BIOACTIVE PROPERTIES OF PEPTIDES DERIVED FROM ENZYMATIC HYDROLYSIS OF COD MUSCLE MYOSIN WITH TRYPSIN, CHYMOTRYPSIN AND ELASTASE

By

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To my loving parents, my brother and especially my wife Gogce and her family

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TABLE OF CONTENTS

page

ACKNOWLEDGMENTS 4

LIST OF TABLES 8

LIST OF FIGURES 9

LIST OF ABBREVATIONS 11

ABSTRACT 12

CHAPTER

1 INTRODUCTION 14

2 LITERATURE REVIEW 17

Marine Protein and Enzymes 17
Proteins 17
Enzymes 21
Bioactive Peptides and Fish Protein Hydrolysates 23
Antioxidant Capacity / Reactive Oxygen Species Scavenging Ability 24
Angiotensin Converting Enzyme Inhibition 31
Protein and Peptide Analysis 36

3 OBJECTIVES 42

4 ENZYME SEPARATION, MYOSIN EXTRACTION, HYDROLYSIS AND FRACTIONATION 43

Material and Methods 43
Separation and Purification of Trypsin, Chymotrypsin and Elastase 43
Extraction of Atlantic Cod Muscle Myosin 49
Hydrolysis of Atlantic Cod Muscle Myosin 51
Fractionation of Atlantic Cod Muscle Myosin Hydrolysates 55
Protein and Peptide Assays 56
Results 58
Separation and Purification of Trypsin, Chymotrypsin and Elastase 58
Extraction of Atlantic Cod Muscle Myosin 60
Hydrolysis of Atlantic Cod Muscle Myosin 61
Fractionation of Atlantic Cod Muscle Myosin Hydrolysates 63

5 DETERMINATION OF ANTIOXIDANT PROPERTIES OF COD MYOSIN HYDROLYSATES 75

Material and Methods 75
Oxygen Radical Absorbance Capacity 75
DPPH Radical Scavenging Ability 76
Reducing Power of Antioxidants Assay 77
Ferrous Ion Chelation Ability 78
Cellular Antioxidant Activity Assay 79
Statistical Analysis 81
Results 82
Oxygen Radical Absorbance Capacity 82
DPPH Radical Scavenging Ability 83
Reducing Power of Antioxidants Assay 85
Ferrous Ion Chelation Ability 87
Cellular Antioxidant Assay (CAA) 87
Discussion 88

6 ANGIONTENSIN CONVERTING ENZYME (ACE) – INHIBITION BY COD MYOSIN HYDROLYSATES 98

Material and Methods 98
Statistical Analysis 99
Results 100
Discussion 101

7 MASS SPECTROMETRY ANALYSIS OF COD MYOSIN HYDROLYSATES 104

Material and Methods 104
LC-MS/MS Analysis of Peptide Fragments from Myosin Digests 104
Rationale for LC-MS/MS Analysis 105
Data Analysis 107
Results 110
Discussion 114

8 CONCLUSION 121

APPENDIX

A CELLULAR ANTIOXIDANT ASSAY 124

B PROTEOME DISCOVERY RESULTS FOR CHYMOTRYPSIN 130

C PROTEOME DISCOVERY RESULTS FOR TRYPSIN 137

D PROTEOME DISCOVERY RESULTS FOR ELASTASE 152

E PROTEOME DISCOVERY RESULTS FOR CEM LOW 159

F PROTEOME DISCOVERY RESULTS FOR CEM HIGH 166

G PEAKS DATABASE SEARCH RESULTS FOR CHYMOTRYPSIN 173
H PEAKS DATABASE SEARCH RESULTS FOR TRYPSIN 180
I PEAKS DATABASE SEARCH RESULTS FOR ELASTASE 218
J PEAKS DATABASE SEARCH RESULTS FOR CEM LOW 223
K PEAKS DATABASE SEARCH RESULTS FOR CEM HIGH 242
L DE NOVO SEQUENCING RESULTS FOR CHYMOTRYPSIN 265
M DE NOVO SEQUENCING RESULTS FOR TRYPSIN 306
N DE NOVO SEQUENCING RESULTS FOR ELASTASE 372
O DE NOVO SEQUENCING RESULTS FOR CEM LOW 405
P DE NOVO SEQUENCING RESULTS FOR CEM HIGH 456
LIST OF REFERENCES 533
BIOGRAPHICAL SKETCH 545

LIST OF TABLES

Table		page
2-1	List of amino acids with three- and one- letter codes	40
2-2	Bioactive peptides found in different studies	41
4-1	Purification table for chymotrypsin from cod enzyme mixture	66
4-2	Purification table for trypsin from cod enzyme mixture	67
4-3	Purification table for elastase from cod enzyme mixture	67
4-4	Molecular weight distribution of extracted cod myosin	69
4-5	Myosin hydrolysate analysis	71
4-6	Myosin hydrolysate fractions analysis	74
6-1	IC_{50} values for ACE inhibition by myosin peptide fractions	103
7-1	Atlantic cod (*Gadus morhua*) myosin fragment sequence for BLAST alignment comparison	117
7-2	Zebra fish myosin sequences aligning with Atlantic cod myosin fragment	117
7-3	Number of peptides identified or De novo sequenced by mass spectrometry from myosin hydrolysates.	119
7-4	False discovery rates (FDR) for the Sequest database search	120

LIST OF FIGURES

Figure		page
4-1	Chromatogram of cod enzyme mixture separated on a PBA Column	65
4-2	Chromatogram of chymotrypsin and trypsin separated on a PABA Column	66
4-3	SDS-PAGE analysis of myosin extracts	68
4-4	Sample profile plot of the colorimetric analysis of the myosin SDS-PAGE gel	69
4-5	SDS-PAGE analysis of myosin hydrolysates	70
4-6	SDS-PAGE analysis of myosin hydrolysate fractions A	72
4-7	SDS-PAGE analysis of myosin hydrolysate fractions B	73
5-1	Method of proposed principle for the cellular antioxidant activity (CAA) assay	93
5-2	Oxygen radical absorbance capacity assay (ORAC)	94
5-3	DPPH radical scavenging ability	94
5-4	Reducing power of antioxidants assay	95
5-5	Ferrous ion chelating ability assay	95
5-6	Cell viability measurements with peptides derived by individual enzymes	96
5-7	Cell viability measurements with peptides derived by CEM high and low	96
5-8	Cellular antioxidant assay (CAA) results	97
6-1	ACE Inhibition for peptides derived by enzymatic hydrolysis from cod myosin	102
6-2	IC_{50} values for ACE inhibitory effect of myosin peptides	103
7-1	LC/MS chromatograms for myosin peptides with less than 5 kDa MW	116
7-2	The alignment of myosin protein sequences from Atlantic cod and Zebrafish	118
7-3	Sample mass spectrum for trypsin digested myosin	119
A-1	Cellular Antioxidant Assay (CAA) results for chymotrypsin digested myosin	124
A-2	Cellular Antioxidant Assay (CAA) results for trypsin digested myosin	125
A-3	Cellular Antioxidant Assay (CAA) results for elastase digested myosin	126

A-4 Cellular Antioxidant Assay (CAA) results for CEM high digested myosin 127

A-5 Cellular Antioxidant Assay (CAA) results for CEM low digested myosin 128

A-6 Cellular Antioxidant Assay (CAA) results for Trolox standards 129

LIST OF ABBREVATIONS

ANOVA	Analysis of Variance
CEM	Cod enzyme mixture
LC	Liquid Chromatography
MS	Mass Spectrometry
MS/MS or MS2	Tandem Mass Spectrometry
MW	Molecular Weight
ORAC	Oxygen Radical Absorbance Capacity
SDS-PAGE	Sodium Dodecyl Sulfate – Polyacrylamide Gel Electrophoresis
U	Units

Abstract of Dissertation Presented to the Graduate School
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BIOACTIVE PROPERTIES OF PEPTIDES DERIVED FROM ENZYMATIC HYDROLYSIS OF COD MUSCLE MYOSIN WITH TRYPSIN, CHYMOTRYPSIN AND ELASTASE

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Low molecular weight peptides derived by controlled enzymatic hydrolysis from fish by-products and underutilized fish species have been shown to have potential application in the food, pharmaceutical and nutraceutical industries. A recently developed process to extract pure fish proteins from fish by-products (called fish protein isolates), which are usually rich in pro-oxidants and oxidative susceptible lipids, has made it possible to prepare fish protein hydrolysates without serious oxidative and color problems during processing and in the final product. Several studies have been conducted already to determine bioactive properties of fish protein hydrolysates with certain proteolytic enzyme mixtures and whole fish muscle extracts from different fish species. However, very limited studies have been done on fish protein isolate hydrolysates in terms of their functionality and bioactivity.

For this research project, myosin, which is the most abundant single muscle protein in fish muscle (and fish protein isolates), was extracted from Atlantic cod (*Gadus*

morhua) and then hydrolyzed by three separated individual enzymes (trypsin, chymotrypsin and elastase), which were also extracted from Atlantic cod (*Gadus morhua*). Low molecular weight peptides were separated from the myosin hydrolysates by ultrafiltration using 5 and 30 kDa membranes. The fractionated peptides were then tested for various bioactive properties, such as antioxidant capacities and angiotensin-converting enzyme (ACE) inhibition. All peptide fractions were finally analyzed by liquid chromatography coupled with tandem mass spectrometry.

The results show that peptides with antioxidative and ACE inhibitory properties can be produced by enzymatic hydrolysis. Low molecular weight peptides show higher antioxidative and ACE inhibitory activities. The bioactive properties are dependent on the type of enzyme used, as well as the degree of hydrolysis and molecular size. Chymotrypsin derived peptides showed higher antioxidant potential than trypsin and elastase derived one, while trypsin derived peptides had the lowest IC_{50} values for ACE-Inhibition. Higher degrees of hydrolysis (%DH) seem to increase bioactive properties until about 30%, while hydrolysates with 43 %DH showed decreased antioxidant activity and increased ACE-inhibitory activities. Mass Spectrometry results discovered over 5000 low molecular weight peptides (less than 10 amino acids residues long) through De novo sequencing.

CHAPTER 1
INTRODUCTION

Recent data estimates that the world harvest of wild fish is close to 100 million metric tons and soon reaches the worlds estimated limit for a sustainable wild fish population according to the FAO (2006). It is believed by many that we are very close to a major collapse in important fish stocks in the world's oceans (Valdimarsson, 2003). Recent news from the Associated Press (AP) about the ban of Bluefin tuna by the United States and the European Union and the economic difficulties resulting thereof for Japan show how dramatic the situation can become. It is also a fact that currently substantial amounts of protein rich material, which could be derived from marine animals, is discarded or underutilized (Kristinsson and Rasco, 2000b). These materials are often by-catch from fishery vessels and by-products, such as frames and cut-offs, from seafood processing facilities. It has been reported that up to 60% of the fish tissue remaining after processing is considered waste and not used for human consumption (Mackie, 1982). Most of the material that could be recovered from by-catch and by-products is high in quality protein and could be used for human consumption and in a wide variety of other applications. Several researchers have demonstrated that applying controlled enzyme technology to fish proteins from byproducts and underutilized species can be recovered and modified to produce a wide range of protein ingredients, useful in the food, pharmaceutical and feed/fertilizer industry (Kristinsson and Rasco, 2000d; Kristinsson and Rasco, 2000c; Kristinsson and Rasco, 2000a; Kristinsson and Rasco, 2002; Baek and Cadwallader, 1995; Shahidi and others 1995; Vieira and others 1995; Onodenalore and Shahidi, 1996). Since these ingredients are mostly derived by chemical and enzymatic hydrolysis of fish protein into peptides of various sizes they are

collectively called fish protein hydrolysates (FPH) (Skanderby, 1994). In recent years many publications and developments have emerged that promise novel use of fish protein hydrolysates. Endogenous and added enzymes are now used in the industry to produce fish protein hydrolysates with high functional and nutritional value (González-Tello and others 1994; Kristinsson and Rasco, 2000b). Production of fish protein hydrolysates on a commercial scale has reached a sizable level in certain countries, like the United States, Norway, Denmark, France, Iceland, Mexico, Japan, Canada and parts of Southeast Asia (Kristinsson and others 2005).

The speed of hydrolysis and the properties of the harvested peptides are influenced by a number of factors during and after the usually simple protein hydrolysis process. Special consideration has to be given to the choice of enzyme and the specific reaction conditions (Lahl and Braun, 1994; Kristinsson and Rasco, 2002). The use of commercial or purified enzymes instead of endogenous enzyme mixtures offers generally better control of the hydrolysis and the resulting peptides (Kristinsson and Rasco, 2000a; Shahidi and others, 1995). Furthermore the nature and quality of the raw material can have a great impact on the hydrolysis process and the properties and functionality of the resulting peptides. The raw material should be free of blood and dark muscle, which can cause serious oxidative and color problems during processing and in the final product. The problems arise mainly from membrane lipids and powerful pro-oxidants like heme proteins and some transition metals. A process developed by Hultin and others (2003) allows for the production of clean starting material by solubilization of myofibrillar proteins at high pH and recovery of those proteins at pH 5.5. The clean

starting material can be used for the hydrolysis process to produces functional and bioactive peptides

Studies by Raghavan and others (Raghavan and others 2008; Raghavan and Kristinsson, 2009) reported a new protein extraction process and a commercial enzyme mixture called cod enzyme mixture (CEM), which contains trypsin, chymotrypsin and elastase from cod pyloric caeca, to produce protein hydrolysates with bioactive properties. Since myosin is the most abundant single muscle protein in fish muscle and comprises about 50% of the myofibrillar proteins, extracted by the new process (Hultin and others, 2003), and about 40% of the total protein content of fish muscle (Kristinsson and Rasco, 2000b; Kristinsson, 2001), it was chosen as the source material for the protein hydrolysates studies for this research project. It is also of interest to explore the hydrolysates produced by each individual purified enzyme (trypsin, chymotrypsin and elastase) from the cod enzyme mixture (CEM) in contrast to the hydrolysates produced by the mixture.

CHAPTER 2
LITERATURE REVIEW

Marine Protein and Enzymes

It is widely known that most fish proteins have good functionality and high nutritional value. To further improve those properties, enzyme technology is now employed to produce a wide range of fish protein hydrolysates with various functional, nutritional and bioactive properties. During the past 50 years research has focused on fish protein hydrolysates with regard to optimizing production conditions for high protein yields and to investigate the food and nutritional functionality of fish protein hydrolysates (Kristinsson and Rasco, 2002). A major problem until recent years was the presence of potent pro-oxidants and membrane lipids from the raw material that could cause serious oxidative and color problems during processing. The development of a new method to extract pure fish proteins from by-products and the further use of enzymatic hydrolysis of those proteins leads to better recovery of proteins from underutilized species and by-products, enhanced protein quality and induces many desirable properties to the proteins and protein hydrolysates (Kristinsson and Rasco, 2002; Hultin and others, 2003; Kristinsson and Rasco, 2000b).

Proteins

Proteins in foods are generally categorized as globular and fibrous proteins and each protein has its unique molecular structure and functional properties. The relative concentration of dietary essential amino acids is considered a major factor determining the nutritional value of a protein. It is also considered that proteins from animal sources are nutritionally superior, as they contain a better balance of dietary amino acids than plant proteins. Among all animal tissues fish muscle is considered to have an excellent

amino acid composition and is an excellent source of nutritive and easily digestible proteins. A drawback however is that fish proteins are extremely perishable and their chemical composition can vary, which presents unique food processing problems in the utilization of fish as a basic raw food material. For example a large portion of the commercially utilized fish species are cold-adapted or poikilothermic, which make them more heat sensitive than mammalian proteins and they exhibit a greater tendency to denature at elevated temperatures. Fish muscle is usually divided into “white” and “dark” meat, where the white part is more abundant than the dark meat, but the dark meat contains higher amounts of lipids and heme proteins, which, as discussed earlier, causes serious oxidative problems during processing of fish proteins and fish protein hydrolysates. The primary food proteins from fish muscle are the myofibrillar proteins which comprise about 60 to 70 percent of the total fish muscle protein. Myosin and actin are the most abundant proteins who build this protein complex, known as myofibril proteins. Since myosin comprises about 50 to 60 percent of the myofibrillar proteins it is considered the most abundant of the single muscle proteins and accounts for almost 38 percent of the total muscle proteins.

Myosin, with a molecular weight of almost 500 kDa, is a large and fibrous protein, which is comprised of six polypeptide subunits. These six subunits include two identical heavy chains (HC), with molecular sizes of about 220 kDa, and four light chains, with sizes ranging from 16 kDa to 25 kDa. These four light chains are named light chain 1 (LC1), (two identical) light chain 2 (LC2) and a light chain 3 (LC3). LC1 and LC3 are referred to as alkali light chains, since they are released from native myosin by alkaline (pH 11) treatment, and the LC2 light chains are referred to as DTNB light chains, since

they are released by DTNB (dithiobis (2-nitrobenzoic acid)). The entire myosin molecule consists of almost 4500 amino acid residues, which build an asymmetrical molecule with two pear shaped globular heads attached to a long rod-like α-helical tail. (Xiong, 1997)

Several methods can be employed to extract myosin from whole muscle and four of those methods were compared for the extraction of cod muscle myosin by Kristinsson (2001). The author concluded that the method, described by Martone and others (1986), with slight modifications resulted in a myosin extract with the highest purity among the methods compared. During the myosin extraction process the molecule is separated into six polypeptide subunits, which can be analyzed by SDS-PAGE analysis. Since the two heavy chains are identical and two of the light chains are identical, the SDS-PAGE analysis shows 4 distinct bands for the myosin molecule, the heavy chain (around 220 kDa), light chain 1 (around 25 kDa), the two light chain 2 molecules (around 19.5 kDa) and the light chain 3 molecule (around 18 kDa) (Kristinsson, 2001). Kristinsson and Hultin also performed two studies on cod muscle proteins (Kristinsson and Hultin, 2003b) and cod myosin (Kristinsson and Hultin, 2003a) in 2003. The first study determined the effect of low and high pH treatment on the functional properties of cod muscle proteins and concluded that the pH treatment, which causes an unfolding and refolding of the myosin molecule, had no effect on the solubility of myosin but it enhanced the gel strength of myosin and improved its functionality (Kristinsson and Hultin, 2003b). The second study observed changes in conformation and subunit assembly of cod myosin at low and high pH and after subsequent refolding. Their results suggest that high and low pH treatments on cod myosin cause significant

conformational changes in the globular head fraction of myosin heavy chain and that a large portion of the myosin light chains are lost during those treatments. The authors concluded that acid and alkaline treatment may lead to substantial molecular changes in myosin (Kristinsson and Hultin, 2003a). This research is significant since the acid and alkaline treatment is a new method to extract muscle proteins from fish waste and byproducts and should therefore be considered in marine myosin research.

Belitz and others (2004) describe that the proportion of myofibrillar proteins, almost 43% of which is myosin (Xiong, 1997), in fish total protein is higher than in mammalian muscle tissue, but the proportions among the individual components are quite similar. However there are limited studies on the proteome characterization of fish muscle proteins and their sequence and the complete sequence of cod muscle myosin is not yet available in common proteomics databases. Zebrafish (*Danio rerio*) is a very popular aquarium fish, and is also used as a model fish in many genomic and proteomic studies. The entire mitochondrial genome and proteome of zebrafish is sequenced and available in most common proteomics databases (Broughton and others 2001). For this reason many comparative proteome analysis studies use zebrafish to compare protein expression in different species. Sveinsdottir and others (2008) performed a study on the "Proteome analysis of abundant proteins in two age groups of early Atlantic cod (*Gadus morhua*) larvae" and found several spots during a PMF (peptide mass fingerprinting) highly identical with zebrafish proteins, including myosin light chain 2. A study by Bryson Richardson and others (2005) compared the myosin heavy chain expression in zebrafish and slow muscle composition in amniotes (four limbed animals with backbones or spinal columns) and found similarities in the expression of slow and fast

heavy chain myosin between zebrafish and amniotes. As mentioned previously, the entire sequence of cod muscle myosin is not known yet, thus a complete comparison of the protein expression between zebrafish and cod myosin cannot be performed, but comparisons of cod myosin fraction sequences suggest that it is comparable to 80% zebrafish myosin and therefore the zebrafish database may be used for mass spectrometry analysis.

Enzymes

Both trypsin and chymotrypsin recognize a particular side of the myosin molecule, where they can cleave it into heavy meromyosin and light meromyosin. (Kristinsson and Rasco, 2000b) Chymotrypsin, trypsin and elastase are all endopeptidases, which can break peptide bonds of nonterminal amino acids in contrast to expopeptidases which cleave amino acids only from the ends of a protein. While expopeptidases cleave one amino acid at a time from the ends, they can eventually break the protein down into monomers, while the endopeptidases cannot. By using only endopeptidases, like trypsin, chymotrypsin and elastase, it is assured that molecules no smaller than a di-peptide can be formed during hydrolysis. Trypsin is an enzyme having very high specificity that cleaves peptide bonds after arginine and lysine unless followed by proline. Chymotrypsin cleaves peptide bonds after phenylalanine, tryptophan and tyrosine, unless followed by proline. It also cleaves peptide bonds after asparagine, histidine, methionine and leucine, but at a slower speed. Elastase cleaves peptide bonds after alanine, glycine, serine and valine, unless followed by proline according to Simpson (2000). However an older study by Berglund and others (1998) determined that salmon elastase was cleaving peptide bonds after alanine, leucine, isoleucine and

valine (unless followed by proline), but not glycine, serine or phenylalanine, compared to porcine and rat elastase.

Trypsin, chymotrypsin and elastase belong to the category of serine proteases, which can be found in pancreatic tissues, pyloric caeca in fish and intestines of other animals. Enzymes extracted from cold-water species are usually called cold adapted enzymes and several studies have been conducted to compare those cold adapted enzymes to their mammalian counterparts. Cold-adapted trypsin extracted from Atlantic cod showed a 20 times higher catalytic efficiency than the mesophilic bovine counterpart according to a study by Jonsdottir (2004). Chymotrypsin, extracted from the pyloric caeca from Atlantic cod showed a slightly higher molecular weight, a more acidic isoelectric point (pI) and decreased heat stability compared to the bovine counterpart, but it showed also a higher activity at low temperature compared to bovine chymotrypsin (Asgeirsson and Bjarnason, 1991). Elastase is named after elastin, an elastic fibrous protein of connective tissue, it usually targets. However elastase is also effective in hydrolyzing various other soluble proteins (Lewis and others 1956). A study by Asgeirsson and Bjarnason (1993) showed that elastase, extracted and purified from Atlantic cod had a reduced heat and acid stability compared to porcine intestinal elastase, but the catalytic efficiency was about twice as high. An earlier study by Gildberg and Overbo (1990) showed similar results as they described cod elastase to be less thermostable than porcine elastase, but higher in turnover number and catalytic efficiency. Table 2-1 shows a list of all amino acids, as well as their three and one letter code and the side-chain polarity, as described by Belitz and others (2004).

Bioactive Peptides and Fish Protein Hydrolysates

During the past 50 years research has focused on investigating and optimizing conditions to produce fish protein hydrolysates with high protein yield and good food functionality (Kristinsson and Rasco, 2002). Studies have shown that the size and chemical properties of peptides from fish protein hydrolysates have a dramatic impact on their functionality. Enzyme specificity and degree of hydrolysis (%DH) are key elements to produce peptides with properties that can be used in a wide variety of products (Mullally and others 1994; Kristinsson and Rasco, 2000a). While earlier research explored the use of fish protein hydrolysates in food systems and products, the focus has shifted in recent years to study their potential bioactive properties. Recent studies show that protein hydrolysates may provide physiological benefits to living systems as well as bioactive properties that might also be used to stabilize food products (Raghavan and others, 2008; Raghavan and Kristinsson, 2009). Fish protein hydrolysates have received increased attention lately for their potential to serve as antioxidants in food systems to limit lipid oxidation. Seafood products, especially those rich in lipids and potent pro-oxidants, are highly susceptible to quality deterioration by lipid oxidation (Hultin, 1994). Some earlier studies on fish protein hydrolysates, prepared from sardine myofibrillar proteins, showed their antioxidant potential, which was substantially increased when combined with different commercial antioxidants (Hatate and others 1990). Other physiological benefits, beside antioxidant capacities, have been reported connected to hypertension (high blood pressure) and arteriosclerosis (Chuang and others 2000). The inhibition of angiotensin-converting enzyme (ACE) is another useful activity which may lead to the reduction of hypertension (Jeon and others 1999). Various fish protein hydrolysates have been found to have the

ability to inhibit ACE and therefore could possibly lead to reduced hypertension if consumed (Kohama and others 1991; Ukeda and others 1992; Matsumura and others 1993; Wako and others 1996). Fish protein hydrolysates (commercial cod and mackerel hydrolysates) have also been found to reduce anxiety in humans (Dorman and others 1995) and improve the learning performance and memory in rats (Le Poncin, 1996) and in humans (Le Poncin and Lamproglou, 1996). The same commercial hydrolysates have also been reported to reduce stress in laboratory rats similar to the known drug diazepam (valium) (Bernet and others 2000). Furthermore fish protein hydrolysates have been found to enhance the flow of red blood cells and stimulate the proliferation of white blood cells (Chuang and others, 2000; Thongthai and Gildberg, 2005).

Antioxidant Capacity / Reactive Oxygen Species Scavenging Ability

Potent antioxidants are useful substances, which can be used in food products to inhibit or delay deterioration caused by oxidation, like lipid oxidation, and to promote health effects as they act physiologically as antioxidants in vivo. In an early study Shahidi and others (1995) reported the addition of fish protein hydrolysates to minced pork reduced the formation of thibarbituric acid reactive substances (TBARS), an indicator for lipid oxidation, up to 60%. Metal chelation was suspected to be the cause of the antioxidant properties, but was not confirmed in this study. In later studies pro- and anti-oxidant fractions were extracted from fish protein hydrolysates, but it is assumed that the presence of transition metals, heme and heme proteins in the starting material could have contributed to the pro-oxidative effect (Amarowicz and Shahidi, 1997). Decreased lipoxygenase and hemoglobin mediated linoleic acid oxidation has been reported by Chuang and others (2000) in the presence of mackerel protein hydrolysates. It was hypothesized that the antioxidant mechanism was likely due to

histidine related di-peptides such as anserine and carnosine, which were reported to scavenge free radicals (Chuang and others, 2000). Regarding the size of the peptide fractions, Jeon and others (1999) reported peptide fractions below 5 kDa from cod protein hydrolysates showed good inhibition of oxidation in a linoleic acid model system. It seems that the antioxidant properties of fish protein hydrolysates are highly dependent upon the amino acid composition and the molecular size of the peptides, which in turn are dependent on the type of enzyme and the conditions used in the protein hydrolysis (Saiga and others 2003).

Many human diseases are related to oxidative processes and fish protein hydrolysates have been reported as potential antioxidants. Antioxidants are believed to play an important role in the body's defense system against reactive oxygen species (ROS). These ROS are harmful by-products of normal cell aerobic respiration. It has been suggested that an increased intake in dietary antioxidants will help the body to maintain an adequate antioxidant status and support normal physiological function in living systems (Ou and others 2002a). In a study by Boukrott and others (2004) hypertensive rats were fed fish protein hydrolysates and showed an increase in overall antioxidant status compared to casein fed rats. In more recent studies fish protein hydrolysates, prepared from tilapia with a commercial enzyme mixture and a cod enzyme mixture (trypsin, chymotrypsin and elastase), showed to be effective scavengers of ROS, generated by human mononuclear cells and endogenous H_2O_2. This study also showed that the ROS scavenging ability increased with increasing degree of hydrolysis and low molecular weight peptides seem to be better ROS

scavengers than the remaining high molecular weight peptides (Raghavan and others, 2008).

Many studies recently published, try to fractionate proteins, protein hydrolysates and peptides with various chromatography methods and isolate the fractions with the most antioxidant active peptides, usually followed by further analysis and identification of the peptides involved. Mass spectrometry is widely used to identify and sequence the peptides, although methods like Edman degradation are still employed to sequence purified peptides. In a study by Li and others (2008) chickpea protein hydrolysate was fractionated by gel filtration and the antioxidant and free radical scavenging ability of four fractions was analyzed. The amino acid analysis of the most active fraction showed that it had the highest hydrophobicity among all other fractions and a molecular weight range from 200 to 3000 Da (Li and others, 2008).

A study, which focused on the antioxidant activities of smooth hound muscle protein hydrolysates (digested by various gastrointestinal proteases), determined that the low molecular weight fraction (lower than 3500 Da) showed the highest antioxidant activity. Further amino acid analysis of this fraction determined it was rich in histidine, methionine, tyrosine, leucine, isoleucine, glycine and arginine. This study also showed that the antioxidant activity of the hydrolysates is dependent on the enzyme used and the degree of hydrolysis achieved, as a low molecular weight alkaline protease (LMW) achieved the highest degree of hydrolysis and showed the highest antioxidant activity.(Bougatef and others 2009)

A study by Qian and others (2008) purified a particular peptide from bullfrog (*Rana catesbeiana Shaw*) skin hydrolysate that showed higher lipid peroxidation inhibition than

α-tocopherol and quenched efficiently different sources of free radicals, like DPPH radicals, hydroxyl radicals, superoxide radicals and peroxyl radicals. The peptide was purified by consecutive chromatography methods and analyzed by Q-TOF ESI (Quadrupol – Time of Flight, Electrospray Ionization) mass spectrometry (Qian and others, 2008). The sequence of this peptide (MW = 1478 Da) is listed in Table 2-2.

Hernandez-Ledesma and others (2005) studied the antioxidant and ACE-inhibitory effects of peptides in fermented milk and identified several peptides with sequences equal or similar to peptides previously described as antioxidants and ACE – inhibitors. These peptides and their sequences are also listed in Table 2-2. The authors used RP-HPLC (Reverse Phase – High Performance Liquid Chromatography) tandem mass spectrometry to analyze and identify these peptides (Hernandez-Ledesma and others, 2005).

Among the marine protein sources bigeye tuna (*Thunnus obesus*), horse mackerel (*Magalaspis cordyla*), hoki (*Johnius belengerii*) and grass carp (*Ctenopharyngodon idella*) have been studied by different authors for antioxidant activities of peptides derived by various methods and from different body tissues (Je and others 2008; Sampath and others 2011; Kim and others 2007; Ren and others 2008). Je and others (2008) isolated a peptide from bigeye tuna dark muscle (with a molecular weight of 1222 Da), which was derived by peptic hydrolysis and showed the most antioxidative potential compared to peptides derived by enzymatic hydrolysis using Alcalase, chymotrypsin, neutrase, papain and trypsin. The peptide was identified by Q-TOF ESI mass spectrometry and is listed in Table 2-2 (Je and others, 2008). Sampath and others (2011) performed an *in vitro* gastrointestinal digestion of horse mackerel viscera protein,

followed by fast protein liquid chromatography (FPLC) to isolate a peptide that showed 89.2 and 59.1 percent scavenging effect for DPPH and hydroxyl radicals, respectively. The peptide was analyzed by ESI-MS/MS and identified as Ala-Cys-Phe-Leu with a molecular weight of 518.5 Da. This peptide is also listed in Table 2-2 (Sampath and others, 2011). Kim and others (2007) employed six different proteases (pepsin, trypsin, papain, chymotrypsin, Alcalase and Neutrase) to hydrolyze hoki frame proteins and identified the hydrolysate from the peptic digestion as the most potent antioxidant peptides. After further fractionation they purified and identified an 1801 Da peptide that showed high DPPH-, hydroxyl-, peroxyl- and superoxyl- radical scavenging abilities. This peptide is listed in Table 2-2 (Kim and others, 2007). A study by Ren and others (2008) identified a peptide (966.3 Da), that was derived from grass carp muscle by Alcalase hydrolysis and purified by several consecutive chromatography steps, as a potent antioxidant. Their study also concluded that basic peptides show greater hydroxyl radical scavenging ability than acidic or neutral peptides and that hydrophobic peptides observe higher antioxidant activities than hydrophilic peptides (Ren and others, 2008).

A relatively new antioxidant assay is the Cellular Antioxidant Activity (CAA) assay, which was developed in 2007 by Wolfe and Liu (2007). According to Wolfe and Liu (2007) the measurement of antioxidant activity is an important screening method for fruits and vegetables and other phytochemicals in various food systems. However most of the chemical assays available cannot really predict the in vivo availability and ability of antioxidants. The CAA assay was developed by Wolfe and Liu (2007) to create a better model of the complexity of a biological system in regard to antioxidant activity

assays compared to the traditional chemical assays. The assay uses HepG2 human hepatocellular carcinoma cells, but can also be adapted to other cell lines, as shown by Roy and others (2009), Angelino and others (2011) and Xu and others (2010). A probe chemical (DCFH-DA) is applied to the cells, absorbed by the cells and excess is washed away. The test substance is then applied to the cells, followed by a radical initiator (ABAP or AAPH), which initiates the release of radicals in the cell, and if not quenched by the antioxidant, will react with the probe to form a fluorescent compound which can be measured. The difference between a control (no antioxidants) reaction and the reaction with test substances present can be calculated and is expressed as CAA units (Wolfe and others 2008; Wolfe and Liu, 2008; Wolfe and Liu, 2007). One important advantage of the CAA assay is that it does not only determine the antioxidative activity of a test substance, but determines whether this substance can be absorbed at or into the cell to work as an antioxidant in the biological system.

Not many studies have been performed yet with the CAA assay, since it is relative new and it has to be tested and adapted for use with different forms of antioxidants. A cell cytotoxicity assay is usually performed before the CAA assay with the test substances to ensure they are compatible with the assay and do not influence or inhibit the cell line. A study by Salawu and others (2011) used the CAA assay to determine the antioxidant activities of green leafy vegetables. They successfully used the assay to determine differences in antioxidant activities among the different vegetables used and for different concentrations of freeze dried extracts of those vegetables (Salawu and others, 2011). Roy and others (2009) used chemical and cellular antioxidant assays to determine that steam processed broccoli (*Brassica oleracea*) has higher antioxidant

activities than the unprocessed counterpart. They determined that the hydrophilic part of the steamed broccoli showed a significant reduction of AAPH induced intracellular radicals compared to the fresh, unprocessed broccoli (Roy and others, 2009).

An interesting study by Angelino and others (Angelino and others, 2011) observed the antioxidant activity of phytochemicals purified from olive mill waste waters with chemical and cellular antioxidant assays. They used the Oxygen Radical Absorbance Capacity (ORAC) assay and the CAA assay to measure antioxidant activities. For the CAA assay, red blood cells were used instead of the HepG2 cells (Wolfe and Liu, 2007). They concluded that the ORAC assay determined the overall antioxidant activity in ORAC units per gram dry weight and the CAA assay demonstrated that the phytochemicals are able to penetrate the cells and work as antioxidants inside the biological system (Angelino and others, 2011).

A study by Xu and others (2010) used the CAA assay to determine the antioxidant activities of soy milk manufactures by different temperature controlled methods, including traditional stove cooking, direct steam injection, direct ultrahigh temperature (UHT) and indirect UHT. The authors also used traditional chemical antioxidant assays, such as ORAC assay, Ferric reducing antioxidant power (FRAP) assay and DPPH radical scavenging ability assay. Interestingly they observed that thermal processing of soy milk significantly increased antioxidant activities in chemical assays, but decreased cellular antioxidant capacity as compared to raw soy milk (Xu and others, 2010). This study shows that the CAA assay can be very useful to determine the bioavailability of a potential antioxidant as compared to chemical assays alone.

Angiotensin Converting Enzyme Inhibition

Angiotensin-converting enzyme (ACE) is a dipeptidyl caboxy peptidase (EC 3.4.15.1), located in many tissues and biological fluids, that plays a key role in the regulation of blood pressure and normal cardiovascular functions (Meng and Oparil, 1996; Coates, 2003). The conversion of angiotensin I into angiotensin II is catalyzed by this peptidase. Angiotensin II is a powerful endogenous vasoconstrictor, but it also degrades bradykinin into inactive components, which have a vasodilation effect. Therefore ACE elevates blood pressure and the inhibition of ACE could result in an overall antihypertensive effect (Shalaby and others 2006). Peptides from dairy origin, have shown great bioactive properties in regard to antimicrobial, anticarcinogenic, cholesterol lowering, antithrombic, immunomodulating, enzyme inhibitory and antihypertensive effects (Meisel, 1998; Suetsuna and others 2000; Nagaoka and others 2001; Sipola and others 2002). The search for peptides able to inhibit ACE has been increased due to the potential use of those peptides in drugs, functional foods and nutraceuticals as antihypertensive agents (Ryhänen and others 2001; Schlothauer and others 2002; Sipola and others, 2002). Other sources have also been identified from which peptides with an ACE inhibitor effect can be extracted or produced, such as corn, soy, gelatin, milk, algae and fish proteins (Fujita and Yoshikawa, 1999; Kim and others 2001; Suetsuna and Chen, 2001; Wu and others 2008; Fuglsang and others 2003; Suh and others 2003; Vermeirssen and others 2003). The inhibitor effect appears to be highly dependent on the molecular size of the peptides, where smaller peptides tend to generate a greater inhibitor effect. In a study by Jeon and others (1999) cod protein hydrolysates were fractionized and a reduction in ACE inhibitor activity was recorded in order from 3 kDa to 5 kDa to 10 kDa and finally 30 kDa. Another study reported that

sardine and cod head hydrolysates showed a 30% ACE inhibition while shrimp showed up to 57% ACE inhibition (Bordenave and others 2002). A study by Theodore and Kristinsson (2008) showed high ACE inhibition (up to 90%) in fish protein hydrolysates prepared from channel catfish protein isolate. They suggested that there was no simple relationship between average peptide size, degree of hydrolysis and ACE inhibition, but their results indicate that the soluble fraction of the hydrolysates, which contains the smallest peptides, is responsible for most of the ACE inhibition. A recent study by Raghavan and Kristinsson (2009) on tilapia protein hydrolysates showed the highest ACE inhibition for low molecular weight peptides (<10 kDa), compared to medium (10-30 kDa) and high (>30 kDa) molecular weight peptides, as well hydrolysates with 25% degree of hydrolysis compared to 7.5%.

Since peptides are widely researched for ACE inhibition, a study by Pripp and Ardo (2007) tried to model a relationship between ACE inhibition and the bitter taste of certain peptides. They found a significant correlation of increased ACE inhibition and bitterness found in certain dipeptides. They attributed the hydrophobicity of those peptides to the relationship between ACE inhibition and bitter taste (Pripp and Ardo, 2007). This study is just an example how important the peptide properties are for ACE inhibition and that they are closely related to other easily measurable properties, such as molecular weight and hydrophobicity.

Among many studies it is shown over and over again that the low molecular weight peptides observe much higher ACE inhibitory effects than larger peptides from the same source. Pihlanto and others (2008) published a study in 2007 which determined the ACE inhibitory and radical scavenging effects of potato protein hydrolysates. They

observed that after ultrafiltration of the hydrolysate the less than 3 kDa fraction observed the highest ACE inhibitory effect. Miguel and others (2009) studied the ACE inhibitory and antihypertensive effects of bovine casein hydrolysate. They measured the ACE inhibitory effect of the pepsin hydrolyzed bovine casein and a < 3 kDa fraction of the same hydrolysate. The ACE-inhibitory effect was 10 fold higher for the low molecular weight fraction than for the parent hydrolysate. In an antihypertension study with rats, they observed that both the parent and the low MW fraction of the hydrolysate showed effects close to captopril, a synthetic antihypertension drug (Miguel and others, 2009).

The ACE inhibitory effect of peptides from apricot (*Prunus armeniaca L*.) kernel protein hydrolysate was studied by Zhu and others (2010). The authors used six different proteases to hydrolyze the apricot kernel protein and determined that Alcalase showed the highest potential to produce peptides with ACE-inhibitory effect. The Alcalase hydrolysates were further fractionated using ultrafiltration and it was determined that the lowest molecular weight fraction (less than 1 kDa) showed the highest ACE inhibitory activity (Zhu and others, 2010).

Guo and others (2009) used response surface methodology to optimize hydrolysis conditions to produce peptides from whey protein with ACE inhibitory effects. They determined that the ACE inhibitory activity of the whey protein hydrolysates could be controlled by hydrolysis temperature, pH and enzyme to substrate ratio. They observed the highest ACE inhibitory activity (close to 92.2%) for a whey protein hydrolysate with 18.8% degree of hydrolysis (DH) (Guo and others, 2009).

A very interesting study was conducted by Jia and others (2010), who investigated the use of ultrasound for enzymatic preparation of ACE inhibitory peptides from wheat germ protein. They studied the effect of ultrasound treatment before and during hydrolysis and determined that ultrasound pretreatment increased the ACE inhibitory activity up to 40% while the ultrasound treatment during hydrolysis had almost no effect. Further analysis suggested that ultrasonic pretreatment may accelerate the release of hydrophobic amino acids during enzymatic hydrolysis, which may lead to the increased ACE inhibitory effect (Jia and others, 2010).

Several studies have also been conducted recently to isolate and identify specific peptides from various protein sources (derived by enzymatic or chemical hydrolysis) that show high ACE inhibitory activity. Table 2-2 lists some of the peptides that were isolated and identified in recently published studies.

Balti and others (2010) discovered three novel ACE inhibitory enzymes derived by digestive proteases from cuttlefish (*Sepia officinalis*). The cuttlefish was hydrolyzed by various proteases and tested for ACE inhibitory activity and the most active hydrolysate was further fractionated using gel filtration chromatography. The three novel peptides were identified by ESI mass spectrometry and their sequence is listed in Table 2-2 (Balti and others, 2010). A study by Rho and others (2009) determined the ACE inhibitory effect of fermented soybean extract and tried to purify and identify the peptide with the ACE inhibitory activity. In this study fermented soybean extract was fractionated by ultrafiltration and consecutive chromatography methods. The parent soybean extract observed an IC_{50} value of 1.46 mg/ml for ACE inhibition, while the purified peptide showed an IC_{50} value of 22 µg/ml. The amino acid sequence of this peptide was

determined by Edman degradation and is listed in Table 2-2 (Rho and others, 2009). Sheih and others (2009) performed the isolation and characterization of a novel ACE inhibitory peptide from algae protein waste. The pepsin hydrolysate of the algae protein waste was fractionated and then characterized by Edman degradation to reveal the peptide sequence of the ACE inhibitory peptide, which can be found in Table 2-2. Further analysis revealed that this particular peptide retained most of its ACE inhibitory effect at a pH range from 2-10 and temperature from 40-100˚C (Sheih and others, 2009).

The ACE inhibitory activity and antihypertensive effect of fermented milk was studied by Pihlanto and others (2010), where 25 lactic acid bacteria were used to prepare the test samples. Their experiment showed that the ACE inhibitory effect was dependent on the lactic acid bacteria used and correlated to the degree of hydrolysis, but independent on other fermentation conditions and pH. The milk fermented with *Lb. jensenii* showed the highest ACE inhibitory effect and provided a transient reduction of blood pressure in spontaneously hypertensive rats (Pihlanto and others, 2010).

Lee and others (2010) discovered a 21 amino acid long peptide, isolated from tuna frame protein hydrolysate, which showed ACE inhibitory activity and antihypertensive effects in spontaneously hypertensive rats. The authors used several proteinases and determined that the pepsin hydrolyzed tuna frame protein observed the highest ACE inhibitory effects. Further fractionation of high (5-10 kDa), medium (1-5 kDa) and low (less than 1 kDa) molecular weight fractions was performed and the 1-5 kDa fractions observed the highest ACE inhibitory activity. From this fraction the novel peptide was

isolated by consecutive purification and sequenced by Q-TOF ESI mass spectrometry. The sequence of this peptide is listed in Table 2-2 (Lee and others, 2010).

Myosin hydrolysates from boneless chicken leg meat was prepared by pepsin digestion and analyzed for ACE inhibitory activity by Terashima and others (2010). The authors identified two distinct peptides which correspond to the amino acids 125-135 and 825-835 in the myosin heavy chain protein molecule. These two peptides observed higher ACE inhibitory values than captopril, which is a synthetic ACE inhibitor. The sequence of those peptides are listed in Table 2-2 (Terashima and others, 2010).

Further studies, where isolation and characterization of ACE inhibitory peptides derived by hydrolysis was performed, include studies on Alcalase hydrolysate of peanut flour (Guang and Phillips, 2009), studies on smooth hound fish muscle protein hydrolysates (Bougatef and others, 2009) and studies on a novel ACE inhibitory peptide isolated from sea cucumber (Zhao and others 2009). The amino acid sequence of these peptides is listed in Table 2-2. Most of these studies confirm that low molecular weight peptides have the highest ACE inhibitory activities and that the hydrolysis conditions, especially the degree of hydrolysis and the type of enzyme play an important role in determining ACE inhibitory activity.

Protein and Peptide Analysis

Protein and peptide analysis employs many different tools to identify and characterize the immense variety of proteins that are expressed in a cell of any organism. Traditionally, sodium dodecyl sulfate – polyacrylamide gel electrophoresis (SDS-PAGE) is one of the first tools that can be used to analyze and characterize proteins or peptides, however as a one-dimensional gel electrophoresis, it is limited to the analysis of refined or purified protein mixtures with less than 100 different proteins.

To analyze the whole protein complement that can be expressed by a particular cell, the two dimensional- (2D) gel electrophoresis should be employed, which consist of a isoelectric focusing step in one direction of the gel and the SDS-PAGE step in the second direction of the gel. Only one sample can be analyzed on a single gel, but a higher resolution can be achieved this way (Boguth and others 2000). Still some protein mixtures may be too complex to be analyzed without prior fractionation; therefore most protein analysis should include some form of separation and purification before more complex analysis methods are employed. Usually any type of column chromatography, like size exclusion, ion- exchange, hydrophobic interaction or affinity chromatography is used to separate the protein mixture into smaller fractions that can then be analyzed and characterized (Palzkill, 2002). While the previously mentioned techniques are useful to separate and characterize a protein or peptide based on charge or molecular size, they are not capable of identifying the protein or peptide.

A traditional technique to identify the sequence of a protein or peptide is the Edman degradation procedure, where a peptide is degraded stepwise by phenylisothiocyanate, cleaved by trifluoroacetic acid and converted in aqueous HCl to phenylthiohydantoin, repeatedly until the entire protein is sequenced (Belitz and others, 2004). Since this process is slow and has a low throughput it is no longer used in most proteomics research (Palzkill, 2002).

The major advancement in proteomics research came with the reliable adaptation of mass spectrometry (MS) for peptide analysis. Since most proteins are too large and complex for direct MS analysis a pre-digestion into smaller peptides by specific proteases, for example trypsin, is usually performed before analysis (Matthias Wilm and

others 1996; Mann, 1996; Palzkill, 2002). In mass spectrometry the fragmented molecules are characterized by their mass to charge ratio (m/z). In order to be analyzed the particles have to be ionized into a gas-phase and are then analyzed by a mass analyzer which is coupled with a ion detector to determine the mass to charge ratio of the ion (Yates, 2000). Mass spectrometers are differentiated by their ionization source, their ion detector and mass analyzer. The most common ionization sources are MALDI (Matrix-assisted laser desorption ionization) and ESI (Electrospray ionization). Mass analyzer and ion detectors used are TOF (Time of Flight) analyzer, Quadrupol mass filter and Ion traps, such as three-dimensional Quadrupol ion trap, linear Quadrupol ion trap and orbitrap (Yates and others 2006; Henzel and others 1993; Miranker, 2000; Palzkill, 2002). Another common approach is the use of tandem mass spectrometry or MS/MS, where the ionized peptides are first resolved in the first mass analyzer, which separates and isolates one species at a time that is then sent to a collision cell. In the collision cell the peptide is further fragmented, and then sent to the second mass analyzer. There the mass of the fragments is precisely analyzed and a partial amino acid sequence of the peptide can be determined. These partial sequences, called peptide sequence tags, can then be used in database searches to identify the protein or peptide (Mann and others 2001; Mann, 1996; Matthias Wilm and others, 1996; Palzkill, 2002).

The final step after mass spectrometry analysis is to identify the protein or peptide sequence by database search or De novo sequencing (Wilm and others 2000; Yates and others 2000). The large amount of peptide sequence tags, generated by the mass spectrometer can be compared to a database of known protein and peptide sequences

to identify the actual proteins and peptide present in the sample. Databases like UniProt or SwissProt contain large amounts of information regarding protein and peptide sequences for a large variety of species. Search engines like SEQUEST or PEAKS are employed to compare the mass spectrometry results to the databases and identify the proteins with a certain amount of accuracy, defined by probability parameters. To identify the error rate of false identification of certain amino acid sequences a decoy database search can be employed, where, the mass spectra are compared to the original database and a database where the amino acid sequences are reversed. A match in both databases would be considered false and increase the False Discovery Rate (FDR) of the protein or peptide detection (Yates and others, 2000).

When the protein or peptide sequence is not known in any database De novo sequencing can be employed to determine the peptide amino acid sequence. De novo means “anew” or “all over” and describes the fact that the peptide has to be characterized without additional knowledge. In this regard the Edman degradation can be characterized as De novo sequencing. In mass spectrometry a labeling technique for the C-terminal amino acid can be used to identify the side by the additional mass in the mass spectrometer and the correct sequence of a peptide can be analyzed by tandem mass spectrometry. Of course the more information is available of the original protein or peptide the more accurate are the results of the mass spectrometry analysis (Wilm and others, 2000).

Many recently published articles and studies (see previous chapters) regarding antioxidant and ACE inhibitory effects of proteins, peptides and hydrolysates have used

the various forms of mass spectrometry, described in this chapter, to identify a particular peptide, which showed bioactive potential.

Table 2-1. List of amino acids with three- and one- letter codes

Amino Acid	Three Letter Code	One Letter Code	Side-Chain Polarity
Alanine	Ala	A	nonpolar
Arginine	Arg	R	nonpolar
Asparagine	Asn	N	polar
Aspartic acid	Asp	D	polar
Cysteine	Cys	C	nonpolar
Glutamic acid	Glu	E	polar
Glutamine	Gln	Q	polar
Glycine	Gly	G	nonpolar
Histidine	His	H	polar
Isoleucine	Ile	I	nonpolar
Leucine	Leu	L	nonpolar
Lysine	Lys	K	polar
Methionine	Met	M	nonpolar
Phenylalanine	Phe	F	nonpolar
Proline	Pro	P	nonpolar
Serine	Ser	S	polar
Threonine	Thr	T	polar
Tryptophan	Trp	W	nonpolar
Tyrosine	Tyr	Y	polar
Valine	Val	V	nonpolar

Note: This table was compiled of information obtained from Belitz and others (2004).

Table 2-2. Bioactive peptides found in different studies

Peptide Source	Sequence	Bioactivity	Citation
Bullfrog skin	LEELEEELEGCE	Antioxidant	(Qian and others, 2008)
Fermented milk	TTMPLW	ACE-inhibition	(Hernandez-Ledesma and others, 2005)
	NIPPLTQTPV	ACE-inhibition	
	VLPVPQ	Antioxidant	
	HLPLP	ACE-inhibition	
Bigeye tuna	LNLPTAVYMVT	Antioxidant	(Je and others, 2008)
Horse mackerel	ACFL	Antioxidant	(Sampath and others, 2011)
Hoki	ESTVPERTHPACPDFN	Antioxidant	(Kim and others, 2007)
Grass carp	PSKYEPFV	Antioxidant	(Ren and others, 2008)
Cuttlefish	YAP	ACE-inhibition	(Balti and others, 2010)
	VIIF	ACE-inhibition	
	MAW	ACE-inhibition	
Soybean	LVQGS	ACE-inhibition	(Rho and others, 2009)
Algae	VECYGPNRPQF	ACE-inhibition	(Sheih and others, 2009)
Tuna frames	GDLGKTTTVSNWSPPKYKDTP	ACE-inhibition	(Lee and others, 2010)
Sea cucumber	MEGAQEAQGD	ACE-inhibition	(Zhao and others, 2009)
Smooth hound	AGS	ACE-inhibition	(Bougatef and others, 2009)
Chicken myosin	MNVKHWPWMK	ACE-inhibition	(Terashima and others, 2010)
	VTVNPYKWLP	ACE-inhibition	
Peanut flour	KAFR	ACE-inhibition	(Guang and Phillips, 2009)

Note: These are only a few peptides, isolated and identified in various studies, to show antioxidative or ACE inhibitory effects. The citation for each study is given at the end of the table.

CHAPTER 3
OBJECTIVES

The hypothesis for this study is that peptides with significant bioactive properties can be produced from Atlantic cod (*Gadus morhua*) myosin by enzymatic hydrolysis. Such bioactive properties include reactive oxygen species (ROS) scavenging ability, reducing capability, metal chelation ability and other antioxidant capacities, as well as angiotensin-converting enzyme (ACE) inhibitor abilities. Enzymes that can produce such peptides (trypsin, chymotrypsin and elastase) were extracted and separated from Atlantic cod (*Gadus morhua*) pyloric caeca.

The first objective was to extract myosin from fresh Atlantic cod (*Gadus morhua*) fillets and to separate and purify trypsin, chymotrypsin and elastase from Atlantic cod (*Gadus morhua*) pyloric caeca. Using the three individual enzymes, myosin hydrolysates were prepared and were then subjected to fractionation using ultrafiltration.

The second objective was to test the parent hydrolysate fractions for antioxidant capabilities and angiotensin-converting enzyme inhibitor capabilities using various *in-vitro* chemical assays and a cell based assay.

The final objective was to identify the peptide fractions that show the highest activities among all tested assays and characterize those peptides using Mass Spectrometry.

CHAPTER 4
ENZYME SEPARATION, MYOSIN EXTRACTION, HYDROLYSIS AND FRACTIONATION

Material and Methods

Separation and Purification of Trypsin, Chymotrypsin and Elastase

The cod enzyme mixture is a mixture of various cold active proteolytic enzymes extracted from Atlantic cod (*Gadus morhua*) by North Ltd. (Reykjavik, Iceland), which has (according to the product specification sheet) practically no lipase, nuclease and amylase activities, but very high trypsin, chymotrypsin and elastase activities. The original product is an aqueous solution which contains 50% glycerol. Since glycerol will interfere with certain subsequent assay procedures for the myosin hydrolysates, a freeze dried preparation of the same enzyme mixture was obtained from this company and stored at -80ºC until further use.

Trypsin, chymotrypsin and elastase were separated and purified from the enzyme mixture before they were used to hydrolyze myosin for further experiments. Cohen and others (1981) describe an experiment that extracts proteolytic enzymes from carp and separates trypsin, chymotrypsin and elastase from the extracted enzyme mixture using several affinity chromatography procedures. In their original experiment they needed to activate the enzymes from their zymogen states by adding $CaCl_2$ to crude filtered extract and incubate the mixture for 20 h at 24ºC. Since, in preliminary experiments, the freeze dried cod enzyme mixture showed very high enzyme activities, the activation step was not required before purification. Enzyme activity measurements at every stage of the purification process were used to determine the success of the separation and purification procedure.

Throughout the entire separation and purification procedure the following parameters were measured at every step:

- Protein concentration of the mixture or the collected fractions
- Trypsin activity of the mixture or the collected fractions
- Chymotrypsin activity of the mixture or the collected fractions
- Elastase activity of the mixture or the collected fractions

Protein concentration was measured using the Pierce® 660 nm Protein Assay from Thermo Scientific, calibrated with a bovine serum albumin (BSA) standard curve. The enzyme (trypsin, chymotrypsin and elastase) activities were measured by determining the initial rate of substrate (enzyme specific) conversion in 100 mM Tris-HCl buffer at pH 8.2 and 25ºC. The following substrates were used: Nα-Benzoyl-DL-Arginine-p-nitroanilide (BAPNA) for trypsin, N-Succinyl-Ala-Ala-Pro-Phe-p-nitroanilide for chymotrypsin and N-Succinyl-Ala-Ala-Ala-p-nitroanilide for elastase. Each substrate contains the colorimetric component p-nitroanilide, which when cleaved from the substrate by the enzyme, will yield a yellow color. The substrate solutions were prepared by first dissolving 20 mM of each substrate separately in dimethyl sulfoxide (DMSO) to prepare a stock solution and then diluting each substrate stock solution in assay buffer to a final concentration of 5 mM (working solution). The undiluted substrate stock solutions (in DMSO) were stable at room temperature for about a week. For the enzyme activity assay, 1.35 ml of assay buffer and 150 µL of substrate working solution were placed in a 1.5 ml plastic cuvette. Sample (200 µL) was added to the cuvette, mixed and the absorbance was measured immediately for 3 minutes in 5 second intervals. The absorbance was measured at 410 nm and since the extinction coefficient

of p-nitroanillide is known to be ε_{410nm}= 8.8*mM^{-1}*cm^{-1}, Equation 4-1 was used for all three enzymes to calculate the activity based on the initial rate, measured in A_{410nm}/min. In Equation 4.1 Δ_{A410nm} equals the linear rate change in absorbance units for a 1 minute time period, V equals the total volume of the assay solution in the cuvette, dF equals the dilution factor of the test enzyme, ε_{410nm} equals the millimolar extinction coefficient of p-nitroanillide and V_e equals the volume of the enzyme solution added. One unit is defined as 1 mM of substrate hydrolyzed per minute at pH 8.0 and 21˚C.

$$\frac{\text{Units}}{\text{ml}} = \frac{\Delta_{A410nm} * V * dF}{\varepsilon_{410nm} * V_e} \quad (4\text{-}1)$$

The enzymes were separated in two stages on two different affinity chromatography columns as described by Cohen and others (1981). The first column, an affinity column using phenylbutylamine (PBA) as a ligand, was used to separate elastase from chymotrypsin and trypsin, which were not separated on this column. The second column, which contained para-aminobenzamidine (PABA) as a ligand, was used two separate chymotrypsin and trypsin from the pooled fractions collected in the first column. The elastase containing fractions from the first column were pooled and then concentrated using Amicon® Ultra-15 10k Centrifugal Filter Devices with a molecular weight cut off (MWCO) of 10,000 kDa. During the concentration step the retentate was washed several times with ultra-pure water, therefore exchanging the buffer and retaining the purified concentrated enzyme in ultra-pure water. The chymotrypsin/trypsin fractions from the first column were treated in the same way, except that the final washing step contained the starting buffer for the second column chromatography step. The concentrated chymotrypsin/trypsin solution was added onto the second column to separate chymotrypsin and trypsin. The separated trypsin and chymotrypsin fractions

were pooled, washed and concentrated as described for the elastase fraction. The three separated enzymes, trypsin, chymotrypsin and elastase, were then stored at -80˚C until further use.

For the first chromatography step a phenylbutylamine (PBA) Sepharose 4B chromatography column was prepared and packed. Cyanogen-Bromide-activated Sepharose 4B affinity media was obtained from GE Healthcare and phenylbutylamine (PBA), obtained from Sigma Chemicals Co. (St. Louis, MO), was attached as a ligand to the affinity media as described in the affinity media product manual. The lyophilized medium (30 g) was suspended in 200 ml 1 mM HCl solution and allowed to swell. The medium was subsequently washed on a sintered glass filter (porosity G3) for 15 minutes by adding 6000 ml 1 mM HCl solution in several aliquots. PBA (1.05 g) was added to 150 ml of coupling buffer (0.1 M $NaHCO_3$, pH 8.3 containing 0.5 M NaCl) and this solution was added to the pre-swollen medium in a stoppered vessel. The suspension was slowly rotated (mixed) overnight at 4˚C. The medium was washed with 500 ml of coupling buffer and transferred into 300 ml 0.1 M Tris-HCl (pH 8.0) solution and incubated for 2 hours to block any remaining active groups. Finally the medium was washed with three cycles of alternating pH, whereas each cycle contained a 500 ml wash with 0.1 mM acetic acid (pH 4.0, with 0.5 M NaCl) followed by a 500 ml wash with 0.1 M Tris-HCl (pH 8.0, with 0.5 M NaCl). The medium was then stored in binding buffer A (10 mM Tris-HCl, 10 mM $CaCl_2$, 200 mM KCl, pH 8.0). The PBA-Sepharose column was prepared by pouring the medium into a glass column (3 cm in diameter, 20 cm length packed) and packed to a bed-volume of approximately 140 ml. The column was packed at a flow rate of 3 ml/min with binding buffer and secured with a column adapter.

The enzyme solution, to be applied to the first column, was prepared by adding 10 g freeze dried cod enzyme mixture to 40 ml of binding buffer A, vortex the mixture for 5 minutes followed by centrifugation at 5000 x g for 5 minutes. The supernatant was collected and the protein content as well as specific enzyme activities were measured. The PBA column was equilibrated with binding buffer A until no further change in pH was observed for the effluent. Enzyme solution (10 ml) was added onto the column, followed by a rinse with 400 ml binding buffer A. Elution was carried out by rinsing the column with 300 ml elution buffer A (100 mM PBA in ultra-pure water with 20% ethanol). Finally the column was washed with 300 ml 7M Guanidine Hydrochloride (Gua-HCl) solution, followed by re-equilibration with binding buffer A for subsequent reuse. The flow rate was constant at 1 ml/min during the entire chromatography procedure using a peristaltic pump, connected between the column and the fraction collector. Fractions (10 ml) were collected and analyzed. The absorbance of each fraction at 280 nm was measured and plotted against the fraction number. The specific enzyme activities were measured for every second fraction surrounding the peak area on the 280 nm chromatogram and for every fifth fraction outside the peak areas. The specific enzyme activities were then plotted against the fraction numbers inside the 280 nm chromatogram. The fractions showing the highest enzyme activities were pooled and used as previously described. This chromatography procedure was repeated 3 times to recover enough enzyme solutions for subsequent use.

For the second chromatography step a para-aminobenzamidine (PABA) Sepharose 4 Fast Flow (also referred to as Benzamidine Sepharose 4 Fast Flow) column was prepared and packed. The Benzamidine Sepharose 4 Fast Flow medium

was obtained from GE Healthcare as a pre-swollen media stored in 0.05 M acetate buffer (pH 4.0, with 20% ethanol). To prepare the medium for packing, the storage solution was decanted off and replaced by binding buffer B (10 mM Tris-HCl, 10mM $CaCl_2$, 200 mM KCl, pH 7.4). The PABA-Sepharose column was prepared by pouring the medium into a glass column (1.5 cm in diameter, 16 cm length packed) and packed to a bed-volume of approximately 30 ml. The column was packed at a flow rate of 3 ml/min with binding buffer B and secured with a column adapter.

The fractions containing chymotrypsin and trypsin from the first column were pooled and concentrated using Amicon® Ultra-15 10k Centrifugal Filter Devices with a molecular weight cut off (MWCO) of 10,000 kDa. During the concentration step the retentate was washed several times with ultra-pure water, therefore exchanging the buffer and retaining the purified concentrated enzyme in ultra-pure water. The retentate was finally washed with binding buffer B and concentrated, therefore retaining the desired enzymes in binding buffer B and ready for application onto the second column. The PABA column was equilibrated with binding buffer B until no further change in pH was observed for the effluent. Chymotrypsin/trypsin (2 ml) solution was added onto the column, followed by a rinse with 100 ml binding buffer B. Elution was carried out in two steps by rinsing the column with 500 ml binding buffer B (with 0.5 M NaCl added), followed by a rinse with 150 ml acetic acid (25 mM). To all fractions from the acetic acid rinse 1 ml 1M Tris-HCl buffer (pH 9.0) was added to prevent enzyme inactivation or degradation due to low pH. Finally the column was washed with 50 ml 7M Guanidine Hydrochloride (Gua-HCl) solution, followed by re-equilibration with binding buffer B for subsequent reuse. The flow rate was constant at 1 ml/min during the entire

chromatography procedure using a peristaltic pump, connected between the column and the fraction collector. Fractions (12 ml) were collected and analyzed. The absorbance of each fraction at 280 nm was measured and plotted against the fraction number. The specific enzyme activities were measured for every second fraction surrounding the peak area on the 280 nm chromatogram and for every fifth fraction outside the peak areas. The specific enzyme activities were then plotted against the fraction numbers inside the 280 nm chromatogram. The fractions showing the highest enzyme activities were pooled and used as previously described. This chromatography procedure was repeated 6 times to recover enough enzyme solutions for subsequent use. A purification table (Table 4-1) was used to monitor the separation and purification process.

Extraction of Atlantic Cod Muscle Myosin

To extract myosin from Atlantic cod (*Gadus morhua*), a modified procedure originally developed by Martone and others (1986) was used. The original procedure was modified and described by Kristinsson (2001). The modified procedure was compared by Kristinsson (2001) to three other methods for myosin extraction and showed the highest purity results for myosin extraction.

The following solutions were prepared for the extraction process and stored at 4˚C. Solution A, containing 0.1 M KCl, 1 mM phenylmethylsulfonyl fluoride (PMSF), 0.02% sodium azide (NaN_3) and 0.02 M Tris-HCl, was prepared with ultra-pure water and adjusted to pH 7.5 with 1 M NaOH. Solution B, containing 0.45 M KCl, 0.2 M magnesium acetate ($Mg(CH_3COO)_2$), 1 mM ethylene glycol tetraacetic acid (EGTA), 0.02 M Tris Maleate and 5 mM beta-mercaptoethanol (was added just before use), was prepared with ultra-pure water and adjusted to pH 6.8 with 1 M NaOH. Solution C,

containing 0.5 M KCl, 0.02 M Tris-HCl and 5 mM beta-mercaptoethanol (was added just before use), was prepared with ultra-pure water and adjusted to pH 7.5 with 1 M NaOH. Adenosine triphosphate (ATP) was added to a concentration of 0.01 M during the second washing step and magnesium chloride (MgCl) was added to a concentration of 0.01 M during the third washing step. Sodium bicarbonate (NaHCO3) was used as buffer in several non-specific washing solutions at a concentration of 1 mM. All chemicals were obtained from Fisher Scientific Co. (Pittsburgh, PA) and Sigma Chemical Co (St. Louis, MO).

Fresh Atlantic cod (*Gadus morhua*) was obtained from Save-On-Seafood (Tampa, FL) and myosin was extracted from the white muscle according to the modified procedure. Any fat and connective tissue was removed from the fillet and 200 g of muscle was then chopped and homogenized with 2 L of washing solution A, followed by a 60 min incubation at 4ºC and subsequent centrifugation at 1000g for 10 minutes at 4ºC. The collected pellet was then suspended in 1L of washing solution B, which contained 10 mM ATP, followed by 60 min incubation at 4ºC and subsequent centrifugation at 10,000g for 15 minutes at 4ºC. The supernatant was then diluted very slowly into 19 L of 1mM NaHCO3- buffer, followed by overnight incubation at 4ºC and subsequent centrifugation at 12,000g for 10 min at 4ºC. The pellet was then suspended in 1 L of washing solution C and homogenized by using a Potter-Elvehjem tube. The suspension was incubated for 10 min at 4ºC and then diluted 3 fold (3 L) with 1mM NaHCO3- buffer. Magnesium chloride was added to a final concentration of 10 mM. The suspension was then incubated at 4ºC overnight followed by a centrifugation at 22,000g for 15 min at 4ºC. For the original procedure the pellet would be suspended in solution

C, homogenized and then stored for subsequent experiments. Following the modified procedure, the pellet was washed one more time with 40 volumes of deionized water and then centrifuged at 22,000g for 15 min at 4ºC. The pellet is considered purified myosin and was stored at -80ºC until further use. This procedure was repeated several times with different batches of Atlantic cod (*Gadus morhua*) and the extracted myosin pellets were pooled to ensure a uniform sample for subsequent analysis. The extracted myosin was analyzed for purity by sodium dodecyl sulfate – polyacrylamide gel electrophoresis (SDS-PAGE).

Hydrolysis of Atlantic Cod Muscle Myosin

Enzymatic hydrolysis of myosin was performed using the three separated individual enzymes, trypsin, chymotrypsin and elastase, and the cod enzyme mixture. Five different hydrolysates were prepared by using the three separated enzymes and two different concentrations of the cod enzyme mixture. Enzyme activity assay results showed that the ratio of chymotrypsin, trypsin and elastase is about 10:1:1, respectively. In order to reflect an enzyme activity of each enzyme in the mixture similar to the enzyme activity of the separated enzymes two different concentrations of cod enzyme mixture were chosen to hydrolyze myosin. These concentrations were named CEM high and CEM low. CEM high was added to myosin in such an amount that trypsin activity reached at least 2 Units per gram protein. CEM low was added in such an amount that the combined enzyme activity did not exceed 2 Units per gram protein. The ratio of enzymes in CEM high and low remained unaltered. Since data from the enzyme separation and purification step also showed trace amounts of chymotrypsin activity in the trypsin and elastase fraction 10 µm of TPCK (N-Tosyl-L-Phenylalanine Chloromethyl

Ketone), a chymotrypsin inhibitor that shows no effect or inhibition of trypsin or elastase, was added to those fractions to inhibit any residual chymotrypsin activity.

The hydrolysates were prepared by the following procedure. For each hydrolysate 60 g myosin (90% moisture) were suspended and homogenized in 240 ml hydrolysis buffer (10 mM Phosphate, pH 8.5) and the protein content was measured and adjusted to reach a 2% w/v myosin solution. The pH was measured and, if necessary, adjusted to pH 8.5. Individual enzymes, trypsin, chymotrypsin and elastase, were added to reach a concentration of 2 U per gram protein. For the CEM high concentration hydrolysis, CEM solution was added to yield a concentration of 2 Units of trypsin per gram protein; chymotrypsin and elastase concentration were in excess of 2 Units per gram protein. For the CEM low concentration hydrolysis, CEM solution was added to yield an overall enzyme concentration of 2 Units per gram protein, which means trypsin and elastase were diluted and mainly chymotrypsin determined the enzyme activity. The myosin/enzyme solutions were transferred to 1 quart Ziploc® freezer bags and the remaining air was removed before sealing the bags. The bags were gently shaken for 12 hours at room temperature (26˚C). After the 12 hour incubation any remaining enzyme activity was terminated by placing the bag in a water bath and heating the hydrolysates to 85˚C for 10 minutes, followed by quickly chilling in ice water to prevent further denaturation. Unhydrolyzed and aggregated proteins were removed from the hydrolysates by centrifugation at 5000 x g for 10 minutes. The hydrolysates were adjusted to pH 7.5 and stored at -80˚C until further processing. Samples were taken before and after hydrolysis to determine protein/peptide content and degree of hydrolysis.

The degree of hydrolysis (DH) was determined by the o-phthaldialdehyde (OPA) method as described by Nielsen and others (2001). This method was chosen since, according to the authors, it is more accurate, is easier and faster to carry out, has a broader application range and is environmentally safer than other methods (Nielsen and others, 2001). This method is based on the reaction of OPA with primary amine groups and a sulfhydryl (SH) compound (dithiothreitol, DTT) to form a compound that will absorb light at 340nm. The degree of hydrolysis is defined by Equation 4-2, where DH is the degree of hydrolysis in percent, h_{tot} is the total number of peptide bonds per protein equivalent and h is the number of hydrolyzed bonds.

$$DH = \frac{h_{tot}}{h} * 100\% \quad (4\text{-}2)$$

The total number of peptide bonds h_{tot} is dependent on the amino-acid composition of the raw material. Nielsen and others (2001) provided a table to estimate h_{tot}, based on the raw material. For fish muscle myosin h_{tot} was estimated as h_{tot} = 8.6. To determine the number of hydrolyzed bonds from the absorbance value a standard was needed to translate the absorbance values into milliequivalents per gram protein of that standard. Serine was used as the standard and from the absorbance values the serine-NH_2 meqv per gram protein were calculated by Equation 4-3, where A is the respective absorbance value, 0.9516 meqv/L is the serine-NH_2 concentration, 0.1 is the sample volume in L, X is the gram of sample and P is the percent protein in the sample.

$$\text{Serine NH}_2 = \frac{\text{A}_{\text{sample}} - \text{A}_{\text{blank}}}{\text{A}_{\text{standard}} - \text{A}_{\text{blank}}} * 0.9516 \frac{\text{meqv}}{\text{L}} * 0.1\text{L} * \frac{100}{\text{X}} * \text{P} \quad (4\text{-}3)$$

From the serine-NH2 meqv value the amount of hydrolyzed peptide bonds h can be calculated by using Equation 4-4, where h is the number of hydrolyzed peptide bonds, Serine is the serine milliequivalents per gram protein (calculated by Equation 4-3) and α

and β are protein specific values which were also estimated for fish muscle myosin by the table provided by Nielsen and others (2001). For fish muscle protein α equals 1.00 and β equals 0.40.

$$h = \frac{(Serine - \beta)}{\alpha} \quad (4\text{-}4)$$

As mentioned earlier the degree of hydrolysis was calculated from the h_{tot} and h values by Equation 4-2.

The OPA reagent was prepared as follows:

- 7.620 g di-Na-tetraborate decahydrate and 200 mg SDS were dissolved in 150 ml deionized water
- The reagents were completely dissolved before continuing with the next step
- 160 mg OPA was dissolved in 4 ml ethanol
- OPA solution was transferred quantitatively to the first solution by rinsing with deionized water
- 176 mg DTT was added to the solution by rinsing with deionized water
- The solution was then made up to 200ml with deionized water

The serine standard was prepared by diluting 50 mg of serine standard (Sigma Chemical Co., St. Louis, MO) in 500 ml Deionized water to achieve 0.9516 meqv per Liter. The test samples of the hydrolysates were diluted with deionized water to achieve a protein/peptide concentration of 0.1 percent w/v. Three milliliters of OPA reagent were mixed with 400 µL of standard, sample or blank (deionized water) in test tubes and incubated at room temperature for exactly two minutes. The absorbance at 340 nm was read immediately after incubation. The typical absorbance value of the standard was 0.8 and for the blank 0.07.

Previous studies showed that in general the antioxidant capacities of the muscle protein hydrolysates increased with increasing DH, and a DH of 25% was the highest

level achieved in those studies. Therefore for this experiment the goal was to achieve the highest DH in a 12 hour period.

Fractionation of Atlantic Cod Muscle Myosin Hydrolysates

Since preliminary data shows that the highest activity is present in the peptide fractions of a molecular weight of 5,000 Da or less, all hydrolysates were fractionated by ultrafiltration, using an ultrafiltration cell with ultrafiltration membranes with 30,000 and 5,000 Da molecular weight cut-offs. Each hydrolysate was first transferred into an Amicon® 200 ml ultrafiltration cell (Model 202) with magnetic stirrer and a Millipore polyethersulfone ultrafiltration membrane with a Nominal Molecular Weight Limit (NMWL) of 30,000 Da. The chamber was pressurized with nitrogen to 40 psi and the filtration was monitored periodically. The filtration was stopped by releasing the pressure in the chamber when 90% of the hydrolysate where filtered. The filtrate was collected and stored at 4˚C for the second ultrafiltration step. The retentate was recovered from the chamber and the membrane was washed 3 times with sample buffer (10 mM phosphate, pH 6.6) equal to the volume of the retentate. The retentate was aliquoted and stored at -80˚C until further use. The filtrate was added to a second ultrafiltration cell with a Millipore polyethersulfone ultrafiltration membrane with a Nominal Molecular Weight Limit (NMWL) of 5,000 Da. The chamber was pressurized with nitrogen to 40 psi and the filtration was monitored periodically. The filtration was stopped by releasing the pressure in the chamber when 90% of the hydrolysate where filtered. The filtrate was collected, aliquoted and stored at -80˚C until further use. The retentate was recovered from the chamber and the membrane was washed 3 times with sample buffer (10 mM phosphate, pH 6.6) equal to the volume of the retentate. The retentate was aliquoted and stored at -80˚C until further use. This ultrafiltration

procedure resulted in 3 separate molecular weight (MW) fractions for each hydrolysate that were designated as follows: less than 5 kDa fractions were designated < 5 kDa, 5 to 30 kDa fractions were designated 5-30 kDa and larger than 30 kDa fractions were designated > 30 kDa. The peptide concentration of each hydrolysate fraction was determined by using the modified Lowry's method.

Protein and Peptide Assays

The Pierce® 660 nm Protein Assay from Thermo Scientific was used to determine the protein content during the enzyme separation and purification procedures and the myosin extraction procedure. It is a very quick and easy method to determine the total protein content of solutions with a range of 25 to 2000 µg/ml protein. As with many other methods its limitation is the inaccuracy of detecting low molecular weight proteins and peptides. For this reason this method was not used after the proteins were hydrolyzed. It is a single reagent method that can be used in test tube or microplate procedure. For the test tube procedure 1.5 ml of assay reagent and 0.1 ml of sample were mixed and incubated at room temperature for 5 minutes. The absorbance was read at 660 nm. Bovine serum albumin (BSA) was used to construct a standard curve.

The modified Lowry method (Bensadoun and Weinstein, 1976; Davis, 1988; Legler and others 1985; Lowry and others 1951; Ohnishi and Barr, 1978; Vallejo and Lagunas, 1970) was used to determine the protein/peptide content for all sample solutions containing the hydrolysates (whole or fractions) for further experiments. The modified Lowry method was performed using the Pierce® Modified Lowry Protein Assay Kit from Thermo Scientific. It is a two reagent procedure where the samples are first mixed with a cupric sulfate-tartrate solution in which the proteins form tetradentate copper-protein complexes, which then reduce the Folin-Ciocalteu reagent (added in second step) to

form a blue color compound that can be measured at 750nm. Like the 660nm assay this assay can be performed in a test tube or microplate mode. For the test tube procedure 0.2 ml of sample are mixed with modified Lowry's reagent and incubated at room temperature for 10 minutes. After incubation 100 µL of Folin-Ciocalteu reagent is added and the mixture is incubated for an additional 30 minutes at room temperature. The absorbance is then read at 750nm. Bovine serum albumin (BSA) was used to construct a standard curve.

To determine the molecular weight distribution of myosin as well as the whole and fractionated hydrolysates Sodium Dodecyl Sulfate – Polyacrylamide Gel Electrophoresis (SDS-PAGE) was performed. For the large MW myosin analysis Novex® 4-20% Tris-Glycine gels from Invitrogen™ were used. For the low MW peptide analysis of the hydrolysates and their fractions Novex® 10-20% Tricine gels from Invitrogen™ were used. Tricine gels were used since they give better separation and resolution for low MW proteins and peptides. Both types of gels were run on the XCell SureLock™ Mini-Cell System from Invitrogen™ and according to the sample preparation and running procedures provided with each gel type. The procedures are nearly identical up to the point that the sample and running buffer have to match the gel type used. All reagents were obtained from Invitrogen™ and specifically designed for this System. For each SDS-PAGE, samples were adjusted to 1mg/ml and 40 µL of sample were mixed with 50 µL of sample buffer and 10 µL of β-mercaptoethanol. The samples were heated to 85˚C for 3 minutes. 5 to 15 µL of sample or standard were added to each well and the gels were run for 90 minutes with 125 volts. Both types of gels were stained using Bio-Safe™ Coomassie G-250 Stain from Bio-Rad. A SDS-PAGE wide range molecular

weight standard was used for both gel as a reference to estimate the molecular weight of the peptide fractions (Schägger and Von Jagow, 1987).

Results

Separation and Purification of Trypsin, Chymotrypsin and Elastase

A solution of cod enzyme mixture in binding buffer A was prepared and centrifuged to separate any remaining insoluble particles from the enzyme solution. The enzyme solution had a clear but very dark orange appearance which suggested that this unpurified enzyme mixture still contained larger protein and pigment compounds. The first chromatography step seemed to separate most of the color pigment compounds from the enzyme solution, as the collected fractions with the highest enzyme activities were completely clear and colorless. Most of the colored compounds were trapped on the column and eluted during the Guanidine-HCl washing step. Figure 4-1 shows the chromatogram for the first enzyme purification step using the PBA Column. Unbound large molecular proteins eluted first (fractions 0-10) followed by the fractions containing the elastase activity (fractions 11-25). The addition of PBA in the elution buffer slowly released chymotrypsin and trypsin, which were found in fractions 55-70. Since with the beginning of the Guanidine-HCl wash the trapped colored compounds started to elute (fractions 65-90) only fractions 55-65 were collected and pooled to retain a solution containing only chymotrypsin and trypsin activities. This solution was called the CT/T fraction and was subsequently concentrated and applied to the PABA column to separate chymotrypsin and trypsin.

Fractions 11-25 from the PBA column were pooled and called the elastase fraction. The elastase fraction was concentrated, aliquoted and then stored at -80˚C until use for the hydrolysis experiment. Table 4-3 is the purification table for elastase. It

shows a 36% recovery of elastase activity with no residual trypsin activity and only traces of chymotrypsin activity.

The CT/T fraction was applied to the PABA column and separated into chymotrypsin and trypsin fractions. Figure 4-2 shows the chromatogram from the second chromatography step using the PABA column. Since the CT/T fraction contained little enzyme unrelated proteins, protein measurement at 280 nm was a great indicator of the fractions with the highest enzyme activities. Chymotrypsin started to elute from the column with the addition of NaCl in the elution buffer. The majority of chymotrypsin activity was around fractions 10-25, but it took a rather long wash (up to fraction 50) to elute the remaining chymotrypsin from the column. Trypsin was then eluted from the column using a 25 mM acetic acid solution. Trypsin eluted in only three fractions (56-58) from the column and was collected and pooled. Traces of chymotrypsin were still present in the collected trypsin fraction. It was decided that, rather than extend the NaCl wash to elute more chymotrypsin before eluting trypsin, the collected, pooled and concentrated trypsin would be treated with TPCK (N-Tosyl-L-Phenylalanine Chloromethyl Ketone), a chymotrypsin inhibitor, to eliminate the traces of chymotrypsin activity and simplify the separation procedure.

Only fractions 10-25 were collected and pooled to obtain the chymotrypsin fraction. Purification Table 4-1 shows a 15% recovery of chymotrypsin activity after two affinity chromatography steps and concentration by ultrafiltration. There were no measurable trypsin or elastase activities in the purified and concentrated chymotrypsin solutions. The solution was aliquoted and stored at -80˚C until used for hydrolysis.

Fractions 56-58 were collected and pooled as described before and the protein content and enzyme activities were measured. Purification Table 4-2 shows a 13% recovery of trypsin activity after two chromatography steps and concentration by ultrafiltration. There were no elastase activities and only traces of measureable chymotrypsin activities. The pooled and concentrated fractions were aliquoted and stored at -80˚C until used for hydrolysis.

Both chromatography procedures were repeated several times with similar results and the purified enzymes were pooled before further use. Trypsin and elastase were treated with 50 µM of TPCK to inhibit any remaining chymotrypsin activity.

Extraction of Atlantic Cod Muscle Myosin

Myosin was extracted from Atlantic cod (*Gadus morhua*), obtained from Save-On-Seafood (Tampa, FL). The fillets were trimmed and cleaned to remove blood stained or dark tissue. Only clean white muscle was used for the myosin extraction process. After completion of the extraction process myosin was recovered by centrifugation and the moisture content was determined at around 90%. Myosin was extracted in several batches, with each batch prepared from a fresh delivery of Atlantic cod (*Gadus morhua*), and each batch of myosin was vacuum sealed and frozen at -80˚C until further use. After each extraction the purity was analyzed by SDS-PAGE. Figure 4-3 shows the SDS-PAGE gel prepared after the last myosin extraction. In this gel the previously frozen myosin extracts were compared to the fresh extracted myosin to determine any changes during frozen storage. The visual analysis of the gel determined no differences between the frozen and the fresh extracted myosin. It can clearly be seen that the amount of actin in the myosin extracts was greatly reduced compared to the fresh whole muscle. Further the amount of heavy chain, and light chain myosin (1, 2 and 3)

increased. A small remaining amount of actin was to be expected compared to the study by Kristinsson (2001). Kristinsson (2001) compared several myosin extraction methods for Atlantic cod (*Gadus morhua*) and determined the method, used for this study, would result in the highest purity for myosin. A colorimetric analysis was performed using the ImageJ software to determine the ratio of each fraction, represented by a single band in the SDS-PAGE gel, for the myosin extracts and the untreated whole muscle. Figure 4-4 shows a sample of a profile plot for a single column analyzed from the gel shown in Figure 4-3. Each column in Figure 4-3 was analyzed in the same way. The peaks areas identified and the areas under the peaks defined and calculated. Table 4-4 shows the results of the colorimetric analysis of the gel shown in Figure 4-3. The analysis shows that amounts of heavy chain and light chain myosin increased compared to the whole muscle. The amounts were also comparable to results described by Kristinsson (2001), with heavy chain myosin close to 80%, light chain myosin 1 close to 2%, light chain myosin 2 close to 9% and light chain myosin 3 close to 5%. With 4-6%, the amount of remaining actin was a little bit higher as described by Kristinsson (2001), but it was definitely reduced from the 26% in whole muscle. The batches were combined prior to hydrolysis to ensure a homogenate mixture of extracted myosin for each hydrolysate.

Hydrolysis of Atlantic Cod Muscle Myosin

Myosin was hydrolyzed using the three separated enzymes, chymotrypsin, trypsin and elastase, and two different concentrations of the cod enzyme mixture (CEM). The concentrations of the cod enzyme mixture were chosen so that the overall enzyme activity matches that of the single enzymes (CEM low) and that the enzymes with the lowest activity in the mix would have a concentration equal to the single enzymes (CEM

high). In the CEM high hydrolysate, the activity of chymotrypsin exceeded 10 U per gram protein, while the activity of trypsin and elastase were around 2 U per gram protein. For all the other hydrolysates, separated enzymes and CEM low, the amount of enzyme added was set to 2 U per gram protein. All myosin/enzyme samples were hydrolyzed for 12 hours at room temperature and pH 8.5. A control sample was prepared that contained myosin in buffer at pH 8.5, which was subjected to 12 hour incubation at room temperature without enzymes added, to determine any effect of the incubation period on the myosin itself. All hydrolysate solutions started with a cloudy appearance as part of the myosin-in-buffer suspension. For the separated enzymes the solutions decreased in cloudiness during the incubation period while the CEM low and CEM high solutions became almost transparent. The control solution appeared unchanged. After inactivation of the enzyme at 85˚C, some protein fractions denatured and precipitated out in most hydrolysates except for the CEM high one. The CEM high hydrolysate remained clear even after inactivation. Precipitated proteins were removed by centrifugation and the clear hydrolysates were analyzed for protein/peptide content, degree of hydrolysis and peptide fraction profile with SDS-PAGE.

Figure 4-5 shows the SDS-PAGE analysis of all hydrolysates as well as the control sample and the untreated fresh myosin. The control sample and the untreated myosin show almost no differences, so it was decided that for further experiments the fresh myosin can be used as unhydrolyzed myosin control. The separated enzyme hydrolysates show a variety of peptide fractions starting at 66 kDa. The myosin specific bands around 205 kDa, 36 kDa, 23 kDa and 19 kDa almost disappeared. The CEM high hydrolysates show no bands, which means the resulting peptides were too small to be

detected on the SDS-PAGE gel. The CEM low hydrolysates were prepared later than the other hydrolysates and were not included in Figure 4-5. Figure 4-7, which shows the ultrafiltration results, shows a similar variety of smaller peptides below 45 kDa for the CEM low hydrolysate (larger than 30 kDa fraction).

The analysis of the protein content and the degree of hydrolysis (%DH) is shown in Table 4-5. The protein concentration of all hydrolysates was measured and adjusted to around 10 mg/ml for %DH analysis. Table 4-5 shows that no degree of hydrolysis could be detected in the unhydrolyzed myosin fractions, while the separated enzyme hydrolysates observed %DH ranging from 6.2 for chymotrypsin to 14.2 for trypsin. CEM low hydrolysates reached a degree of hydrolysis of almost 30% and the CEM high hydrolysate of nearly 43%. These high degrees of hydrolysis would explain the lack of larger peptide fractions detectable via SDS-PAGE analysis. The degree of hydrolysis achieved with CEM low concentration is comparable to results from Raghavan and Kristinsson (2009), who achieved under similar conditions and with the same enzyme mixture nearly 25% degree of hydrolysis with tilapia protein isolates. All hydrolysates were stored at 4˚C until further fractionation by ultrafiltration.

Fractionation of Atlantic Cod Muscle Myosin Hydrolysates

Since many studies show that low molecular weight peptides observe higher bioactive properties than larger fractions, all hydrolysates were fractionated by ultrafiltration into three molecular weight classes: less than 5 kDa, 5 kDa to 30 kDa and larger than 30 kDa. Since some of the subsequent bioactivity assays require protein/peptide concentrations of 1.0 mg/ml (or higher), the ultrafiltration procedure were conducted with great care and accuracy to ensure each fraction had a protein concentration of at least 1 mg/ml. The protein concentration of the <5 kDa fraction was

the determining factor, as this fraction cannot be further concentrated, unless by methods like lyophilization or chromatography, which could alter the peptide composition.

Figures 4-6 and 4-7 show the SDS-PAGE analysis of all ultrafiltered hydrolysate fractions. The molecular weight cut off (MWCO) limits for the two ultrafiltration steps are indicated and it can be seen that all hydrolysate fractions stayed within their respected limits. The control and untreated myosin were run as a comparison in the second gel (Figure 4-7).

Table 4-6 indicates the amount of hydrolysate fractions that were recovered after each ultrafiltration step and the protein/peptide concentration measured for each fraction. The 5- 30 kDa fraction of elastase hydrolyzed myosin had the lowest protein concentration and was therefore used undiluted in most subsequent experiments. All other hydrolysates fractions were aliquoted and two aliquots of each treatment were adjusted to 1.0 mg/ml to be used in further experiments. All aliquots and dilutions were stored at -80˚C until further use.

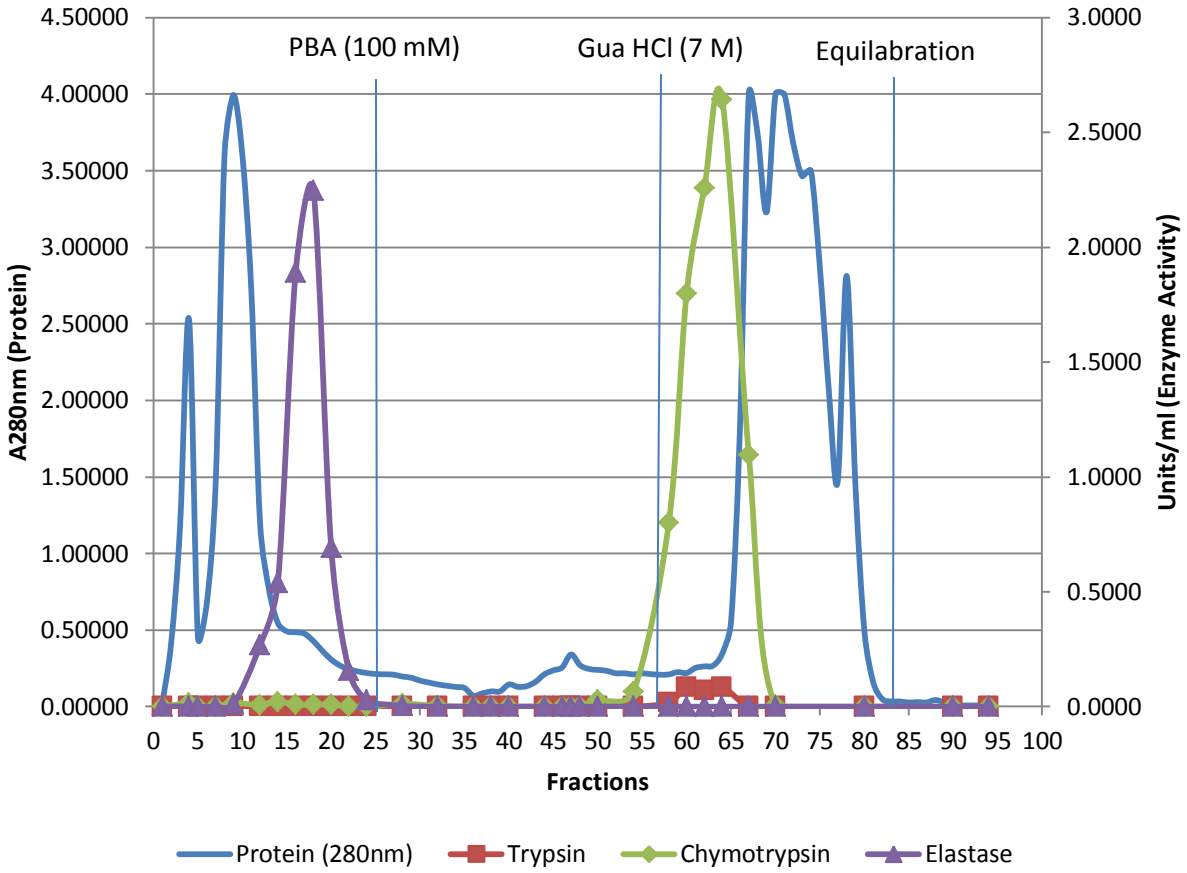

Figure 4-1. Chromatogram of cod enzyme mixture separated on a PBA Column Solid line without markers represents protein detection at 280nm. The square markers represent trypsin activity, the diamond markers represent chymotrypsin activity and the triangle markers represent elastase activity. The horizontal lines denote the different elution steps used.

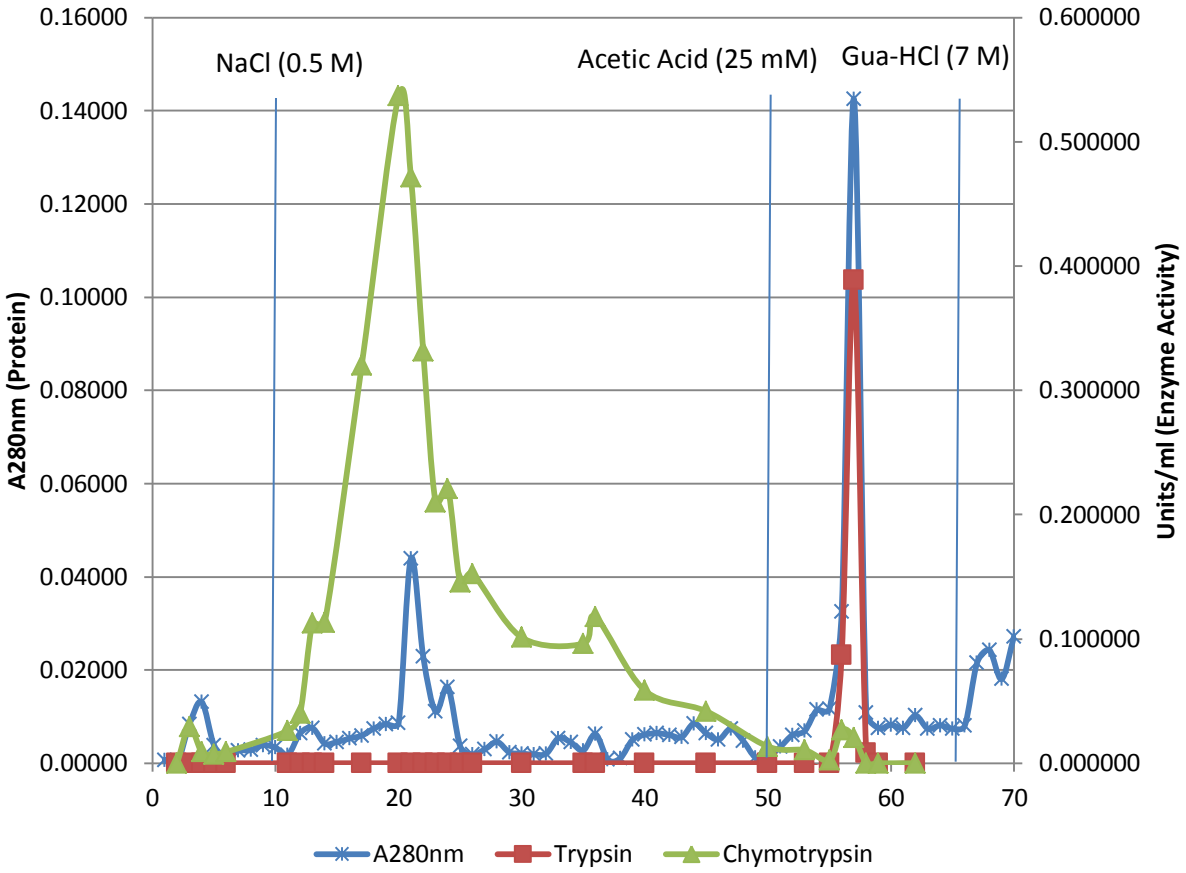

Figure 4-2. Chromatogram of chymotrypsin and trypsin separated on a PABA Column Solid line without markers represents protein detection at 280nm. The square markers represent trypsin activity and the triangle markers represent chymotrypsin activity. The horizontal lines denote the different elution steps used.

Table 4-1. Purification table for chymotrypsin from cod enzyme mixture

Separation Step	Volume [ml]	Protein [mg/ml]	Total Protein [mg]	Units [per mg]	Total Units	Yield [%]
CEM Solution	10	20	200	14.00	2800	100
Elastase Fraction (C1)	145	0.3	43.5		trace	
CT/T Fraction (C1)	170	0.4	68	20.00	1360	49
Conc. CT/T Fraction	9	7.1	63.9	23.00	1470	52
Chymotrypsin (C2)	140	0.3	42	8.70	365	13
Trypsin (C2)	120	0.15	18		trace	
Conc. Chymotrypsin	18	1.8	32.4	12.70	411	15
Conc. Trypsin	15	1.3	19.5		trace	
Conc. Elastase	18	2.1	37.8		trace	

Note: CT/T refers to the chymotrypsin and trypsin fraction that eluted together from column 1. This table shows that trace amounts (less than 0.01% in yield) of chymotrypsin were present in the concentrated trypsin and elastase fractions.

Table 4-2. Purification table for trypsin from cod enzyme mixture

Separation Step	Volume [ml]	Protein [mg/ml]	Total Protein [mg]	Units [per mg]	Total Units	Yield [%]
CEM Solution	10	20	200	0.75	150	100
Elastase Fraction (C1)	145	0.3	43.5		none	
CT/T Fraction (C1)	170	0.4	68	0.75	51	34
Conc. CT/T Fraction	9	7.1	63.9	0.70	45	30
Chymotrypsin (C2)	140	0.3	42		none	
Trypsin (C2)	120	0.15	18	1.20	22	14
Conc. Chymotrypsin	18	1.8	32.4		none	
Conc. Trypsin	15	1.3	19.5	1.00	20	13
Conc. Elastase	18	2.1	37.8		none	

Note: CT/T refers to the chymotrypsin and trypsin fraction that eluted together from column 1. This table shows that no trypsin was detected in the concentrated chymotrypsin or elastase fractions.

Table 4-3. Purification table for elastase from cod enzyme mixture

Separation Step	Volume [ml]	Protein [mg/ml]	Total Protein [mg]	Units [per mg]	Total Units	Yield [%]
CEM Solution	10	20	200	1.20	240	100
Elastase Fraction (C1)	145	0.3	43.5	2.00	87	36
CT/T Fraction (C1)	170	0.4	68		none	
Conc. CT/T Fraction	9	7.1	63.9		none	
Chymotrypsin (C2)	140	0.3	42		none	
Trypsin (C2)	120	0.15	18		none	
Conc. Chymotrypsin	18	1.8	32.4		none	
Conc. Trypsin	15	1.3	19.5		none	
Conc. Elastase	18	2.1	37.8	2.30	87	36

Note: CT/T refers to the chymotrypsin and trypsin fraction that eluted together from column 1. This table shows that no elastase was detected in the concentrated chymotrypsin or trypsin fractions.

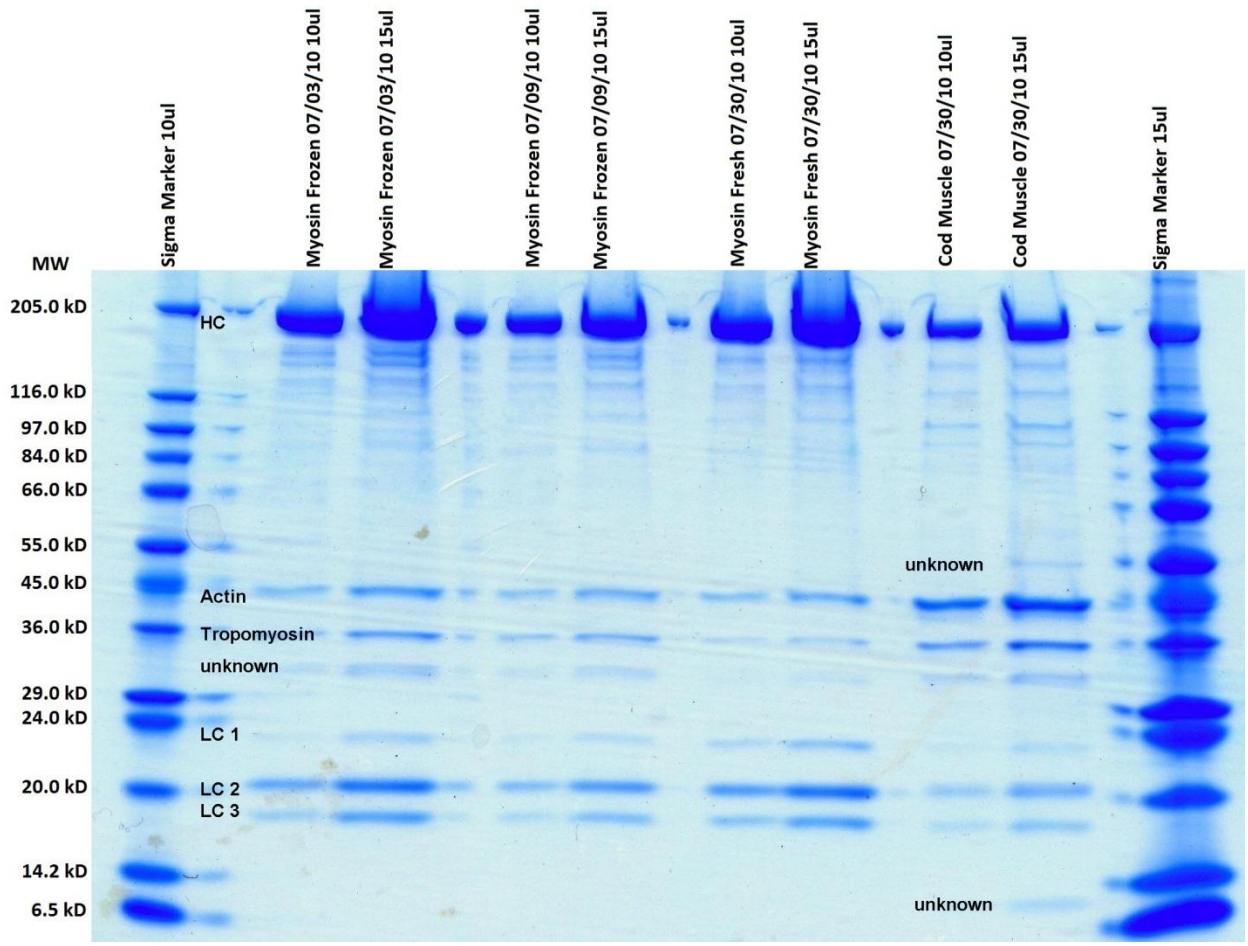

Figure 4-3. SDS-PAGE analysis of myosin extracts The first and last column show the Sigma wide range molecular marker. Columns 3-4 and 6-7 show the profile of myosin extracted and frozen at -80˚C. Columns 9-10 show the profile of fresh extracted myosin. Columns 12-13 show the profile of unaltered cod muscle protein. HC describes Heavy Chain Myosin. LC 1-3 describes Light Chain Myosin 1 to 3.

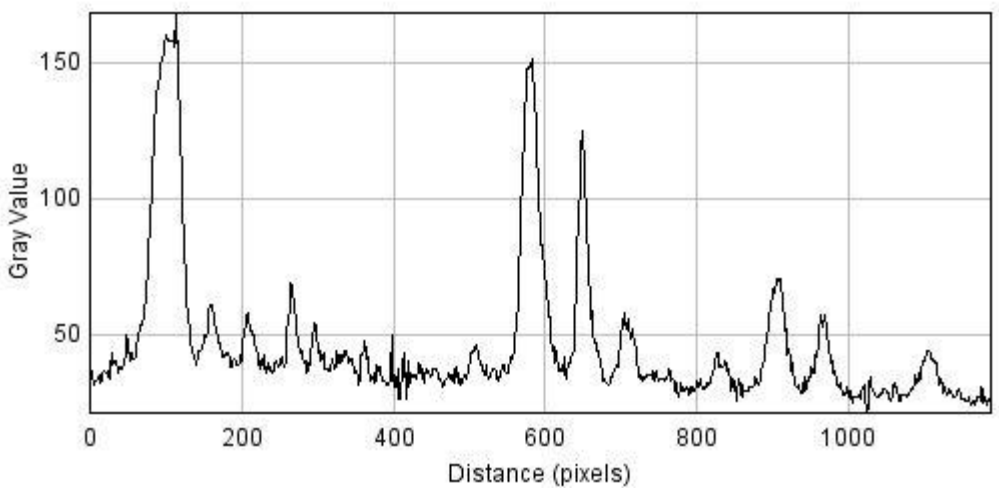

Figure 4-4. Sample profile plot of the colorimetric analysis of the myosin SDS-PAGE gel This image was generated with the ImageJ software, provided free by the National Institute of Health. The areas under the peaks were detected with the ImageJ software and the percentage of the major protein fractions calculated.

Table 4-4. Molecular weight distribution of extracted cod myosin

MW (kDa)	Component	Myosin 070310 Frozen	Myosin 070910 Frozen	Myosin 073010 Fresh	Cod Muscle 073010
200.0	Myosin HC	70.61%	70.58%	74.11%	40.54%
55.0	?				1.06%
43.0	Actin	5.67%	7.38%	4.16%	26.05%
35.5	Tropomyosin	3.49%	4.26%	1.72%	11.73%
32.0	?	2.05%	1.71%		3.52%
25.0	Myosin LC1	1.93%	1.52%	2.58%	1.51%
19.5	Myosin LC2	10.81%	9.81%	11.3%	8.57%
18.0	Myosin LC3	6.04%	4.73%	6.13%	4.17%
10.0	?				2.86%
Total	Myosin	89.39%	86.64%	94.12%	54.79%
Total	all components	100.6%	99.99%	100%	100.01%

Note: Myosin was extracted from three different batches of Atlantic cod (*Gadus morhua*) on three separate days. The first two batches were frozen at -80˚C. The last batch was not frozen prior to SDS-PAGE analysis. The fresh and frozen myosin extracts were analyzed together by SDS-PAGE analysis to detect any differences in protein composition that might result from storage at -80˚C.

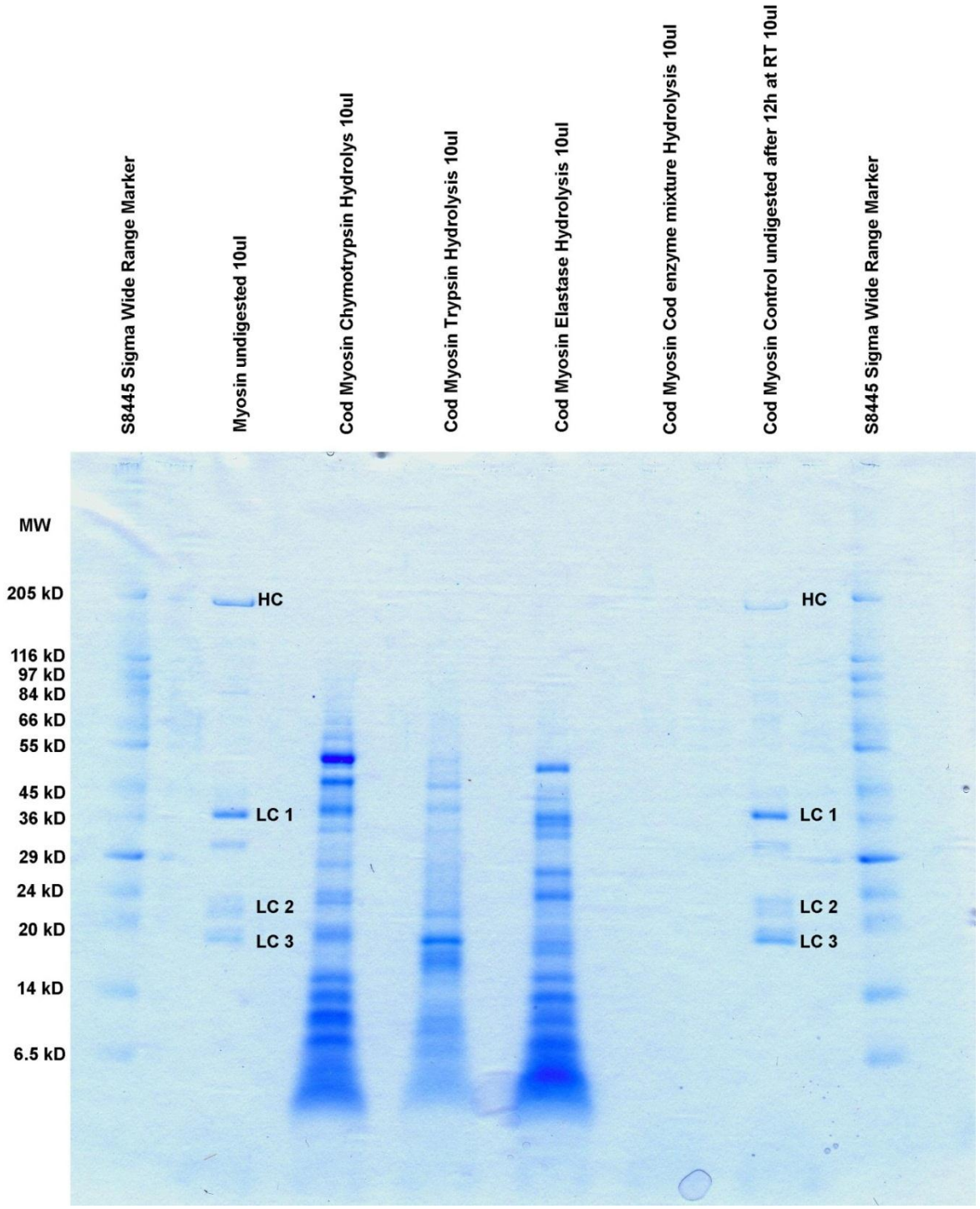

Figure 4-5. SDS-PAGE analysis of myosin hydrolysates The first and last columns show the Sigma wide range molecular marker. Column 3 shows the unaltered myosin and column 13 shows the unhydrolyzed myosin that was subjected to the same conditions as the hydrolysates. Column 5, 7 and 9 show the individual enzyme hydrolysates of chymotrypsin, trypsin and elastase respectively. Column 11 shows the cod enzyme mixture high hydrolysate.

Table 4-5. Myosin hydrolysate analysis

	Protein Concentration [mg/ml]	Degree of Hydrolysis [%]	Amount of Hydrolysate [ml]
Whole Myosin	9.8	0.00	N/A
Control	10.2	0.00	200
Chymotrypsin	9.0	6.16	270
Trypsin	12.1	14.16	225
Elastase	10.1	12.29	240
CEM high	9.3	42.78	250
CEM low	9.1	29.89	250

Note: This table shows the protein concentration, the degree of hydrolysis and the amount of hydrolysate recovered after hydrolysis, enzyme inactivation and centrifugation. These hydrolysates were used unaltered in the subsequent fractionation (ultrafiltration) step.

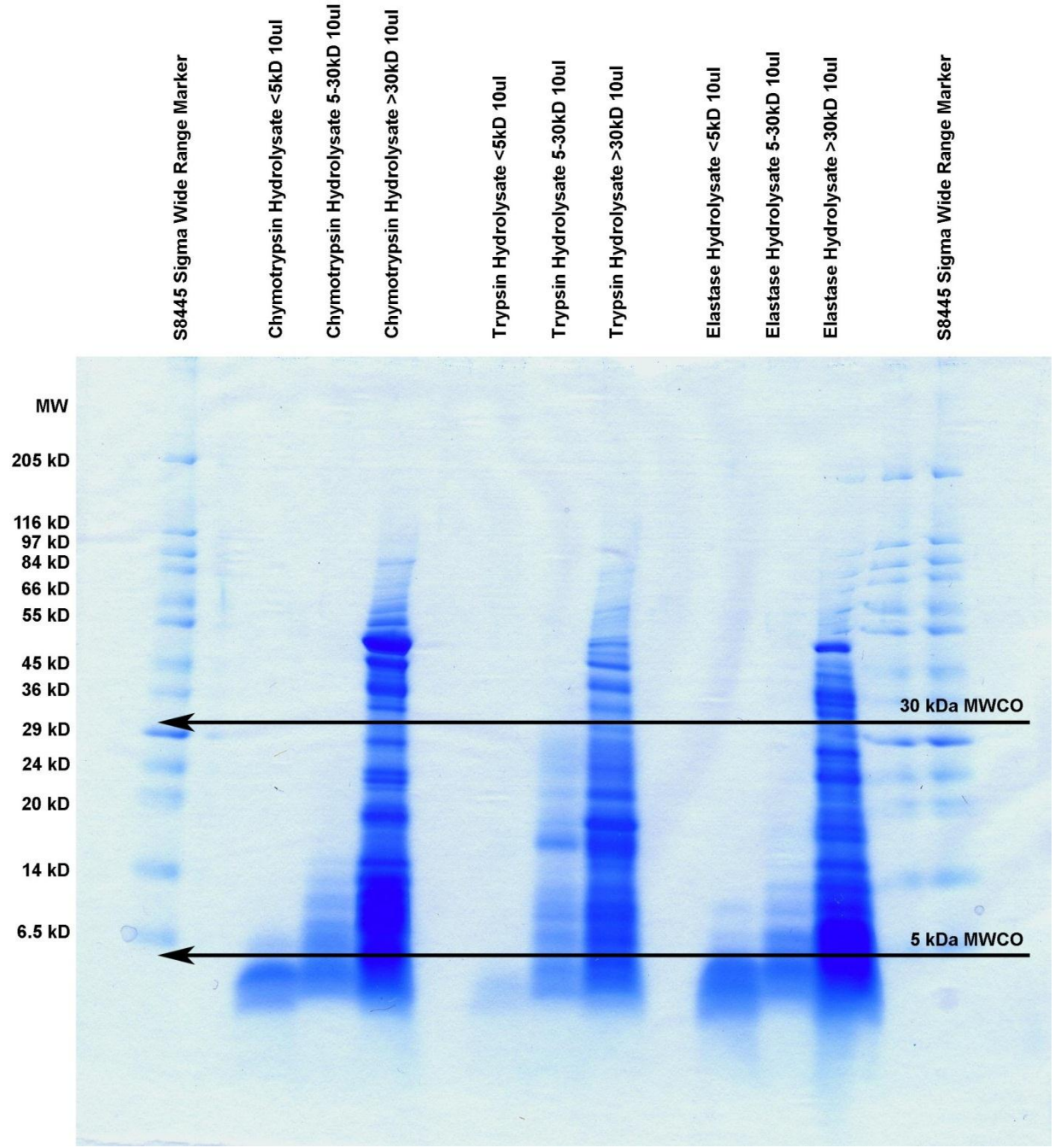

Figure 4-6. SDS-PAGE analysis of myosin hydrolysate fractions A The first and last columns show the Sigma wide range molecular marker. Samples are grouped to show the less than 5 kDa, 5 to 30 kDa and larger than 30 kDa fractions together. This gel shows the chymotrypsin, trypsin and elastase digested myosin hydrolysates, fractionated by ultrafiltration.

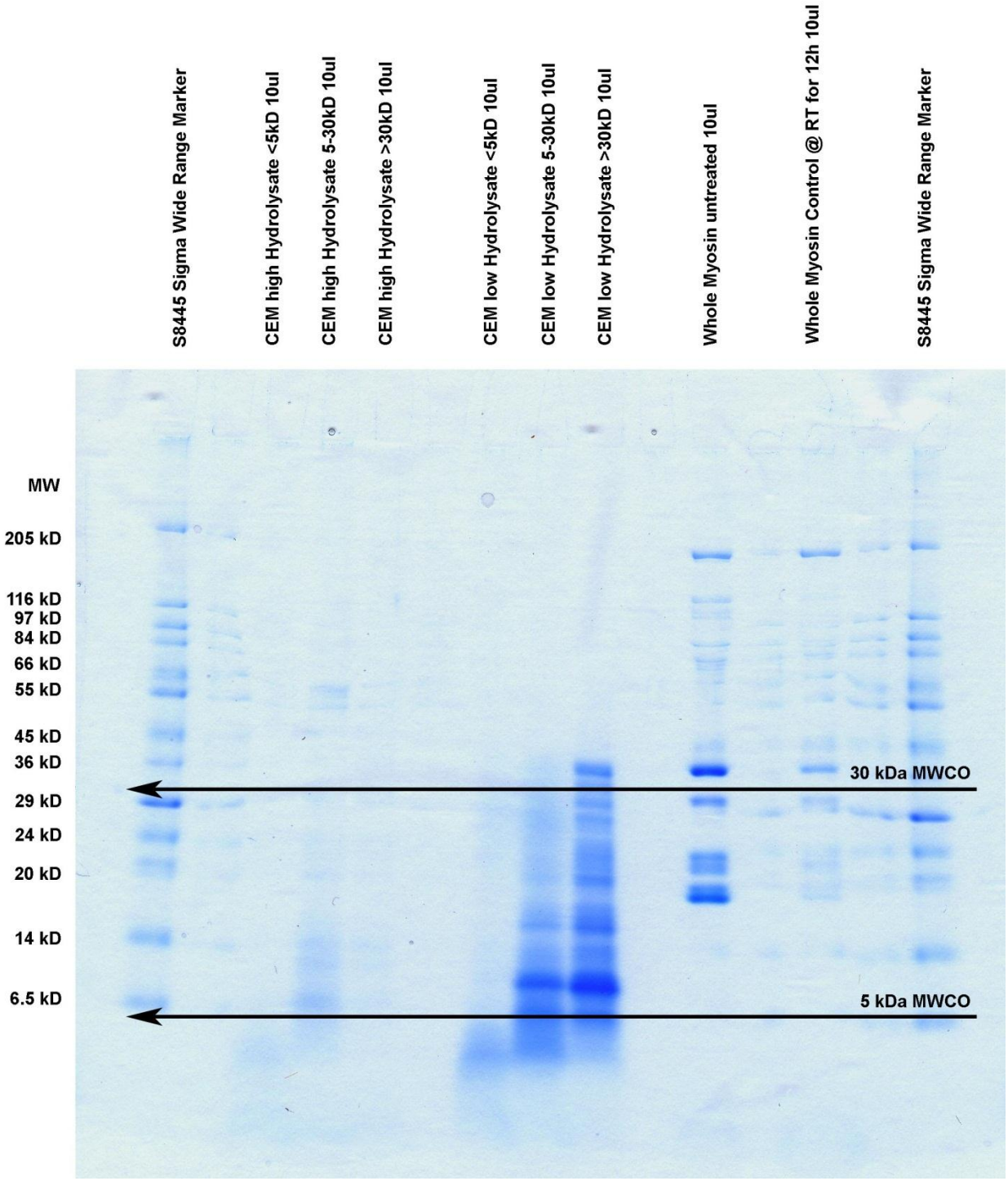

Figure 4-7. SDS-PAGE analysis of myosin hydrolysate fractions B The first and last columns show the Sigma wide range molecular marker. Samples are grouped to show the less than 5 kDa, 5 to 30 kDa and larger than 30 kDa fractions together. This gel shows the cod enzyme mixture low and high concentration digested myosin hydrolysates, fractionated by ultrafiltration. The last two columns show the unfractionated myosin control samples.

Table 4-6. Myosin hydrolysate fractions analysis

	Protein Concentration [mg/ml]	Amount Recovered [ml]
Chymotrypsin <5kD	1.30	200
Chymotrypsin 5-30kD	1.12	200
Chymotrypsin >30kD	8.76	200
Trypsin <5kD	3.55	155
Trypsin 5-30kD	3.45	150
Trypsin >30kD	9.45	180
Elastase <5kD	1.69	155
Elastase 5-30kD	1.04	120
Elastase >30kD	8.92	190
CEM high <5kD	8.17	210
CEM high 5-30kD	3.53	135
CEM high >30kD	2.77	125
CEM low <5kD	6.41	185
CEM low 5-30kD	5.34	135
CEM low >30kD	4.66	130

Note: This table shows the protein concentration and the amount of the hydrolysate fractions recovered after ultrafiltration with 30 kDa and 5 kDa MWCO membranes. These hydrolysate fractions were adjusted to 1 mg/ml protein content with sample buffer (10 mM Phosphate, pH 6.6) and used for all bioactivity assays and mass spectrometry analysis.

CHAPTER 5
DETERMINATION OF ANTIOXIDANT PROPERTIES OF COD MYOSIN HYDROLYSATES

Material and Methods

All chemical antioxidant assays were performed at the Biomolecular Research Laboratory at Matis Biotechnology Centre in Iceland. The laboratory has successfully adopted the antioxidant assays described below for fish protein hydrolysates and performs these assays routinely with repeatable results.

Oxygen Radical Absorbance Capacity

The method that was used for this assay was a method adapted from Huang and others (2002) for a 96-well fluorescent microplate reader. The basic principle of this assay is to monitor the inhibition of decay of fluorescein in the presence of the peroxyl radical generator AAPH (2,2'azobis [2-aminidinopropane] dihydrochloride).

The ORAC assay was performed with slight modifications on a POLARstar Optima (BMG Labtech., Offenburg, Germany) microplate reader. Different dilutions of Trolox (50µM-3,125µM) were prepared in phosphate buffer (10 mM, pH 7.4). All peptide samples were adjusted to 1.0 mg/ml with phosphate buffer (10 mM, pH 7.4). In every working well of a black opaque micro-plate (200 µL, 96 wells, MJ Research, USA) the following was pipetted in triplicates: 1) 60 µL of 10 nM fluorescein solution; 2) 10 µL of Trolox dilutions for standard; 10 µL of sample solution; 10 µL of phosphate buffer for blank. The micro-plate was incubated for 15 min at 37°C without shaking in the POLARstar Optima. After incubation 30 µL of 120 mM AAPH solution was quickly added manually using a multi-channel pipette. The fluorescence was recorded every 0.5 min for the first 40 cycles and every min for the last 60 cycles. The filters used for excitation were 485 nm and for emission were 520 nm. The total time for the

measurement was 80 min. The antioxidant curves (fluorescence versus time) were normalized. The area under the fluorescence decay curve (AUC) was calculated by the normalized curves with the following Equation 5-1, where f0 was the fluorescence reading at the initiation of the reaction and f79 was the last measurement

$$AUC = \left(0.5 + \frac{f0.5}{f0} + \cdots + \frac{f19.5}{f0}\right) * 0.5 + \left(\frac{f21}{f0} + \cdots + \frac{f78}{f0}\right) + 0.75 * \frac{f20}{f0} + 0.5 * \frac{f79}{f0} \quad (5\text{-}1)$$

The net AUC was obtained by subtracting the AUC of the blank from that of a sample or standard. The ORAC value was calculated and expressed as micromoles of Trolox equivalents per gram of protein (μmol of TE/g protein) using the calibration curve of Trolox. All samples were run in triplicates on each plate and duplicate plates were run in this experiment. The unhydrolyzed control sample was not used due to insolubility issues.

DPPH Radical Scavenging Ability

The ability of the hydrolysates to scavenge diphenylpicrylhydrazyl (DPPH) radicals was measured by using the method described by Bersuder and others (1998) and Wu and others (2003) with a slight modification. This assay is useful since it measures the ability of the peptides to act as free radical scavengers, as we can directly correlate this to the measured decomposition of the DPPH radical.

Peptide solutions (1.0 mg/ml) in phosphate buffer (10 mM, pH 6.6) were diluted with ultra-pure water to reach a concentration of 0.5 mg/ml. The dilution step was necessary since it was discovered during initial experiments that the 10 mM phosphate buffer solution (the carrier for the peptide samples) causes slight disturbance issues with the DPPH test solution. A 50% dilution of the phosphate buffer resolved the incompatibility issues but still allowed for sufficient peptide concentration to perform the

test. Therefore 150 µL of the diluted peptide solutions were mixed with 60 µL of 2,2 diphenyl-1- picryhydrazyl (DPPH) in 0.02% methanol solution, 150 µL of water/phosphate buffer (1:1) instead of peptide solutions was used as blank, and 60 µL of methanol was used instead of DPPH solution as control. This procedure was performed in microplates and the test solutions were incubated at room temperature in the dark for 30 min. The absorbance of the test solutions was read at 520 nm using POLARstar Optima (BMG Labtech, Offenburg, Germany) microplate reader. The scavenging effect was calculated as with Equation 5-2, where A_{blank} is the absorbance of the blank, A_{sample} is the absorbance of the sample and $A_{control}$ is the absorbance of the control at 520 nm.

$$\% \text{ inhibition} = \frac{Ablank-(Asample-Acontrol)}{Ablank} \times 100 \quad (5\text{-}2)$$

All samples were run in triplicates on each plate and duplicate plates were run in this experiment. The unhydrolyzed control sample was not used due to insolubility issues.

Reducing Power of Antioxidants Assay

The reducing power was measured as described by Benjakul and others (2005). Fifty microliters of peptide solutions (1.0 mg/ml) in phosphate buffer (10mM, pH 6.6) were mixed with 250 µL of phosphate buffer (0.2 M, pH 6.6) and 250 µL of 1% potassium ferricyanide [$K_3Fe(CN)_6$]. After 30 min incubation at 50°C, 250 µL of 10% trichloroacetic acid was added and the mixture was centrifuged at 4500 *g* for 10 min. The supernatant (200 µL) was mixed with 40 µL of ferric chloride solution (0.1%) and the absorbance was measured at 700 nm. The relative activity of the sample was

calculated in relation to the activity of ascorbic acid standards (0-200 µg/ml) and the results were expressed as mg of ascorbic acid equivalents (ASE) per gram of extract.

All samples were run in triplicates on each plate and duplicate plates were run in this experiment. The unhydrolyzed control sample was not used due to insolubility issues.

Ferrous Ion Chelation Ability

Reactive oxygen species (ROS) can be produced by transition metals, such as Fe^{2+} and Cu^{2+}. These ROS can then, for example, catalyze lipid oxidation. To assess the iron chelating ability of the peptides, a modified procedure, originally described by Seth and Mahoney (2001) was used. The soluble iron content in the supernatant was determined by the ferrozine method described by Carter (1971) and then compared to the starting solution. The entire procedure was performed as described by Decker and Welch (1990) with minor modifications.

Peptide solutions (1.0 mg/ml) in phosphate buffer (10 mM, pH 6.6) were diluted with ultra-pure water to reach a concentration of 0.5 mg/ml. The dilution step was necessary since it was discovered during initial experiments that the 10 mM phosphate buffer solution (the carrier for the peptide samples) causes slight disturbance issues with the ferrous ion chelating ability test. A 50% dilution of the phosphate buffer resolved the incompatibility issues but still allowed for sufficient peptide concentration to perform the test.

One hundred fifty microliters of sample solution (0.5 mg/ml) were mixed with 5 µL of 2 mM $FeCl_2$. The reaction was initiated by the addition of 10 µL of 5 mM ferrozine. After incubation for 30 min at room temperature, the absorbance was measured at 560 nm using the microplate reader (POLARstar OPTIMA, BMG Labtech, Offenburg,

Germany). Distilled water (100 µL) instead of sample solution was used as a control. Distilled water (10 µL) instead of ferrozine solution was used as a blank. L-ascorbic acid, citric acid and EDTA-Na_2 were used as reference standards. The ferrous ion-chelating ability was calculated by Equation 5-3, where A_0 was the absorbance of the control, A_1 was the absorbance of the sample or standard and A_2 was the absorbance of the blank.

$$Ferrous\ ion\ chelating\ ability\ (\%) = \frac{A_0-(A_1-A_2)}{A_0} * 100\% \quad (5\text{-}3)$$

All samples were run in triplicates on each plate and duplicate plates were run in this experiment. The unhydrolyzed control sample was not used due to insolubility issues.

Cellular Antioxidant Activity Assay

The cellular antioxidant activity (CAA) assay is a newly developed method to determine the antioxidant capabilities of a compound in an in vitro cellular model system. A procedure, described by Wolfe and Liu (2007), was used with modifications. The CAA assay was performed at the Cell Culture Laboratory at Matis Biotechnology Centre in Saudarkrokur, Iceland and the following descriptions are based on the procedures established by that laboratory.

A cytotoxicity assay was performed initially to determine whether the hydrolysate samples have any negative effect on cell growth and viability. The CAA assay was then performed with the sample peptides to determine the antioxidant activity. HepG2 human hepatocellular carcinoma cells were used for the cytotoxicity assay and the CAA assay. The HepG2 cells were maintained in Minimum Essential Medium α (MEM α), supplemented with 10% (v/v) heat inactivated Fetal Bovine Serum (FBS), penicillin (50

U/ml) and streptomycin (50 µg/ml). The HepG2 cells were obtained from the American Type Culture Collection (ATCC No. HB-8065), the MEM α, the FBS, the penicillin and the streptomycin were obtained from GIBCO™ by Invitrogen™. HepG2 cells were incubated at 37˚C in a fully humidified environment under 5% CO_2 and cells at passage 80 to 100 were used for the cytotoxicity and CAA assays. Cells were subcultured at 3-5 day intervals before reaching 90% confluency.

For the cytotoxicity assay, HepG2 cells were seeded at 6×10^4/well on a black 96-well plate (BD Falcon™) in 100 µL of 10% FBS MEMα growth medium and incubated for 24 h at 37°C. The medium was removed and 100 µL of new medium added. The cells were then exposed to different concentrations of sample peptides in 100 µL of medium and incubated at 37°C for 24 h. After incubation, the medium containing the sample peptides was discarded and the cell viability was evaluated by exposure to 100 µL AlamarBlue® (Invitrogen™) solution (10% in 10% FBS MEMα growth medium) at 37°C for 4 h. Finally, the fluorescence was measured at excitation 570 nm and emission 610 nm (Page and others 1993) using POLARstar OPTIMA (BMG Labtech, Offenburg, Germany). Control cells were exposed to AlamarBlue® but not to the sample peptides. The percentage of viable cells in the population of each concentration was calculated as % Mortality = (100-% viability), where: % viability = (Mean fluorescence of treated cells)/(Mean fluorescence of control cells) × 100.

The cellular antioxidant assay was performed on sample peptides using HepG2 cells at a density of 6×10^4/well using black 96-well plates (BD Falcon™) in 100 µL growth medium/well according to Wolfe and Liu (2007) and Samaranayaka and others (2010) with minor modifications. Twenty four hours after seeding, 100 µL of DCFH-DA

(2',7'-dichlorofluorescein diacetate) probe (1 µM in Hanks Balanced Salt Solution(HBSS)) was added to the cells and incubated at 37°C in the dark for 30 min. Cells were then treated with different concentrations of sample peptides and incubated for 1 hour at 37°C. This was followed by the addition of 100 µL of 2,2'-Azobis (2-methylpropionamidine) dihydrochloride (AAPH) (500 µM in HBSS) to the cultured cells after removal of the test compounds. Fluorescence readings (excitation = 493 nm, emission = 527 nm) were recorded using a POLARstar OPTIMA (BMG Labtech) every 10 min for 2 h after addition of AAPH. Each plate included four replicates of control and blank wells: Blank wells contained cells exposed to only the DCFH-DA probe. The control consisted of cells with DCFH-DA probe and the AAPH peroxyl radical initiator added but in the absence of any sample peptides.

Trolox, a powerful antioxidant, was used simultaneously with the peptide samples to compare the antioxidative activity. Antioxidative activity was expressed as % inhibition of AAPH radical based on the uninhibited control measurement after 120 minutes. Equation 5-4 shows the calculation, where $F_{Control}$ is the average fluorescence for the control wells at 120 minutes and F_{Sample} is the average fluorescence of the sample wells at 120 minutes.

$$\%\ AAPH\ inhibition = \frac{(F_{Control} - F_{Sample})}{F_{Control}} * 100\% \quad (5\text{-}4)$$

Statistical Analysis

Simple one-way analysis of variance (ANOVA) was used to determine significant differences between all treatments and fractions. When significant differences among the sample means were detected Tukey's Studentized Range (HSD) test was used to

do a pair wise comparison between these sample means. The level of significance for all ANOVA and Tukey's test was set to $\alpha = 0.05$.

Results

Oxygen Radical Absorbance Capacity

The Oxygen Radical Absorbance Capacity (ORAC) of the hydrolysate fractions was determined and expressed in µM of Trolox equivalents per gram protein. Figure 5-2 shows the ORAC results for all hydrolysate fractions. Except for trypsin, the <5 kDa fraction showed the highest oxygen radical absorbance capacity within their respective groups, although there was no significant ($p < 0.05$) difference found between the low (<5 kDa) and medium (5 -30 kDa) molecular weight fractions for chymotrypsin, trypsin and elastase. For chymotrypsin and trypsin the high molecular weight fraction had significantly ($p < 0.05$) lower ORAC values than their low and medium molecular weight fractions. CEM low and high (less than 5 kDa fraction) had significantly ($p < 0.05$) higher ORAC values than the low molecular weight fractions of the single enzyme digests, with CEM high having the highest value. The medium and low molecular weight fractions of CEM high and low were either similar or higher in ORAC values than the low molecular weight fractions of the single enzyme digests.

The CEM high hydrolysate showed a very high degree of hydrolysis and no bands above 5 kDa were visible on the SDS-PAGE analysis, which may suggest that during the ultrafiltration process the same small peptides were retained on either side of the membranes and all fractions observe a similar peptide composition, resulting in similar antioxidant capacity values, especially above the 5 kDa membrane, where a kind of concentration step might have occurred. It may further be assumed that a similar

process took place for all other fractions and therefore some of the antioxidant activity may be attributed to remaining low molecular peptides in the larger fractions.

However all samples follow the well-known pattern that low molecular weight peptides show higher antioxidative activity than larger fractions and the antioxidative activity follows also quite similar the % degree of hydrolysis as shown in Table 4-5. Supporting results were found in several studies involving marine derived peptides (Bougatef and others, 2009; Kim and others, 2007; Sampath and others, 2011). Compared to other food sources such as fruits and vegetables, the ORAC values of myosin derived peptides are very high (between 800 and 1800 Trolox equivalents per gram protein), considering typical ORAC values from 10 to about 300 µmol Trolox equivalents per gram dried fruit or vegetable matter (Wang and others 1996; Ou and others 2002b). Even recently published studies on fish protein hydrolysates from saithe, shrimp, loach and Pacific hake reported lower ORAC values (between 10 and 300 Trolox equivalents per gram protein) (Halldórsdóttir and others 2011; Jensen and others 2009; Samaranayaka and others, 2010; You and others 2011). It is possible that the removal of pro-oxidants and other undesired compounds, such as phospholipids, through the myosin extraction process increased the oxygen radical absorbance capacity of the myosin hydrolysates compared to other less purified fish muscle protein systems.

DPPH Radical Scavenging Ability

The DPPH radical scavenging ability of all fractions was determined and compared to the uninhibited DPPH reaction and expressed as percent DPPH inhibition. Figure 5-3 shows the results from the DPPH radical scavenging assay. The control sample was not compatible with this assay, as it caused precipitation of the DPPH

compound and the protein. It was therefore assumed that it cannot be measured for DPPH radical scavenging ability. The fractions of the five hydrolysates were measured with no interference. It can be seen that the low molecular fractions of the hydrolysates usually show higher scavenging activity than the larger fractions. Except for elastase, all other low molecular weight fractions are significantly ($p < 0.05$) different from the higher molecular weight fractions within their treatment groups. When focused on the low molecular weight fractions, chymotrypsin shows the highest DPPH scavenging activity, significantly ($p < 0.05$) different from all other fractions except the medium molecular fraction of CEM high. Only in the elastase and the CEM high measurements were the scavenging abilities of the low fraction equal or even lower than that of the larger fractions. It is surprising that the low molecular weight fraction of CEM high observed such a low DPPH radical scavenging ability, but it was consistent in all replicates. Further replication of the entire experiment may be advised to determine this phenomenon. Unfortunately DPPH radical scavenging results are difficult to compare, since protocols and procedures can be quite different between laboratories and the amount of DPPH vs. sample concentration is often poorly reported. The measurement of %DPPH radical scavenging ability allows only for comparison between samples of the same study; however, overall trends can be reported and compared. Similar to the ORAC assay most studies report that low molecular weight peptides observe higher DPPH radical scavenging ability than higher molecular weight fractions, which is consistent with the findings in this study (Pihlanto and others, 2008; Li and others, 2008; Bougatef and others, 2009; Sampath and others, 2011). It is difficult to compare exact values between this study and other published studies, since DPPH radical scavenging

results are usually not reported based on sample concentration. Therefore a finding of 50% DPPH inhibition for a sample with a protein concentration of 1.5 mg/ml in one study cannot be compared to the 30 % DPPH inhibition reported for a protein concentration of 0.5 mg/ml in another; most studies did not determine dose dependent relationships and used their assay merely to compare treatments within their respective experiments. For example, Halldórsdóttir and others (2011) reported around 30% DPPH inhibition for two different fish protein hydrolysates (FPH at 1.5 mg/ml) that were diluted in water for the DPPH assay, while Sampath and others (2011) reported up to 60% DPPH inhibition for hydrolysates (1.0 mg/ml) derived by *in vitro* gastrointestinal digestion of horse mackerel. Limited studies have been performed to study the effect peptides derived in a model system with a single protein source and separated purified enzymes; therefore it is hard to find comparable literature results. Some articles have been published with the purpose to detect novel peptides derived by different individual or mixed enzymes, but their discussion usually focuses on the most potent enzyme mixture to produce bioactive peptides and further results regarding individual enzyme hydrolysates are of not shown (Qian and others, 2008; Je and others 2007; Kim and others, 2007; Mendis and others 2005).

Reducing Power of Antioxidants Assay

The reducing power of all hydrolysate fractions was measured and expressed in mg of ascorbic acid equivalents per g protein. Figure 5-4 shows the results of the reducing power assay for all hydrolysate fractions. Similar to the DPPH assay, the control sample was not compatible with the assay and therefore not measured. The results show nearly no differences in reducing power between the fractions of each individual hydrolysate, but it seems that the chymotrypsin hydrolysates have slightly

higher reducing power than the remaining hydrolysates. The chymotrypsin medium and high molecular weight fractions are significantly ($p < 0.05$) higher than most other treatments and fractions. Probably some kind of sample contamination, which could not be resolved for analysis, caused the extreme low value for the low molecular weight trypsin fraction. Surprisingly CEM high observed the lowest reducing power values among all hydrolysates except for the trypsin less than 5 kDa fraction. It is hard to speculate whether a high degree of hydrolysis has a negative effect on the reducing power ability of myosin peptides as compared to the amino acid composition and molecular size of the peptides. Wu and others (2003) showed in a study with mackerel (*Scomber austriasicus*) that the reducing power increased with increasing hydrolysis time for both autolysation and hydrolysation with Protease N, which would assume an increase in %DH with prolonged hydrolysis time. Their results are contradictive of the findings in this assay, where the reducing power decreases with increasing %DH. Again it is difficult to compare measured values for reducing power assays, since the units of measurement vary from study to study. Wu and others (2003), for example, reported the absorbance at 700 observed for different samples at the end of their assay, while Jensen and others (2009) performed the FRAP (ferric reducing antioxidant power) assay on shrimp and saithe hydrolysates and reported their results in Trolox equivalents per gram protein. The choice of enzyme seemed to be less important for the reducing power ability, since there was no significant ($p < 0.05$) difference between the individual enzymes and the low concentration cod enzyme mixture (CEM), which observe similar degrees of hydrolysis.

Ferrous Ion Chelation Ability

The metal chelating abilities of the hydrolysates were measured using the ferrous ion chelating ability assay and expressed as percent iron chelation compared to the un-chelated reaction. Figure 5-5 shows the results of the ferrous ion chelating ability assay. The control sample was again not measured do to incompatibilities with the assay procedure. Similar to the reducing power assay results there was little difference observed between the fractions of each hydrolysate. Most hydrolysates observe a metal chelation ability of larger than 80 percent at 0.5 mg/ml protein in the test environment. Chymotrypsin, CEM high and CEM low observe nearly identical chelating abilities except for the CEM high less than 5 kDa fraction, which similar to the DPPH scavenging results, exhibited a surprisingly low value and was significantly ($p < 0.05$) different from the remaining samples. Similar to the reducing power assay chymotrypsin showed the highest activity, followed by CEM low, CEM high, trypsin and elastase. Trypsin and elastase showed significantly ($p < 0.05$) lower iron chelating abilities among all their fractions compared to chymotrypsin, CEM low and CEM high. These results are consistent with findings in recently published studies. Yin and others (2005) reported on the iron chelating ability of minced mackerel before and after hydrolysis. Their results show an increase from 40% (before hydrolysis) to almost 80% (after hydrolysis) of iron chelating ability. Raghavan and others (2008) reported iron chelating abilities for tilapia protein hydrolysates around 80% for most enzymes mixtures tested.

Cellular Antioxidant Assay (CAA)

The Cellular Antioxidant Assay (CAA) was performed as described earlier, but only the low molecular weight fractions were tested since preliminary results suggest that these were the most active factions and they have the ability to be absorbed by the

cells. All hydrolysates were tested in three different concentrations from 0.50 mg/ml over 0.25 mg/ml to 0.10 mg/ml. Figures 5-6 and 5-7 show the results of the cell viability assay, which was performed to determine that the test substances do not interfere with regular cell growth or may even cause cytosis (cell death). As seen in figure 5-6, the hydrolysate fractions from the individual enzymes do not interfere with cell growth up to a concentration of 0.5 mg/ml. Figure 5-7 shows similar results for the hydrolysates derived by the cod enzyme mixture at low and high concentration. No significant ($p < 0.05$) difference was observed among the three concentrations tested for chymotrypsin, elastase and CEM high digested myosin. Trypsin and CEM low hydrolysates observed an expected dose dependent relationship, where higher concentrations increased the amount of AAPH radical inhibition inside the cells. Among the individual enzymes, trypsin showed the highest amount of AAPH radical inhibition followed by chymotrypsin and elastase. Except for chymotrypsin at 0.25 mg/ml no significant ($p < 0.05$) differences were detected between all chymotrypsin and elastase concentrations. The amount of AAPH radical scavenging ability seems to be less dependent on the dose (concentration) and more on the type of enzyme used and the degree of hydrolysis achieved. At higher degrees of hydrolysis small peptides are generated which may migrate easier into the cells and act as antioxidants, however results also suggest that extensive hydrolysis (as shown for CEM high) may lead to diminished antioxidant activity, whether inside or outside the cell. Limited studies have been performed using the CAA assay and therefore it is hard to find comparable data.

Discussion

Both the ORAC and the DPPH results showed that lower molecular weight peptides have higher antioxidant activities. However, only the DPPH results showed

differences ($p < 0.05$) between low and higher molecular weight fractions. Also reducing power and metal chelation results indicated no differences ($p < 0.05$) between molecular weight fractions, as it was observed in recent studies (Bougatef and others, 2009; Kim and others, 2007; Sampath and others, 2011; Pihlanto and others, 2008; Li and others, 2008).

The ORAC results, observed for the cod myosin hydrolysates, were much higher than for most dried fruit and vegetable matter with low phytochemical composition (Ou and others, 2002b; Wang and others, 1996). Even for chardonnay grapes, ORAC value up to only 450 Trolox equivalents have been reported (Yilmaz and Toledo, 2004), compared to the more than 600 Trolox equivalents observed for trypsin digested myosin (larger than 30 kDa). Less data are available to compare ORAC values of food protein derived peptides to data acquired by this study, since ORAC, although widely used to determine antioxidant activity in fruits and vegetables, is not as commonly used to assess the antioxidant activity peptides, as the DPPH radical scavenging ability assay (Bougatef and others, 2009; Hernandez-Ledesma and others, 2005; Je and others, 2008; Kim and others, 2007; Li and others, 2008; Qian and others, 2008; Ren and others, 2008; Sampath and others, 2011).The DPPH radical scavenging results showed larger variation between samples and fractions than the ORAC, reducing power and iron chelation assay results. Here the importance of low molecular weight peptides to increase radical scavenging ability is supported by the data, which showed much lower radical scavenging ability for higher molecular weight fractions. Chymotrypsin, followed by trypsin and elastase showed the highest radical scavenging ability among the individual enzyme treatments; however no studies have been published that compare

effects of individual enzymes on a protein model system. The effects of low molecular weight fractions on increases in DPPH radical scavenging ability is well documented (Pihlanto and others, 2008; Bougatef and others, 2009; Li and others, 2008; Sampath and others, 2011).

Both the reducing power and the iron chelating ability assay did not show much differentiation, but the iron chelating ability assay showed more than 50% iron chelation for nearly all fractions and treatments, except CEM high (low MW). The reducing power assay reported up to 40 mg ascorbic acid equivalents per gram peptide for most fractions, except all CEM high fractions and the low molecular weight fraction of trypsin. Little literature data are available to compare reducing power assay results and it is is difficult to compare the data available, since the measurement of reducing power varies among those studies. Some report ascorbic acid equivalents and others report antioxidant equivalents and FRAP values (Benzie and Szeto, 1999). It should however be noted that in this study no differences ($p < 0.05$) were observed between most molecular weight fractions within treatment groups, which contradicts results reported by Wu and others (2003), who observed increased reducing power of hydrolysates with increasing hydrolysis time and %DH.

The iron chelating ability values were similar among all molecular weight fractions: around 80% for chymotrypsin, CEM low and CEM high hydrolysates; around 60% for trypsin and elastase hydrolysates. Only CEM high (low MW fraction) showed a relative low iron chelating ability at 20%. These finding are consistent with studies who reported an increase in iron chelating ability after protein hydrolysis in minced mackerel and tilapia (Yin and others, 2005; Raghavan and Kristinsson, 2008).

The cellular antioxidant activity (CAA) assay results showed that for most peptide fractions a dose dependent relationship cannot be established, however trypsin and CEM low digested myosin showed results that would be expected with a decrease in peptide concentration. Standard deviations in this assay were much higher, especially for CEM high which may suggest that increased hydrolysis generates a complex mixture of peptides that may be absorbed in many different ways and vary in antioxidant potential. In comparison, the standard deviation of Trolox (a vitamin E derivative) was small, since it is a single compound and potent antioxidant with little variation in cell absorbance and antioxidant activity. The high variability and partly inconclusive results associated with CEM high peptides may suggest that degree of hydrolysis can exceed levels too high to produce peptides that sustain bioactive functionality. Interestingly, overall antioxidative effects in the CAA assay seem to be correlated to degree of hydrolysis for different enzyme treatments. A higher degree of hydrolysis generates smaller peptides, which are easier to absorb, until the peptides become too small (see CEM high) and may lose bioactivity. This hypothesis, however, could not be confirmed in the present study. Trypsin showed the highest antioxidative activity in the CAA assay and it also showed the highest amount of phosphorylated peptides among the individual enzyme treatments. Unfortunately, not many studies have been conducted using the CAA assay on food protein hydrolysates. This assay however was implemented successfully to study flavanoids and the antioxidant properties of fruits, vegetables and even soy milk (Wolfe and Liu, 2007; Wolfe and others, 2008; Wolfe and Liu, 2008; Salawu and others, 2011; Roy and others, 2009; Angelino and others, 2011; Xu and others, 2010).

The mechanisms of antioxidant activity of proteins, peptides and amino acids are complex, but there are certain parameters that might indicate increased antioxidant potential. For example methionine and tyrosine have been shown to have strong H+ donating ability, an important mechanism in antioxidant activity (Shahidi, 1997). Some studies also suggest that the antioxidant activity is strongly related to the metal chelating ability of proteins and peptides (Shahidi, 1997), as it was observed in this study, where the metal chelating ability of all fractions was greater than 60% at 1 mg/ml protein concentration. Furthermore, there are indications that an increase in hydrophobicity is correlated to the increase in antioxidant potential (Shahidi, 1997), which is consistent with the findings in this study. The liquid chromatography results show that trypsin, which observed the least antioxidant activity among the chemical assays, produced far more hydrophilic peptides than all other treatments.

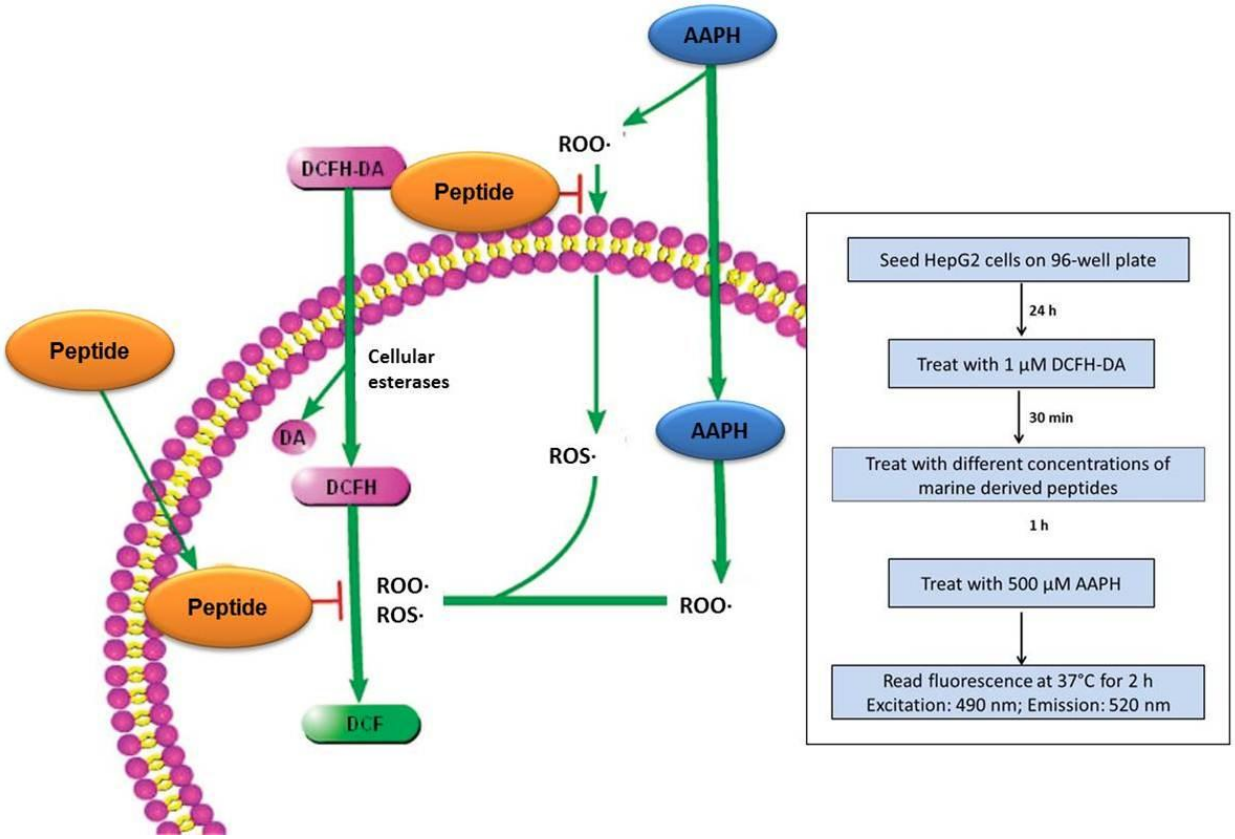

Figure 5-1. Method of proposed principle for the cellular antioxidant activity (CAA) assay This figure is from Wolfe and Liu (2007) with some modifications. (Reprinted with permission from Wolfe and Liu (2007). Copyright 2007 American Chemical Society). DCFH-DA diffuses into the cell where cellular esterases cleave the diacetate moiety to form the more polar DCFH, which is trapped within the cell. The peptides bind to the cell membrane and/or passes through the membrane to enter the cell. AAPH spontaneously decomposed to form peroxyl radicals. These peroxyl radicals attacked the cell membrane to produce more radicals and oxidize the intracellular DCFH to the fluorescent DCF. Antioxidants prevent oxidation of DCFH and membrane lipids and reduce the formation of DCF.

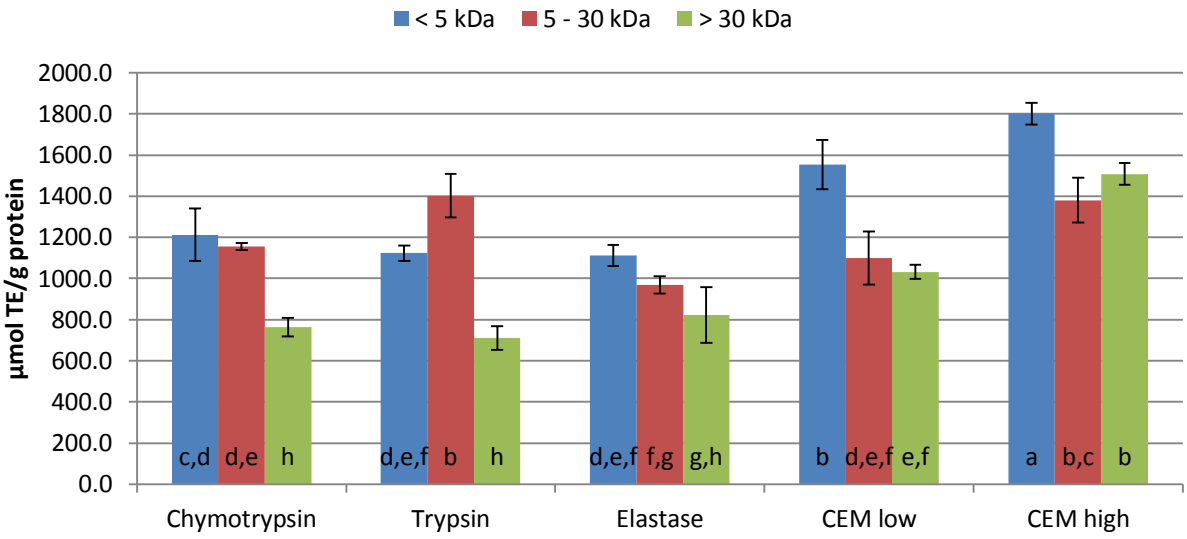

Figure 5-2. Oxygen radical absorbance capacity assay (ORAC) Results are grouped by treatment and each group shows the different molecular weight fractions, from lowest to highest, respectively. Results are expressed as micromole of Trolox equivalents per gram protein. A single factor ANOVA and Tukey's Studentized Range (HSD) test were performed and results bearing the same letter are not significantly different from each other ($p < 0.05$).

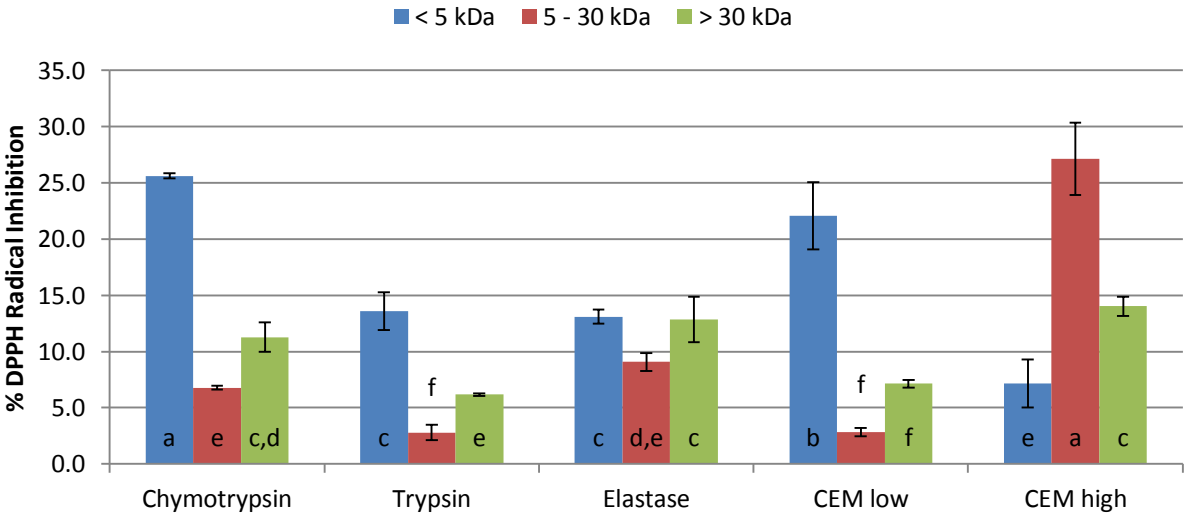

Figure 5-3. DPPH radical scavenging ability Results are grouped by treatment and each group shows the different molecular weight fractions, from lowest to highest, respectively. Results are expressed as % DPPH radical scavenging activity. Sample concentration for this test was 0.5 mg/ml protein. A single factor ANOVA and Tukey's Studentized Range (HSD) test were performed and results bearing the same letter are not significantly different from each other ($p < 0.05$).

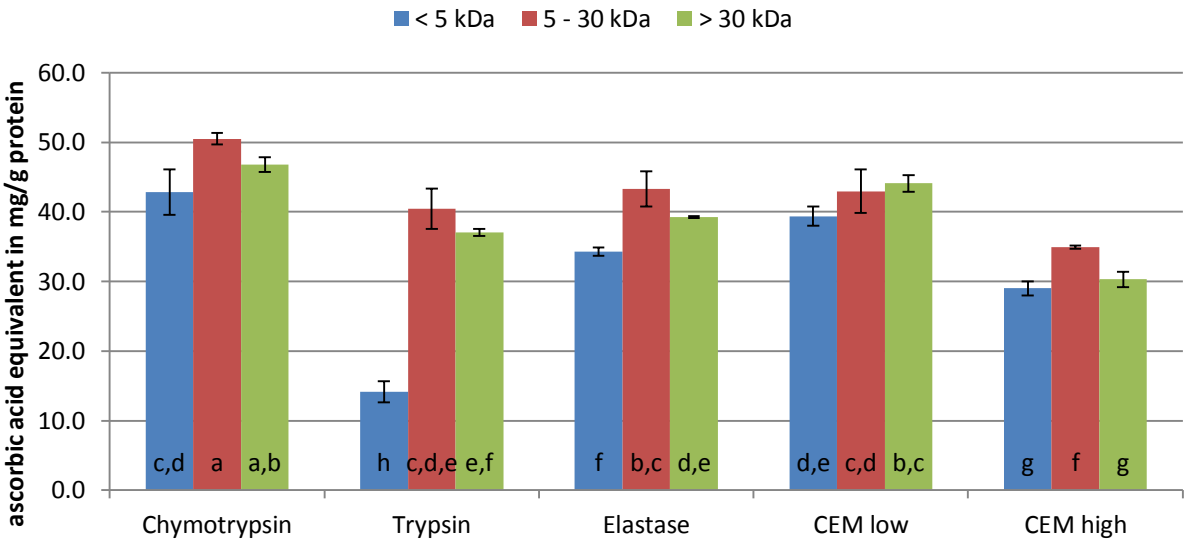

Figure 5-4. Reducing power of antioxidants assay Results are grouped by treatment and each group shows the different molecular weight fractions, from lowest to highest, respectively. Results are expressed as milligram of Ascorbic Acid equivalents per gram protein. A single factor ANOVA and Tukey's Studentized Range (HSD) test were performed and results bearing the same letter are not significantly different from each other ($p < 0.05$).

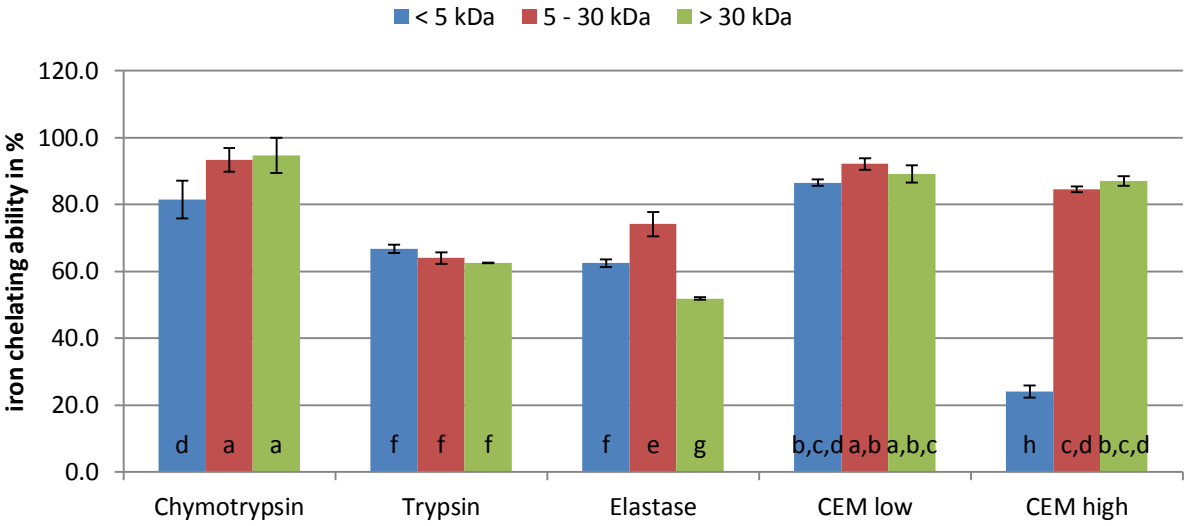

Figure 5-5. Ferrous ion chelating ability assay Results are grouped by treatment and each group shows the different molecular weight fractions, from lowest to highest, respectively. Results are expressed as % metal chelating ability. Sample concentration for this test was 0.5 mg/ml protein. A single factor ANOVA and Tukey's Studentized Range (HSD) test were performed and results bearing the same letter are not significantly different from each other ($p < 0.05$).

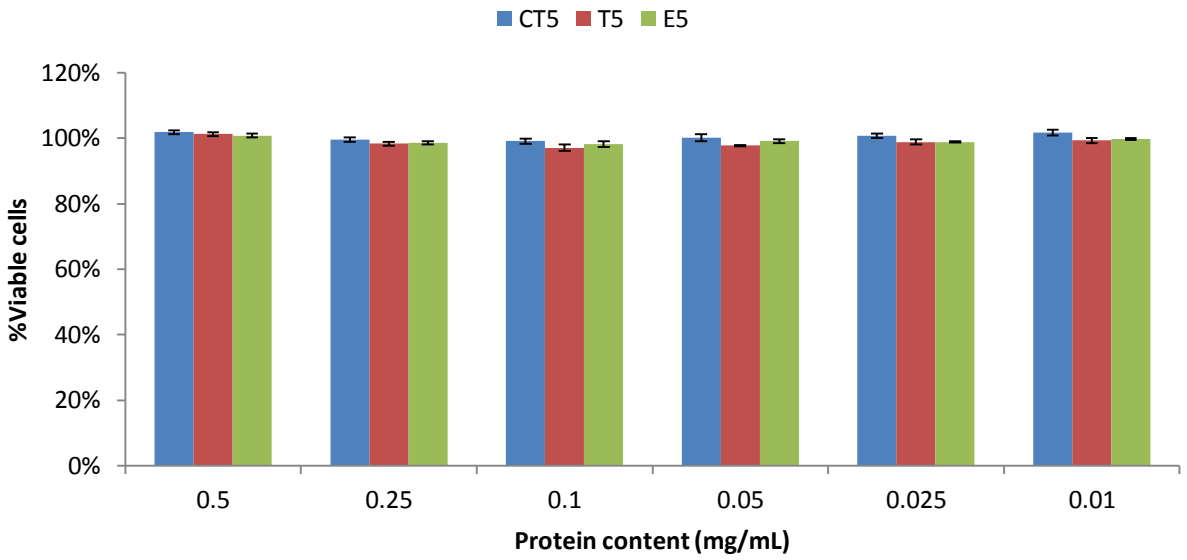

Figure 5-6. Cell viability measurements with peptides derived by individual enzymes To ensure the HepG2 cells are viable and unaffected by the samples themselves during the CAA assay, a viability assay was performed with AlamarBlue® to determine cell cytotoxicity. This graph shows the viability results for the less than 5 kDa hydrolysate fractions derived by chymotrypsin (CT5), trypsin (T5) and elastase (E5) for different protein concentrations.

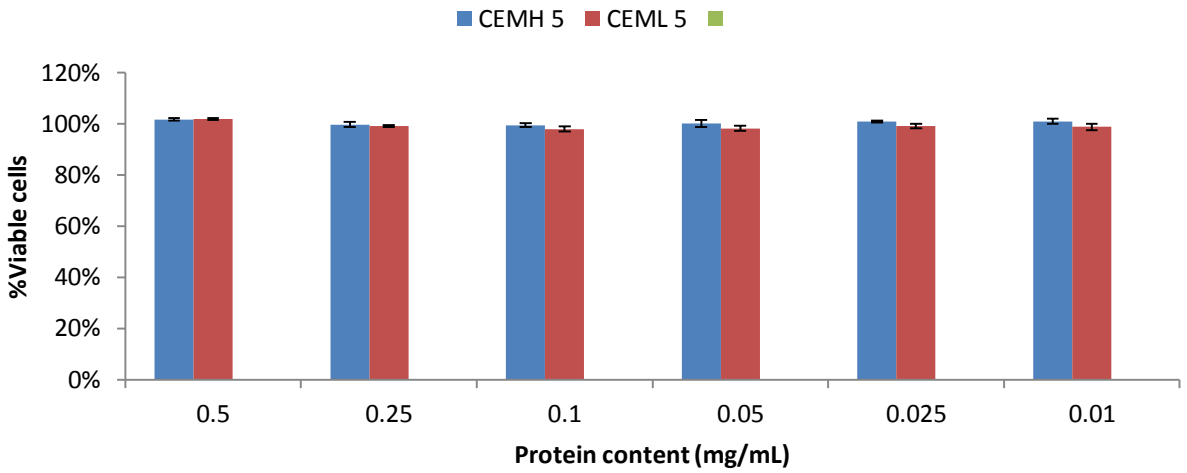

Figure 5-7. Cell viability measurements with peptides derived by CEM high and low To ensure the HepG2 cells are viable and unaffected by the samples themselves during the CAA assay, a viability assay was performed with AlamarBlue® to determine cell cytotoxicity. This graph shows the viability results for the less than 5 kDa hydrolysate fractions derived by high and low concentrations of cod enzyme mixture (CEMH 5 and CEML 5) for different protein concentrations.

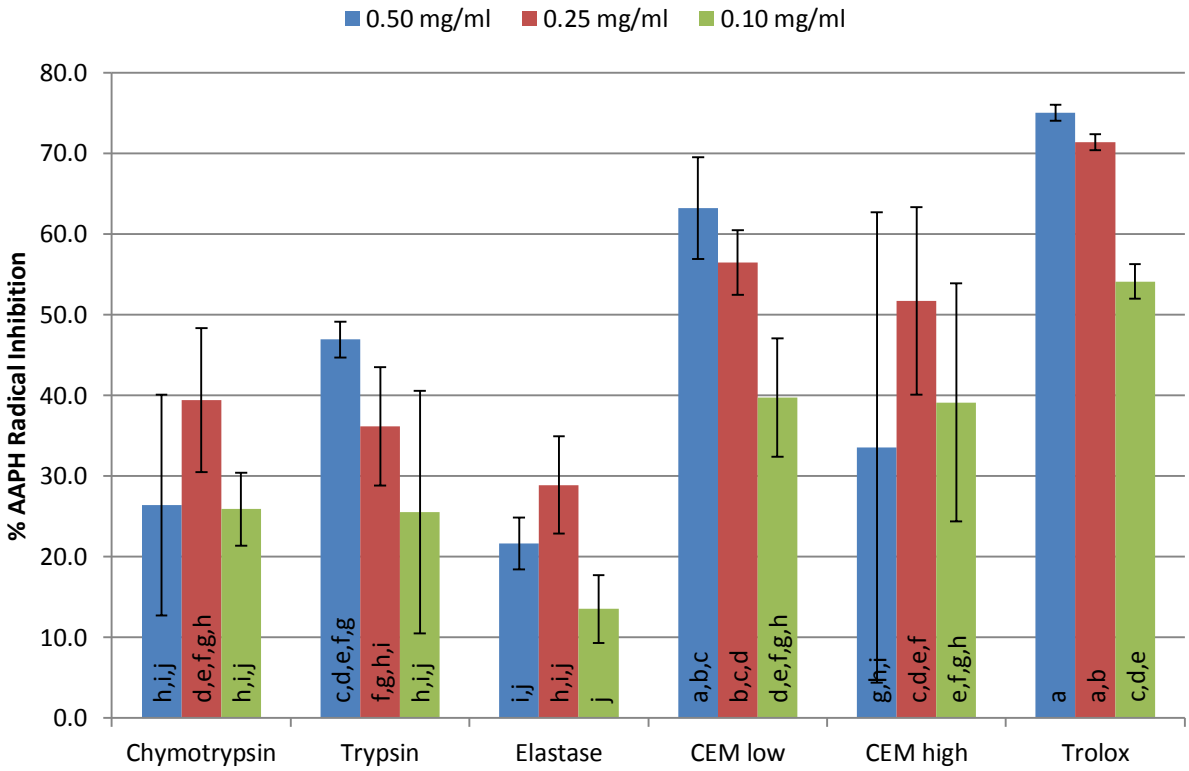

Figure 5-8. Cellular antioxidant assay (CAA) results Inhibition of the AAPH-induced cellular ROS generation in HepG2 cells by the sample peptides at 0.5 mg/ml, 0.25 mg/ml and 0.1 mg protein/mL sample concentration after 120 minutes. Values are expressed as percentages of the DCF fluorescence intensity to that of control cells. Each data point shows the mean ± SD (n = 4). Values with different letters are significantly different from each other ($p < 0.05$)

CHAPTER 6
ANGIONTENSIN CONVERTING ENZYME (ACE) – INHIBITION BY COD MYOSIN HYDROLYSATES

Material and Methods

Angiotensin-converting enzyme (ACE) is a dipetidyl caboxy peptidase that plays a key role in the regulation of blood pressure and cardiovascular function and is located in many tissues and biological fluids (Meng and Oparil, 1996; Coates, 2003). The mechanism of ACE is to elevate blood pressure by converting angiotensin I into angiotensin II, which is a powerful vasoconstrictor. Any substance that can inhibit this enzyme can be considered to have an antihypertensive effect (Shalaby and others, 2006). Shalaby and others (2006) compared two commonly used ACE inhibition assays and concluded that the assay using furanacroloyl-Phe-Glu-Glu (FA-PGG) as the substrate is much faster and less material demanding, and therefore a good choice for screening studies.

A Tris HCl buffer (50 mM, pH 7.5) was prepared and filtered through a 0.45 µm filter. The FAPGG substrate (N-(3-(2-furyl) acryl-oyl)-Phe-Gly-Gly) from Sigma Chemical Co. (St. Louis, MO) was prepared as 0.88 mM in the previously described Tris-HCl buffer. Angiotensin converting enzyme (ACE), extracted from rabbit lung, was obtained from Sigma Chemical Co. (St. Louis, MO) and prepared in ultra-pure water to a concentration of 3 U/ml. Twenty microliters of peptide solutions (1.0 mg/ml) in phosphate buffer (10 mM, pH 6.6), or just buffer as the control, were mixed with 10 µL of enzyme solution (ACE) in a NUNC™ 96/Flat bottom microplate. The microplate was incubated for 15 minutes at 37˚C in the POLARstar OPTIMA (BMG Labtech, Offenburg, Germany) microplate reader with temperature control system. During incubation of the microplate, the substrate solution was also heated to 37˚C to equalize the temperature

at the time the substrate solution is added to the microplate. After incubation 170 µL FAPGG substrate solution was added to each sample and control well and the absorbance was recorded for 60 minutes in 1 minute intervals. For each sample and control, the initial rate (linear part of the absorbance curve) was determined and expressed as ΔA in min^{-1}. The percent ACE-inhibition was calculated by Equation 6-1, where ΔA_{sample} is the slope of the linear part of the absorbance curve ($\Delta A_{340}\ min^{-1}$) for the sample and $\Delta A_{control}$ is the slope of the linear part of the absorbance curve ($\Delta A_{340}\ min^{-1}$) for the control.

$$ACE - inhibition\ (\%) = \left(1 - \frac{\Delta A_{sample}}{\Delta A_{control}}\right) * 100\% \quad (6\text{-}1)$$

By assaying increasing concentrations of each sample, until ACE inhibition higher than 50% was achieved, the IC_{50} value for each sample was determined. By plotting the sample concentration against the measured ACE inhibition and determining the concentration of each sample, needed to inhibit ACE by 50%, IC_{50} values were calculated and expressed in mg/ml.

All samples were run in triplicates on each plate and duplicate plates were run in this experiment. The unhydrolyzed control sample was not used due to insolubility issues.

Statistical Analysis

Simple one-way analysis of variance (ANOVA) was used to determine significant ($p < 0.05$) differences between all treatments and fractions. When significant ($p < 0.05$) differences among the sample means were detected Tukey's Studentized Range (HSD) test was used to do a pair wise comparison between these sample means. The level of significance for all ANOVA and Tukey's tests was set to $\alpha = 0.05$.

Results

The ACE inhibitory effect of myosin hydrolysates fractions was assessed according to the procedure described above. Similar to all antioxidant assays the unhydrolyzed myosin could not be used for analysis, since it interfered intermittingly during the experiment. Data for the control sample is therefore not shown. Figure 6-1 shows the results of the initial ACE inhibition assay for a peptide concentration of 1 mg/ml. This test determined that a concentration of most of the samples was necessary to determine IC_{50} values, which represent the amount of hydrolysate needed to inhibit ACE by 50%. These results indicate that the low molecular weight fraction for most all of the hydrolysates exhibit higher ACE inhibition than the remaining fractions and significant ($p < 0.05$) differences are found for chymotrypsin, elastase and CEM high, while trypsin and CEM low show no significant ($p < 0.05$) differences between most of the fractions within their respective treatment groups. The order of the potency between the treatments shows that CEM high and elastase had the highest ACE inhibition activity followed by chymotrypsin and CEM low (not significantly ($p < 0.05$) different from each other) and trypsin the lowest. The IC_{50} values obtained in a second trial after sample concentration are listed in Table 6-1 and shown graphically in Figure 6-2. Since IC_{50} values describe the least amount of a substance needed to inhibit a reaction by 50% lower values denote more potent substances. In this case Figure 6-2 and Figure 6-1 are almost mirror images, therefore accounting for the reproducibility of the data. Many studies have been performed regarding the ACE inhibitory effects of food derived peptides. Guo and other (2009) studied ACE inhibitory peptides from whey proteins and determined a relationship between ACE inhibitory effect and degree of hydrolysis. Several studies reported on the observed effect that low molecular weight fraction of

hydrolysates show higher ACE inhibitory abilities than the larger molecular weight fractions (Lee and others, 2010; Miguel and others, 2009; Zhao and others, 2009; Raghavan and Kristinsson, 2009). Certain studies reported IC_{50} values for unpurified peptide fractions from sea cucumber, hard clam and bovine casein hydrolysate ranging from 5.5 down to almost 0.5 mg/ml (Miguel and others, 2009; Tsai and others 2008; Zhao and others, 2009).

Discussion

The ACE inhibitory effects among different molecular weight fractions are well differentiated, and for all treatments the low molecular weight fraction showed the highest ACE inhibitory activity. The IC^{50} values determine that trypsin, followed by chymotrypsin and elastase had the highest potency for ACE inhibition. Only CEM high showed lower IC^{50} values than trypsin and CEM low and therefore, showed the highest potency among all samples tested. The effect of low molecular weight fractions in ACE inhibitory properties, as observed in this study, are well documented (Lee and others, 2010; Miguel and others, 2009; Raghavan and Kristinsson, 2009; Zhao and others, 2009). Reported IC^{50} values conform to those reported in recent studies for unpurified peptide fractions of sea cucumber, hard clam and bovine casein hydrolysate (Miguel and others, 2009; Tsai and others, 2008; Zhao and others, 2009).

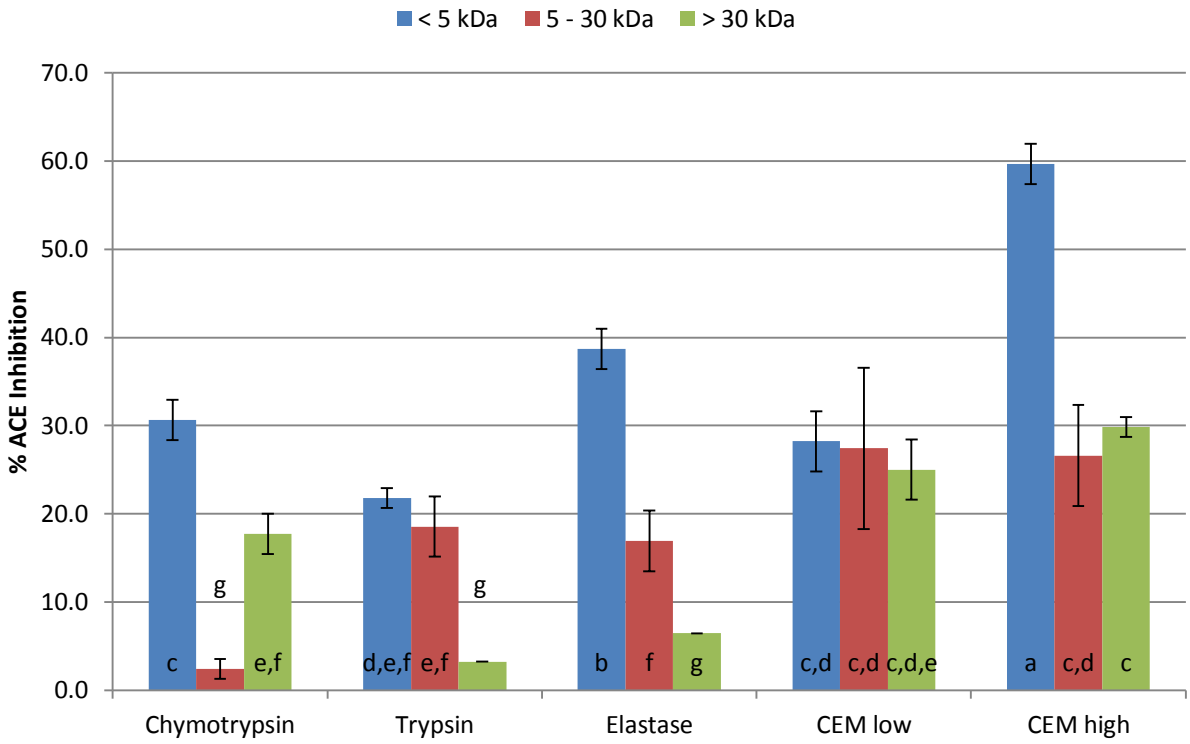

Figure 6-1. ACE Inhibition for peptides derived by enzymatic hydrolysis from cod myosin Results are grouped by treatment and each group shows the different molecular weight fractions, from lowest to highest, respectively. Results are expressed as % ACE Inhibition. Sample concentration for this test was 1.0 mg/ml protein. A single factor ANOVA and Tukey's Studentized Range (HSD) test were performed and results bearing the same letter are not significantly different from each other ($p < 0.05$).

Table 6-1. IC_{50} values for ACE inhibition by myosin peptide fractions

Samples	IC_{50}*1	IC_{50}*2	Avg.	Std. Dev.
Chymotrypsin (<5 kDa)	1.38	1.36	1.37	0.01
Chymotrypsin (5-30 kDa)	3.20	3.69	3.44	0.35
Chymotrypsin (>30 kDa)	2.00	2.89	2.45	0.63
Trypsin (<5 kDa)	0.70	0.69	0.70	0.01
Trypsin (5-30 kDa)	1.02	1.11	1.06	0.06
Trypsin (>30 kDa)	1.78	1.76	1.77	0.02
Elastase (<5 kDa)	1.76	2.19	1.98	0.31
Elastase (5-30 kDa)	1.36	1.52	1.44	0.11
Elastase (>30 kDa)	2.91	2.79	2.85	0.09
CEM low (<5 kDa)	0.77	0.79	0.78	0.01
CEM low (5-30 kDa)	1.26	1.48	1.37	0.16
CEM low (>30 kDa)	1.40	1.33	1.36	0.05
CEM high (<5 kDa)	0.35	0.37	0.36	0.01
CEM high (5-30 kDa)	0.95	0.86	0.91	0.06
CEM high (>30 kDa)	0.40	0.43	0.41	0.02

Note: IC_{50} values are expressed in mg/ml peptide. Lower IC_{50} values mean higher ACE inhibitory effect and higher potency, since less of the compound is needed. IC_{50}*1 and IC_{50}*2 represent replicate microplate readings with 4 replicates per microplate.

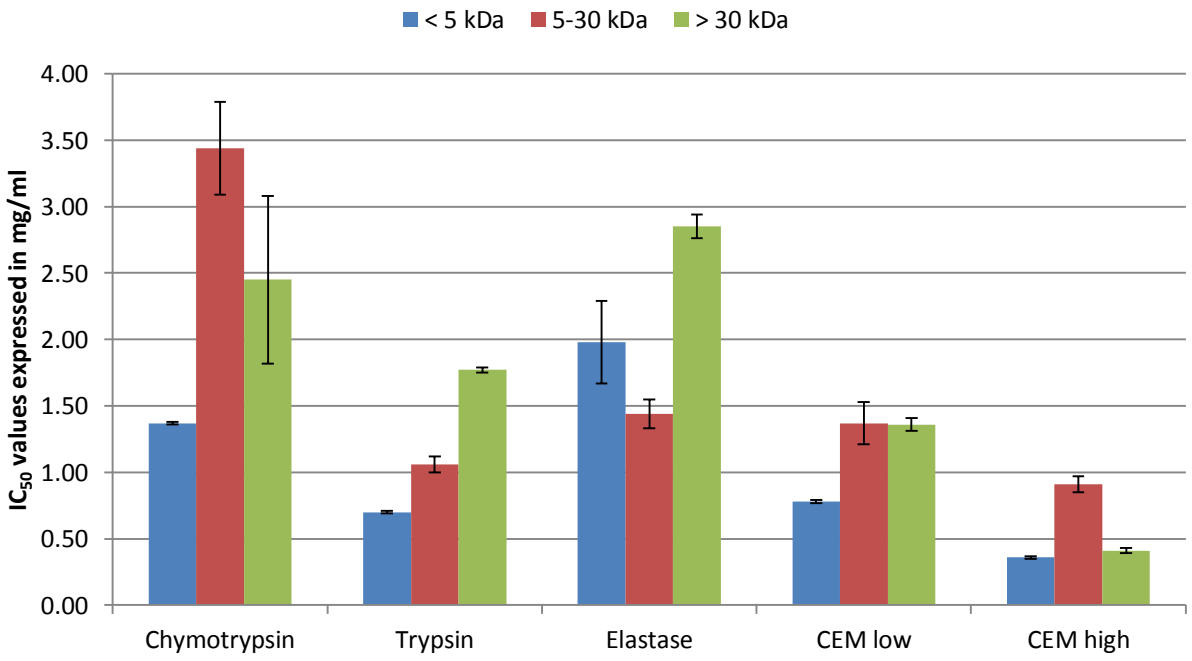

Figure 6-2. IC_{50} values for ACE inhibitory effect of myosin peptides IC_{50} values are expressed in mg/ml peptide. Lower IC_{50} values mean higher ACE inhibitory effect and higher potency, since less of the compound is needed.

CHAPTER 7
MASS SPECTROMETRY ANALYSIS OF COD MYOSIN HYDROLYSATES

Material and Methods

LC-MS/MS Analysis of Peptide Fragments from Myosin Digests

Two micrograms of digested peptides from each of the five enzymatic reactions were concentrated and de-salted via reversed phase chromatography using C18 Zip Tips (Millipore) and eluted with 50% acetonitrile (MeCN), 0.1% formic acid (FA). The de-salted peptides were taken to dryness in a vacuum centrifugal concentrator, and re-suspended in 10 µL mobile phase A (0.1% FA, 99.9% MS-grade water). Each sample (5 µL) was then applied to a self-packed 100 x 0.1 mm C18 Aq (3µm particle, 200A pore size) reversed phase column with a carbon steel frit, and separated over a 45 min linear gradient of increasing amounts of mobile phase B (MeCN) from 0-50% MPB at 300 nl/min using an Eksigent nano-2DLC. Column eluate was introduced into a Thermo (Waltham, MA) LTQ-Orbitrap mass spectrometer via an ADVANCE captive spray ion source (Michrom) with the following settings: nitrogen sheath gas equal 3 arbitrary flow units, spray voltage equal 1.5kV. Xcalibur software v 2.0.7 (Thermo Scientific, Waltham, MA) was used to control instrument settings. MS and MS/MS (MS^2) spectra were acquired in data-dependent acquisition (DDA) mode. Major instrument and DDA settings were as follows: full-scan MS spectra were acquired at 60,000 resolutions (FWHM at 400 m/z) in Fourier Transform mode (FTMS), MS2 spectra were acquired in ion trap (ITMS) mode (2 microscans, 100 millisecond maximum injection time). The top five most abundant peptides from each full scan MS were selected for fragmentation using collision-induced dissociation in the ion trap; helium was used as the collision gas.

Dynamic exclusion was enabled in Xcalibur software to avoid redundant isolation and fragmentation of peptides within a 60 second window.

Rationale for LC-MS/MS Analysis

Though direct-infusion nano-ESI-MS analysis is often sufficient to identify proteins in a low-complexity mixture (up to 20 proteins), there remains the concern of the isobaric (same mass) peptides overlapping one another in both the full scan and the MS^2 spectra. Therefore, even in a simple enzymatic digest of 5-10 proteins, chromatographic separation is ideal, as it greatly increases the chances that isobaric peptides will be resolved and thus, analyzed individually.

In these experiments, nano-flow LC was used to run the analytical gradient. Performing LC-MS experiments at nano-flow rates (50-1000 nl/min) greatly increase the sensitivity of the assay relative to traditional LC-ESI-MS, where flow rates typically range from 300-1000 µL/min, as the analytes (peptides, in this case) enter the MS via much smaller droplets than observed with conventional electrospray (Chelius and others 2003; Klampfl, 2004; Viberg and others 2004; Wetterhall and others 2002; Wickremsinhe and others 2006). This has two major implications: the smaller droplet size yields a much higher charge-to-volume ratio of the droplet (more analyte in a given droplet), as well as a much more efficient desolvation. As ions entering the MS must ultimately be in gas phase, any technique which can more readily lead to a desolvated ionic species is preferred. Additionally, using nano-LC, the relative amounts of non-volatile contaminants from the solvent mixture is much 500- to 1000-fold less, which leads to improved sensitivity, particularly with the type of ion trap instrumentation used for this work. As the traps are indiscriminate with regard to what ions occupy them - and as they have a finite capacity - filling them with an excess of contaminant ions would

“crowd out” ionic species of interest and decrease the sensitivity of the assay. These improvements in sensitivity allow for a comprehensive analysis of proteins, even from a complex digest of hundreds of proteins, from 500 ng-1 µg of material.

Mass spectrometer instrument settings also have a profound impact on the type and quality of data obtained. Recent generation hybrid mass spectrometers (i.e., those having two separate mass analyzers housed within the same instrument) allow for a high degree of flexibility for the types of experiments which can be performed. It is then up to the user to arrange the proper set of instrument parameters which best address the needs of the experiment. The LTQ-Orbitrap MS used in these experiments is capable of operating in two high resolution, high mass accuracy (ex., +/- 0.0001 AMU) modes, as well as a rapid scan, low-resolution (ex., +/- 0.1 AMU) ion trap mode. A large majority of proteomic studies aimed at identification and quantification of peptides employ a ‘high/low’ strategy, wherein the intact mass-to-charge ratios (*m/z*) of each peptide is obtained in the high resolution mode, followed by a sequential trapping and fragmentation of each peptide observed in the full-scan mode using the rapid, low-resolution ion trap. This arrangement represents a logical compromise between performing all scans at high resolution, which would lead to decreased sensitivity as a consequence of the lower scan rates, and performing all scans in ion trap mode, which would lead to decreased statistical confidence in the datasets.

A typical sequence of events in a MS experiment described above (and in fact, the same sequence used in these experiments) would be the data acquisition in the Orbitrap analyzer (Fourier Transform mode – FTMS) for the full scan MS at high resolution (60,000 FWHM at m/z = 400), followed by the trapping and fragmentation via

CID of the five most abundant peptides in the full scan spectrum. This is colloquially referred to as a “Big 5” method. To avoid the collection of redundant data centered around only the most abundant peptides, a feature in the Xcalibur software called “Dynamic Exclusion” directs the MS to list and ignore peptides already fragmented in a previous “Big5” duty cycle for a given time period (usually 30-60 seconds). Extending the dynamic exclusion time beyond 60 seconds is possible, but doing so increases the chances of excluding isobaric or nearly isobaric peptides which are eluting later in the LC separation, leading to a decrease in peptide coverage and characterization. It should be noted too, that fragmentation types other than CID could be used for this work (ex., electron-transfer dissociation [ETD], or higher energy C-trap dissociation [HCD]) could be used to provide complementary datasets, however such features were not available on the particular generation of LTQ-Orbitrap instrumentation used herein.

Data Analysis

MS spectra from each analysis were interrogated using Proteome Discoverer (PD) software (Thermo). This software utilizes the Sequest algorithm, which ranks the predicted *m/z* values for both full scan and fragment ion spectra against predicted spectra derived from protein sequence databases and *in silico* digests that correspond to the enzyme(s) used to hydrolyze the experimental material. Additional information can be specified when beginning the data analysis, such as post-translational modifications including amino acid phosphorylation, oxidation, etc., that allow for such mass shifts in the spectra to be properly interpreted, rather than simply scoring them as a false negative due to a lack of correlation between, for example, a phosphorylated peptide observed in an experiment and its non-phosphorylated complement from a sequence database. Proteome Discoverer is a proprietary software package, and so

the exact means by which it analyzes and ranks peptide identifications are not very well described, however it is generally accepted in the MS field that it provides approximately twice the sensitivity as other commercial and/or free MS search engines (ex., Mascot, Xtandem, OMSA, Andromeda) for a given false discovery rate (FDR) (1% in this experiment).

In all database searches and De novo sequencing the enzymes were set to Trypsin (KR), Elastase (ALIV), Chymotrypsin (FWY) or CEM (FWYKRALIV). Proteome Discoverer 1.3 (Thermo Scientific) was used for SEQUEST search of the spectra against IPI.DANRE.v3.82 database (zebra fish database). The following settings were used for the database searches; precursor mass tolerance was set to 10 ppm, maximum missed cleavage was set to 3 for all enzymes, the dynamic modifications were set to +15.99491 for oxidized methionine and +79.9663 for phosphorylated serine, threonine and tyrosine. The FDR was calculated using a decoy database search. Xcorr values matching the high confidence FDR were chosen to filter the identified peptides further.

The PEAKS Studio 5.3 (Bioinformatics Solutions, Waterloo, Ontario, Canada) was used for automated De novo Sequencing and PEAKS database search. For De novo sequencing the following setting were used; error tolerance for parent ion set to 3 ppm, maximum allowed Posttranslational modification (PTM) were set to 3, up to 2 candidates were reported for each spectrum and the variable PTMs were set to +15.99491 for oxidized methionine and +79.9663 phosphorylated serine, threonine and tyrosine. The resulting peptides were filtered using ALC ≥ 55% and TLC ≥ 3 cut offs.

Same settings were used for PEAKS search engine in which IPI.DANRE.v3.82 database was used to search against LC-MS spectra.

As the MS data obtained in the study were queried against amino acid sequence databases from exogenous model systems, the question arises regarding both the correctness and completeness of the dataset described. Data mining using PD is both rapid, and yields data with exceptionally high statistical confidence, but all such data comes from sequences determined *a priori* – most often by *in silico* translations of genomic sequence data or from expressed sequence tag (EST) libraries. In many cases, searches are performed against translated sequences from both genomic and EST information, as the EST data enables the identification of novel peptide data that arise from alternative spicing events during mRNA transcription. Once again, these peptides would be scored as false negatives if the data were searched against translated genomic databases alone. Still, the combination of EST and genomic information in the searchable database does not preclude the possibility that novel amino acid sequences from less well-characterized species will be scored as negatives and excluded from the final dataset.

To address this, several companies and academic groups have generated software aimed at De novo sequencing from tandem (MS2) mass spectrometry data. One of the most reliable De novo sequencing algorithms is applied in PEAKS Studio 5.3 (BSI) which offers both De novo sequencing algorithm and database search engine PEAKS DB. As there is neither a protein database for Atlantic cod, nor a complete sequence for the proteins extracted in the sample (myosin HC, actin, tropomyosin, myosin LC1, myosin LC2, myosin LC3) for Atlantic cod, De novo sequencing approach

would be ideal to identify the peptide sequences in the sample. Therefore, PEAKS Studio 5.3 has been used to identify the peptide sequences that were obtained by digesting with the five separate enzymes.

Results

The mass spectrometry analysis of the myosin peptide fractions resulted in a vast variety of peptides, identified by Peptide Spectra matching (PMS) in Sequest and PEAKS DB database search algorithms and by De novo sequencing, for all of the hydrolysis treatments. Figure 7-1 shows the LC-chromatograms of all samples treatments for the <5 kDa fractions. Since larger fractions showed usually less bioactivity in previous results and further hydrolysis or fractionation would be necessary anyways to analyze larger molecules with mass spectrometry only the low molecular weight fractions were analyzed. The chromatograms indicate definite differences among the peptide compositions of the five treatments, especially for the trypsin digestion, which shows peptide groups with lower retention times than the other treatments, determined by the LC setting and procedure. It is interesting to observe that the chromatograms for CEM low and CEM high seem to be quite different (note the peak at retention time 19.4), even though the enzyme composition and hydrolysis time for both treatments is the same and only the enzyme concentration during hydrolysis is significantly ($p < 0.05$) increased in the CEM high treatment. The chymotrypsin and CEM low chromatograms have many similarities, which could be explained by the fact that CEM is composed mostly of chymotrypsin and this is the dominating factor, especially at low concentration. The cod enzyme mixture (CEM) is comprised of about 88% chymotrypsin, 5% trypsin and 7% elastase, by unit comparison. Another interesting

observation is the generation of peptides with very low retention times, within the specific LC settings.

Since the entire sequence of cod muscle myosin is unknown as of this date, the complete sequence of zebrafish (Danio rerio) (IPI.DANRE.v3.82 database) was used for the database identifications. The widely recognized online database UniProt contains some sequences of cod muscle myosin fragments, but not for the complete myosin molecules (HC, LC1, LC2 and LC3). Table 7-1 shows the largest cod muscle myosin fragment found in the database, with a length of 259 amino acids, that was used to detect cod and zebrafish myosin similarities and therefore to decide whether the zebrafish database can be used in mass spectrometry database search analysis. The myosin heavy chain protein sequence fragment from Atlantic cod was aligned using BLAST algorithm using UniProt web tools (http://www.uniprot.org/blast/). Table 7-2 lists the results for the comparison of the cod muscle myosin fragment and two identical zebrafish myosin sequences. Figure 7-2 gives a graphical representation of the alignment of Atlantic cod (Q8JIV4) and zebrafish (B8A561 and B3DJM6) myosin. The results indicate an 89% identity match between cod and zebrafish myosin. It was therefore decided to use the zebrafish database for Sequest and Peaks DB peptide matching searches.

Figure 7-3 represents just one of the many thousands of mass spectra analyzed during mass spectrometry data analysis. The red and blue peaks in the spectra represent the b (N-terminal) and y (C-terminal) ions generated in the collision cell. Since the amino acids of a peptide sequence are not detected according to the sequence, as they would be by Edman degradation, the b and y ions are used for the De novo

sequencing of the peptide (Palzkill, 2002). In Figure 7-3 the sample spectra is shown with the b and y ion labeling according to the Sequest database matching algorithm, which means, that only those ions are labeled that match a known sequence. The Sequest search algorithm does not account for peak intensity when matching spectra, therefore a good match can be visually recognized by the amount of high intensity peaks vs. low intensity peaks labeled.

The database search results for the Sequest and Peaks DB search algorithm, as well as the results of the De novo sequencing, for all myosin hydrolysate fractions are listed in appendices B – P. Those results include the protein and peptide identification for each treatment. Protein identifications were performed by peptide (protein fragment) database matching.

Table 7-3 lists the results for the amount of peptides found with Sequest and Peaks DB search algorithms and the amount of peptides discovered by De novo sequencing. One of the tools available for the different search and sequencing data analysis methods is the detection and identification of phosphorylated peptides by mass addition. Some studies (Chen and others 2001; Dockray and others 1987; Hartmann and Meisel, 2007; Kitts and Weiler, 2003; Pihlanto, 2006) suggest that phosphorylation may increase certain bioactive properties in peptides and the amount of phosphorylated peptides was therefore reported in Table 7-3, however it is obvious that, except for elastase digested myosin, the ratio of phosphorylated peptides to total number of peptides is rather low. The number of peptides identified by the Sequest search algorithm is very low compared to the Peaks DB search algorithm and the De novo sequencing. As mentioned before, this is probably the results of the more stringent

correlation factor and the search algorithm used. Table 7-4 shows the false discovery rates (FDR) for the Sequest database searches, which are almost 0 for most of the treatments. A low FDR is usually desirable, but might also eliminate certain peptides from identification. Therefor it is always advisable to use different search algorithms and compare results.

Another indication of good mass spectrometry peptide matching is to review the list of proteins that match with the discovered peptides. Appendices L to P show the results of the protein matches for the Sequest and Peaks DB search algorithms using the zebrafish database. It can be observed that the proteins, discovered with the highest probabilities, match with parent protein mixture, in the case myosin (HC, LC1, LC2 and LC3) and some contamination of actin and tropomyosin, as expected from the myosin extraction procedure (see Figure 4-3 and Table 4-4).

Table 7-3 shows that trypsin digestion resulted in the highest number of peptides generated, followed by CEM high, CEM low, chymotrypsin and elastase. De novo sequencing discovered the highest amount of peptides for CEM high, followed by trypsin, CEM low, chymotrypsin and elastase. Since all enzymes are present in the CEM mixture and hydrolysis was not performed to 100% digestion, the database search engines cannot identify the many peptides in the CEM high mixture that are really present. De novo sequencing is the only way to discover those novel peptides. Trypsin is the enzyme most commonly used in proteomic research to predigest proteins and peptides for mass spectrometry analysis (Palzkill, 2002; Goodlett and others 2000) and these results give a good indication why. Except for the CEM high mixture it was able to generate the highest amount of peptides and phosphorylated peptides.

Discussion

The mass spectrometry results indicate the vast amount of peptides that can be generated by enzymatic hydrolysis of cod muscle myosin, but they also indicate that further isolation and purification of specific peptides is needed before novel peptides with specific bioactive properties can be identified. As mentioned earlier, many studies have isolated and identified novel peptides derived by enzymatic hydrolysis of food proteins that show great antioxidative (Bougatef and others, 2009; Hernandez-Ledesma and others, 2005; Je and others, 2008; Kim and others, 2007; Li and others, 2008; Qian and others, 2008; Ren and others, 2008; Sampath and others, 2011) and ACE inhibitory properties (Balti and others, 2010; Guang and Phillips, 2009; Guo and others, 2009; Lee and others, 2010; Miguel and others, 2009; Sheih and others, 2009; Terashima and others, 2010; Tsai and others, 2008; Zhao and others, 2009). However comparison of their novel peptides to peptides found during mass spectrometry analysis results in no matches.

The protein identifications for each treatment, as listed in appendices B-K, confirmed the SDS_PAGE results from the sample preparation step. For most treatments heavy chain myosin and light chain myosin fragments were identified with high probability, followed by actin and tropomyosin. Some unidentified muscle and cardiac muscle protein fragments were also identified, but with much less probability. Mass spectrometry results showed the highest protein matching coverage for peptides derived by trypsin digestion, followed by CEM low, CEM high, chymotrypsin and elastase. Since the coverage is an indicator how good the database search was able to match peptides to their apparent parent protein, these results showed that trypsin derived peptides were more predictable than peptides derived by chymotrypsin and

elastase. This is an important indicator how well theoretical digestion can be performed ahead of future experiments.

The mass spectrometry data collected in this study were too broad to draw any conclusions regarding peptide sequences and bioactive properties; however there may be indications that post translational changes such as phosphorylation could have an effect on the antioxidative properties or the cell permeability of peptides and therefore bioavailability of peptides derived by enzymatic hydrolysis. It was shown that trypsin, commonly used in proteomics to digest peptides for mass spectrometry analysis, produced more low-molecular weight peptides from muscle myosin than chymotrypsin and elastase; however it showed less antioxidative activities in chemical antioxidant assay, such as ORAC and DPPH radical scavenging ability. To perform effective mass spectrometry analysis, further fractionation and purification of potent peptides is required.

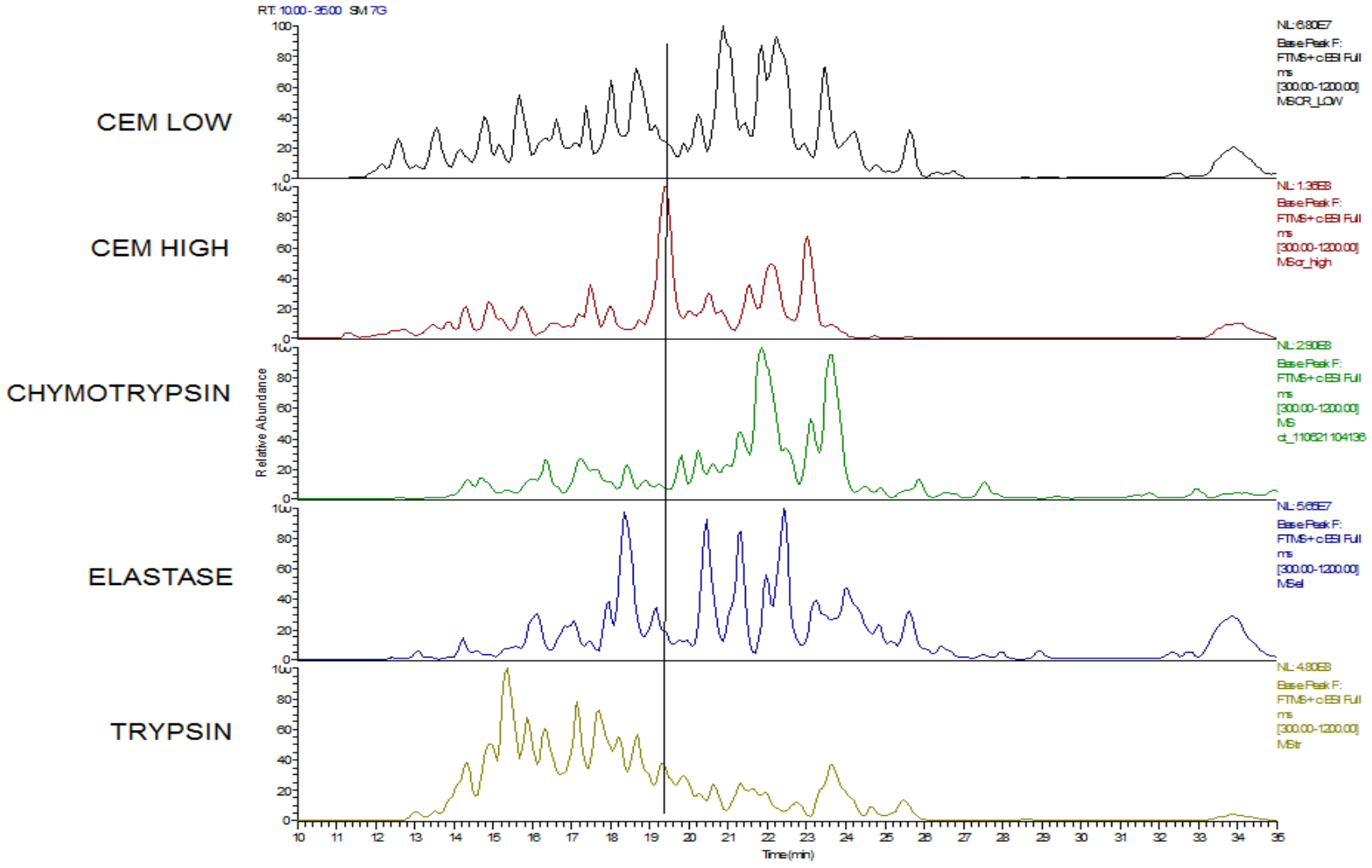

Figure 7-1. LC/MS chromatograms for myosin peptides with less than 5 kDa MW Myosin peptides were separated on a self-packed 100 x 0.1mm C18 Aq (3 µm particle, 200A pore size) reversed phase column with a carbon steel frit, and separated over a 45 min linear gradient of increasing amounts of mobile phase B (MeCN) from 0-50% MPB at 300 nl/min using an Eksigent nano-2DLC, before mass spectrometry analysis.

Table 7-1. Atlantic cod (*Gadus morhua*) myosin fragment sequence for BLAST alignment comparison

Myosin fragment identification	Sequence
tr|Q8JIV4|Q8JIV4_GADMO Fast skeletal myosin heavy chain (Fragment) OS=Gadus morhua PE=2 SV=1	RNGLMVAEIEELRAALEQTERGRKVAEQELLDASERVGLLHSQNTSLLNSKKKLES DLVQVQGEVDDSVQEARDAEEKAKKAITDAAMMAEELKKEQDTSSHLERMKKNLE VTVKDLQHRLDEAENLAMKGGKKQLQKLEARVRDLESEVDNEQRRGAEAIKGVRK YERRVKELTYQTEEDKKNGCRLQDLVDKLQMKVKAYKRQSEETEEQANSYLSKC RKVQHELEEAEERADIAETQVNKLRAKTRDSGKGKETAE

Note: This myosin heavy chain protein sequence fragment from Atlantic cod was aligned using BLAST algorithm and UniProt web tools (http://www.uniprot.org/blast/).

Table 7-2. Zebra fish myosin sequences aligning with Atlantic cod myosin fragment

Accession	Entry name	Show full text Protein names	Organism	Length	Identity	Score	E-Value	Gene names
Q8JIV4	Q8JIV4_GADMO	Fast skeletal myosin heavy chain	*Gadus morhua* (Atlantic cod)	259	100.00%	1,274	1.0×10^{-138}	
8A561	B8A561_DANRE	Novel myosin family protein	*Danio rerio* (Zebrafish) (*Brachydanio rerio*)	1,937	89.00%	1,143	1.0×10^{-123}	CH211-158M24.8-001
B3DJM6	B3DJM6_DANRE	Myosin, heavy polypeptide 1, skeletal muscle	*Danio rerio* (Zebrafish) (*Brachydanio rerio*)	1,937	89.00%	1,143	1.0×10^{-123}	myhz1.1 myhz1 si:ch211-158m24.7

Note: Zebra fish myosin sequences are aligning with Atlantic cod myosin fragment sequence with an identity percentage of 89.

Figure 7-2. The alignment of myosin protein sequences from Atlantic cod and Zebrafish Myosin sequences of Atlantic cod (Q8JIV4) and zebrafish (B8A561 and B3DJM6) were aligned using the UniProt web tool BLAST (http://www.uniprot.org/align/).

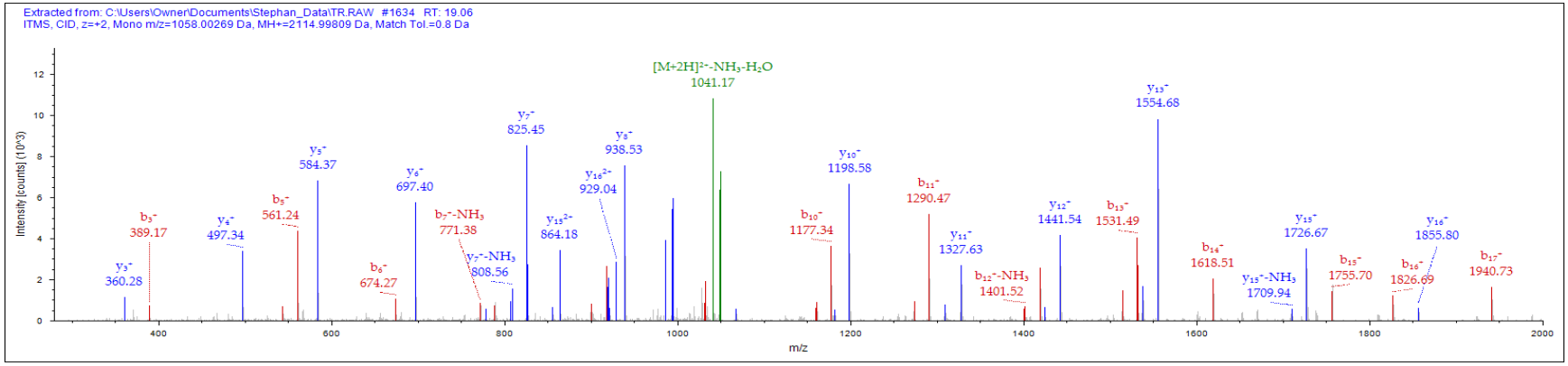

Figure 7-3. Sample mass spectrum for trypsin digested myosin This spectrum is just a representation of the many mass spectra obtained during analysis of myosin peptides (less than 5 kDa fractions only). The following information and parameters were obtained with this particular spectrum at retention time 19.06 minutes: (Sequence: KMEGDLNEMEIQLSHANR, Charge: +2, Monoisotopic m/z: 1058.00269 Da (+1.12 mmu/+1.06 ppm), MH+: 2114.99809 Da, RT: 19.06 min, Identified with: SEQUEST (v1.20); Xcorr: 6.39, Probability:0.00, Ions matched by search engine: 27/34. Fragment match tolerance used for search: 0.8 Da. Fragments used for search: b; b-H_2O; b-NH_3; y; y-H_2O; y-NH_3.)

Table 7-3. Number of peptides identified or De novo sequenced by mass spectrometry from myosin hydrolysates.

Enzyme	Number of phosphorylated peptides in SEQUEST search	Total number of peptides	Number of phosphorylated peptides in PEAKS 5.3 DB search	Total number of peptides in PEAKS 5.3 DB search	Number of phosphorylated peptides in De novo sequencing	Total number of peptides in De novo sequencing
Trypsin	4	93	15	1003	286	1990
Chymotrypsin	2	15	8	112	160	1235
Elastase	3	15	13	34	119	962
CEM low	1	13	7	439	129	1539
CEM high	1	20	1	578	265	2343

Note: These peptides were found using two proprietary software packages, SEQUEST and PEAKS DB, and the IPI.DANRE.v3.82 (zebra fish) database. The De novo sequencing was performed using the PEAKS DB software.

Table 7-4. False discovery rates (FDR) for the Sequest database search

Enzyme	FDR rate (high confidence)	Total number of peptides	Peptides that were detected by Decoy database.
Trypsin	0.0065	93	2
Chymotrypsin	0.0000	15	0
Elastase	0.0000	15	0
CEM low	0.0000	13	0
CEM high	0.0000	20	0

Note: Stringency factors and the design of the Sequest search algorithm allow for very precise peptide matches; however these factors also lower the detectability of novel enzymes, not present in the database.

CHAPTER 8
CONCLUSION

This study was among the first to use a model system with a single protein source (cod muscle myosin) and individual purified enzymes (chymotrypsin, trypsin and elastase), to study bioactive properties of peptides derived by enzymatic hydrolysis of cod muscle myosin. The results showed that peptides with antioxidative and ACE inhibitory properties can be produced by enzymatic hydrolysis from cod muscle myosin. Bioactive properties were dependent on the type of enzyme used, as well as the degree of hydrolysis and molecular size of the peptides.

Low molecular weight peptides showed higher antioxidative and ACE inhibitory activities. Chemical antioxidant assay results showed that chymotrypsin digested myosin had the highest antioxidant activity among the individual enzyme treatments, followed by trypsin and elastase. Among all samples CEM low observed the highest antioxidant activities and with values comparable to chymotrypsin. This was to be expected, since CEM low essentially contains 80% chymotrypsin and 5% trypsin and elastase, and was added in such concentration that overall enzyme activity was equal to chymotrypsin. CEM high had the same enzyme composition as CEM low but was added in 10 fold higher concentration than the individual enzyme and CEM low. The resulting hydrolysate showed a higher degree of hydrolysis than CEM low. Results from SDS-PAGE analysis, as well as mass spectrometry, confirm a variety of peptides with molecular seizes much smaller than those generated by the other enzyme treatments. De Novo sequencing of CEM high hydrolysates showed most of the peptides were 5 or less amino acid residues long.

The cellular antioxidant assay results show that trypsin observed the highest activity followed by chymotrypsin and elastase. Since the mass spectrometry analysis discovered higher amounts of phosphorylated peptides in trypsin, compared to the other treatments, there could be a correlation between phosphorylated peptides and absorbance of peptides into the cell. Future studies should include a detailed analysis of the mechanism of enzymatic derived peptides and in cell transfer mechanism.

The highest potency for ACE inhibition was measured for CEM high, followed by CEM low, trypsin elastase and chymotrypsin. These results seem to be correlated to the degree of hydrolysis and confirm that higher degrees of hydrolysis generate smaller peptides with higher ACE inhibitory activities. Di- and tri-peptides are believed to be the key in ACE inhibition and it stays to reason that a high degree of hydrolysis, such as achieved by CEM high, should generate many such peptides and therefore show higher ACE inhibitory activity. However the complexity of the peptides mixtures, generated in this study were too high, to conduct any reasonable mass spectrometry analysis without further fractionation or purification of those peptides mixtures.

Future studies should therefore focus on further fractionation and purification of potent peptides, followed by peptide characterization by mass spectrometry. It is further suggested that for any model system used, the entire protein sequence should be determined in advance to increase the probability of peptide identification and enhance mass spectrometry data analysis. Since the intended use of peptides, derived by enzymatic hydrolysis, is to enhance food stability and quality as well as provide health benefits to the consumer, sensory studies are advisable to determine consumer acceptance of products containing such peptides. As described earlier, a study by Pripp

and Ardo (2007) determined that an increase in ACE inhibitory effects was correlated to an increase in bitterness (also correlated to decrease in peptides size). Other sensory challenges, faced particularly with marine proteins, are the fishy odor and taste present in seafood derived proteins and peptides. Although no fishy odor was perceived from peptides, generated in this study, this needs to be confirmed by sensory panel analysis.

Finally in-vivo analysis should be performed for the most potent peptides generated in this and follow- studies to determine the bioavailability and bioactivity in and animal or human studies.

APPENDIX A
CELLULAR ANTIOXIDANT ASSAY

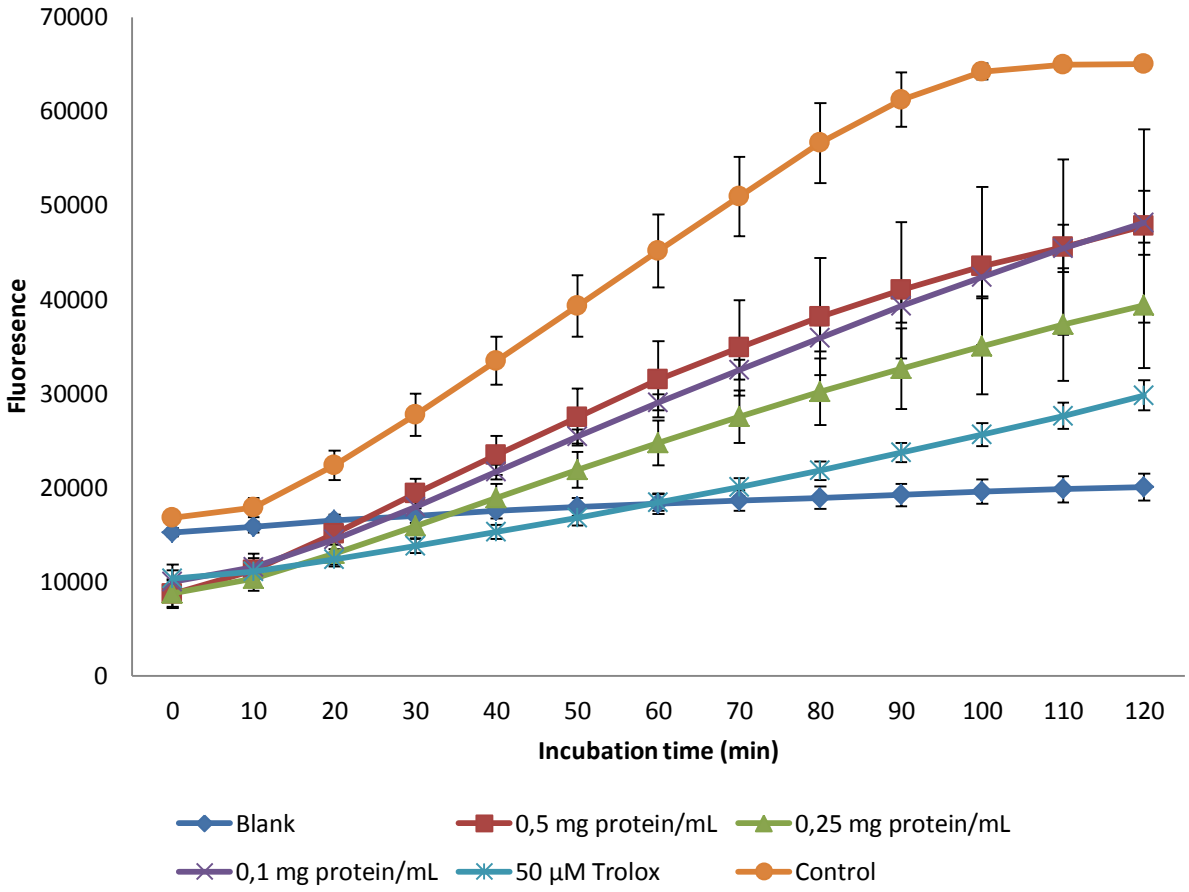

Figure A-1. Cellular Antioxidant Assay (CAA) results for chymotrypsin digested myosin The increase in fluorescence in the presence of the AAPH radical initiator was monitored over time. The control represents the uninhibited reaction with no radical scavenging effect. Lower fluorescence values, compared to the control, represent antioxidant activity in the form of AAPH radical scavenging in live HepG2 cells.

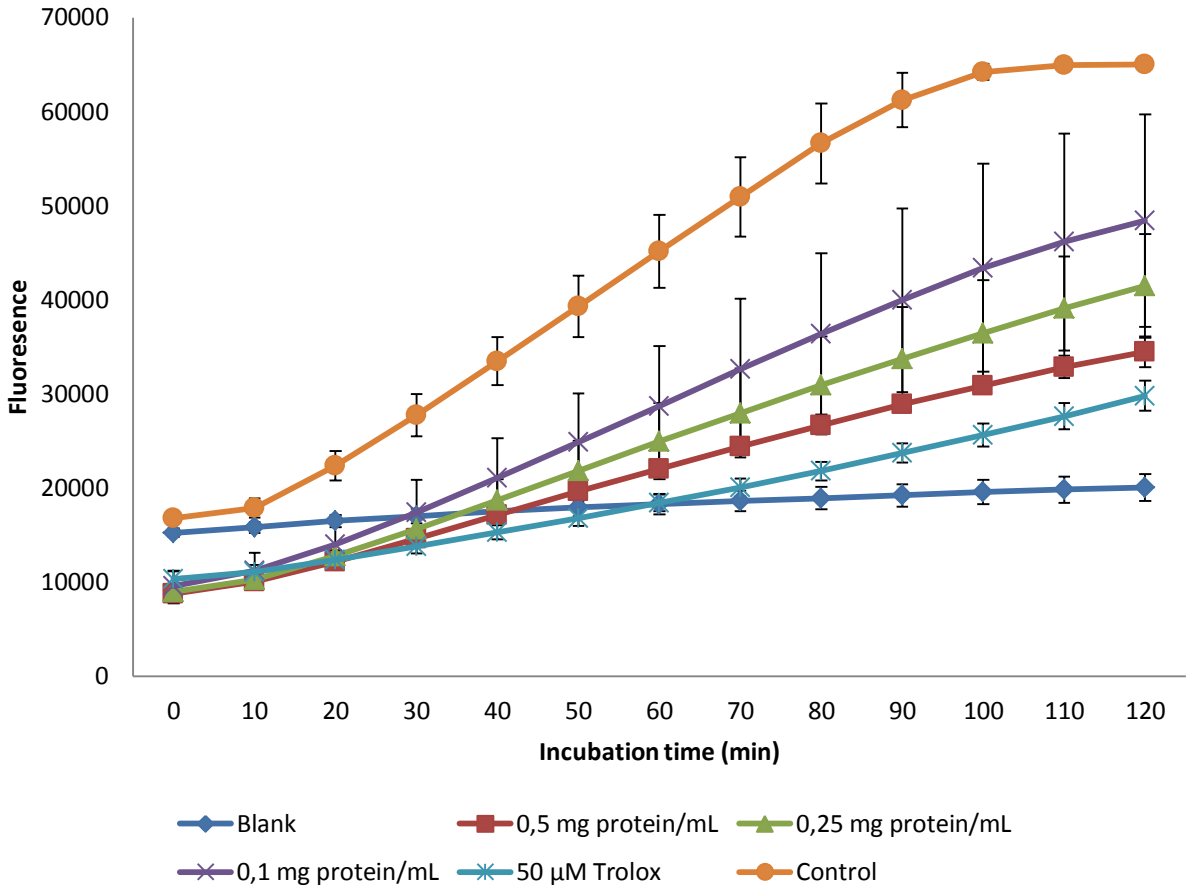

Figure A-2. Cellular Antioxidant Assay (CAA) results for trypsin digested myosin The increase in fluorescence in the presence of the AAPH radical initiator was monitored over time. The control represents the uninhibited reaction with no radical scavenging effect. Lower fluorescence values, compared to the control, represent antioxidant activity in the form of AAPH radical scavenging in live HepG2 cells.

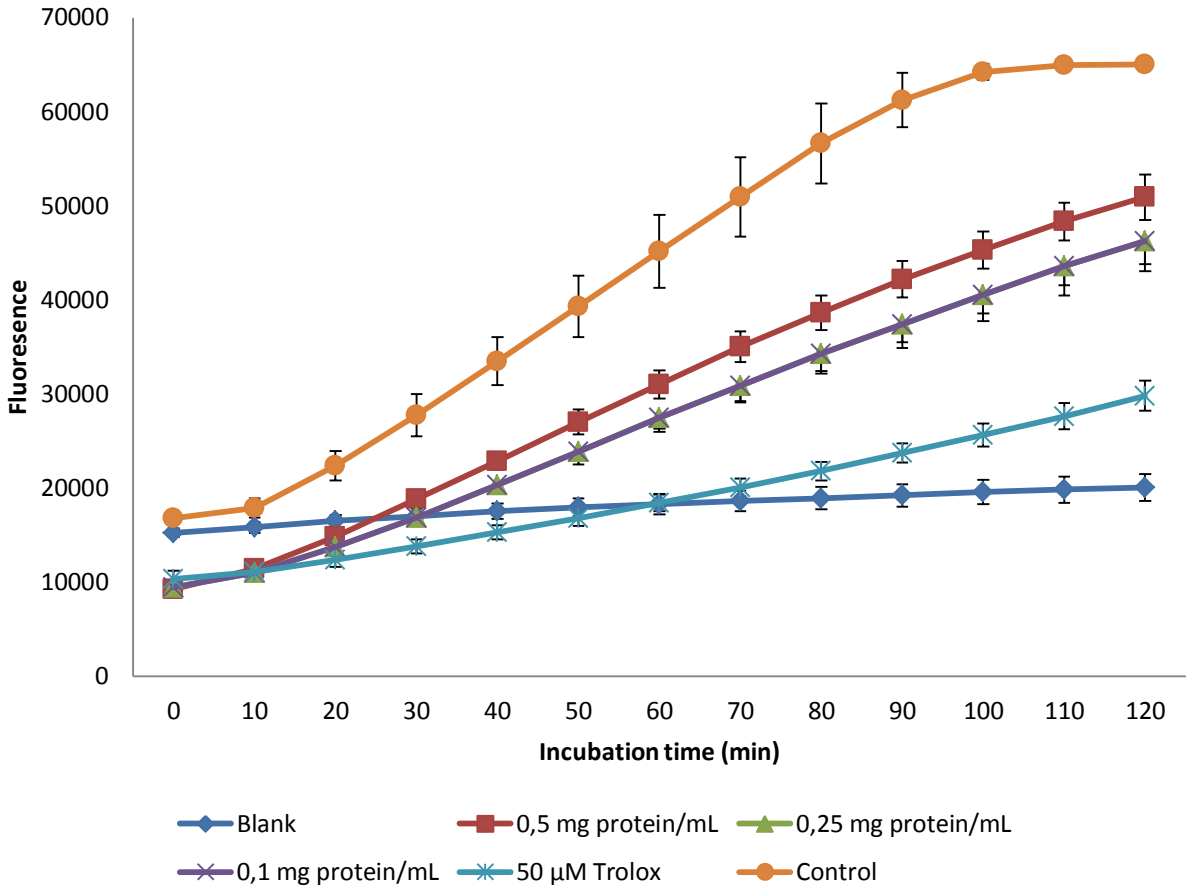

Figure A-3. Cellular Antioxidant Assay (CAA) results for elastase digested myosin The increase in fluorescence in the presence of the AAPH radical initiator was monitored over time. The control represents the uninhibited reaction with no radical scavenging effect. Lower fluorescence values, compared to the control, represent antioxidant activity in the form of AAPH radical scavenging in live HepG2 cells.

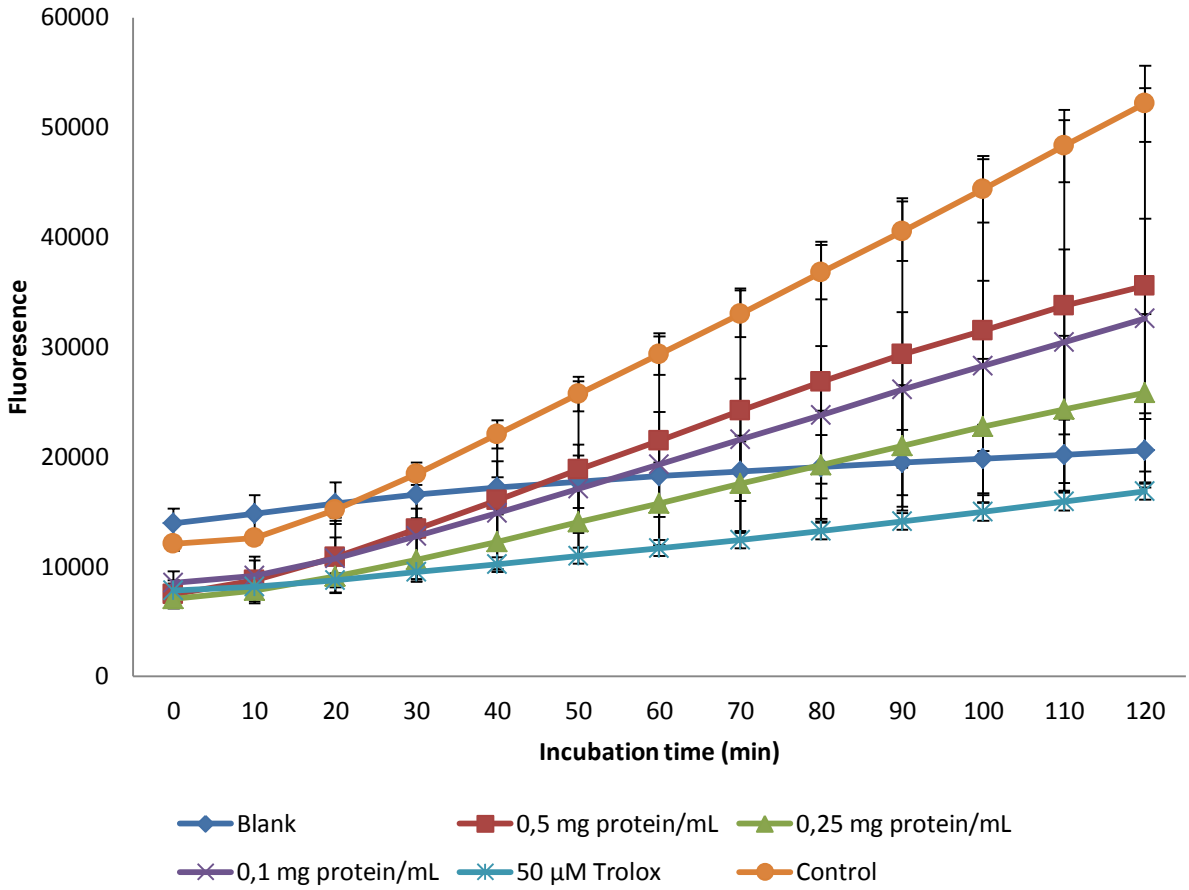

Figure A-4. Cellular Antioxidant Assay (CAA) results for CEM high digested myosin The increase in fluorescence in the presence of the AAPH radical initiator was monitored over time. The control represents the uninhibited reaction with no radical scavenging effect. Lower fluorescence values, compared to the control, represent antioxidant activity in the form of AAPH radical scavenging in live HepG2 cells.

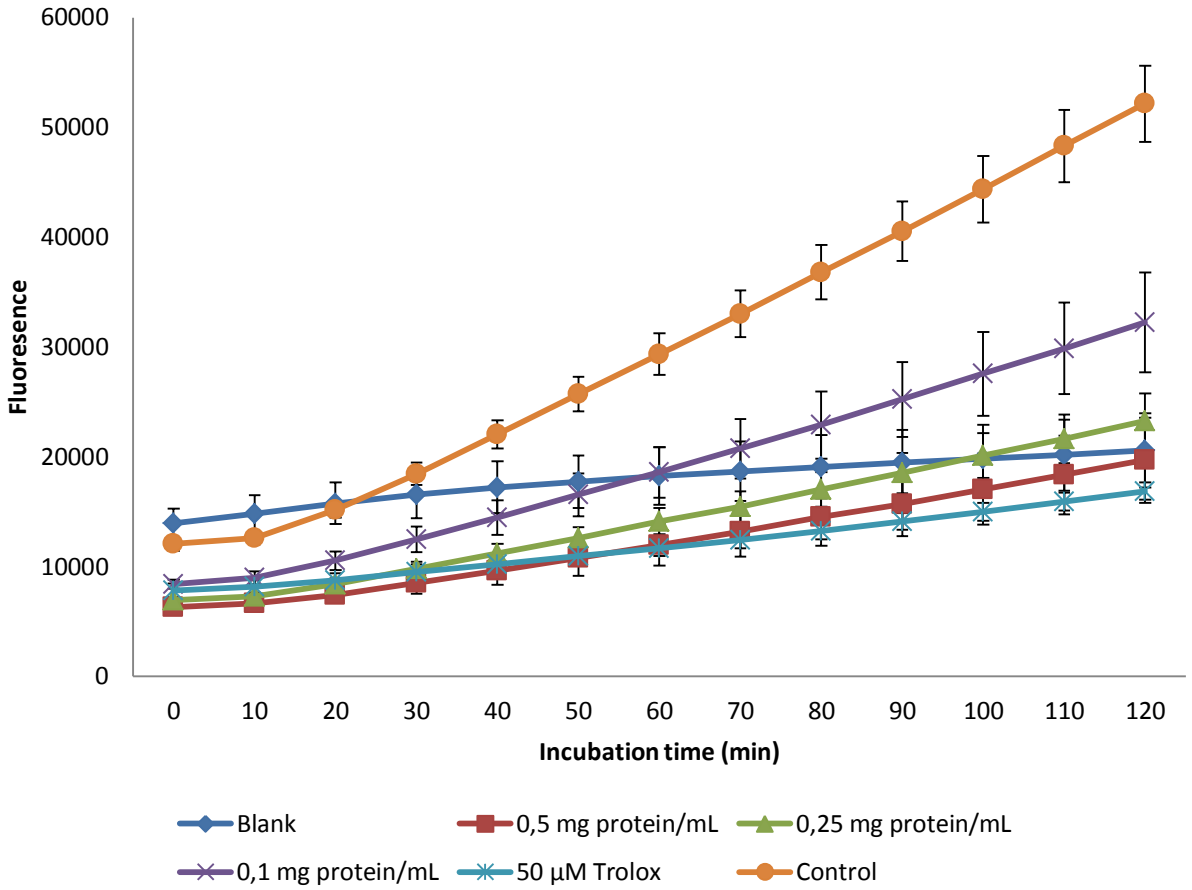

Figure A-5. Cellular Antioxidant Assay (CAA) results for CEM low digested myosin The increase in fluorescence in the presence of the AAPH radical initiator was monitored over time. The control represents the uninhibited reaction with no radical scavenging effect. Lower fluorescence values, compared to the control, represent antioxidant activity in the form of AAPH radical scavenging in live HepG2 cells.

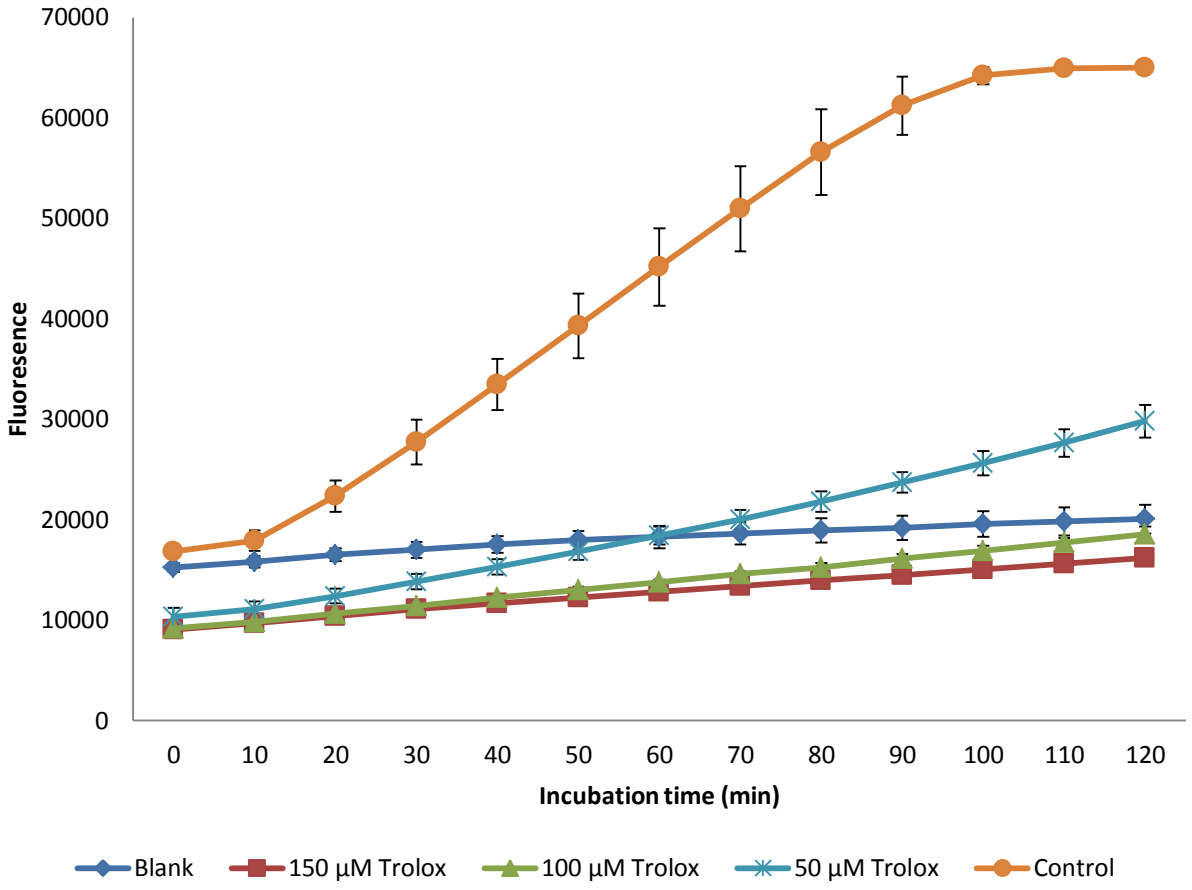

Figure A-6. Cellular Antioxidant Assay (CAA) results for Trolox standards The increase in fluorescence in the presence of the AAPH radical initiator was monitored over time. The control represents the uninhibited reaction with no radical scavenging effect. Lower fluorescence values, compared to the control, represent antioxidant activity in the form of AAPH radical scavenging in live HepG2 cells.

APPENDIX B
PROTEOME DISCOVERY RESULTS FOR CHYMOTRYPSIN

Database search summary report (generated by PD software)

Search report summary of file(s): - C:\Users\Owner\Documents\Stephan_Data\CT.msf
Created with Discoverer version: 1.3.0.339
==========
Number of filtered/unfiltered result items:
- 8/10 protein group(s)
- 64/64 merged protein(s)
- 15/15 peptide(s)
- 23/23 PSM(s)
- 3763/3763 search input(s)

==========
Peptide Grouping Options
- Show peptide groups: True
- Group peptides by: Mass and Sequence

Protein Grouping Options
- Enable protein grouping: True
- Consider leucine and isoleucine as equal: True
- Consider only PSMs with confidence at least: Medium
- Consider only PSMs with delta Cn better than: 0.15
- Apply strict maximum parsimony principle: True

Data reduction filters:
- Peptide Confidence (Minimum confidence: High)

No result filters applied
==========
Summary of file C:\Users\Owner\Documents\Stephan_Data\CT.msf
Workflow created with Discoverer version: 1.3.0.339 (DBVersion:78)
==========
Search name: CT
Search description: danre database, oxi and phos is dynamic
Search date: 06/23/2011 18:56:13
==========
The pipeline tree:

|-(0) Spectrum Files
  |-(1) Spectrum Selector
    |-(2) SEQUEST
      |-(3) Peptide Validator

Processing node 0: Spectrum Files

Input Data:

File Name(s): C:\Users\Owner\Documents\Stephan_Data\CT.RAW

Processing node 1: Spectrum Selector
---
1. General Settings:

Precursor Selection: Use MS1 Precursor
Use New Precursor Reevaluation: True
2. Spectrum Properties Filter:

Lower RT Limit: 0
Upper RT Limit: 0
First Scan: 0
Last Scan: 0
Lowest Charge State: 0
Highest Charge State: 0
Min. Precursor Mass: 350 Da
Max. Precursor Mass: 5000 Da
Total Intensity Threshold: 0
Minimum Peak Count: 1
3. Scan Event Filters:

MS Order: Is MS2
Scan Type: Is Full
4. Peak Filters:

S/N Threshold (FT-only): 1.5
5. Replacements for Unrecognized Properties:

Unrecognized Charge Replacements: Automatic
Unrecognized Mass Analyzer Replacements: ITMS
Unrecognized MS Order Replacements: MS2
Unrecognized Activation Type Replacements: CID
Unrecognized Polarity Replacements: +
6. Just for Testing:

Precursor Clipping Range Before: 2.5 Da
Precursor Clipping Range After: 5.5 Da

Processing node 2: SEQUEST
---
1. Input Data:

Protein Database: ipi.DANRE.v3.82.fasta
Enzyme Name: Chymotrypsin(FWY) (Full)
Maximum Missed Cleavage Sites: 3
1.1 Peptide Scoring Options:

Maximum Peptides Considered: 500
Maximum Peptides Output: 10
Calculate Probability Scores: False
Absolute XCorr Threshold: 0.4
Fragment Ion Cutoff Percentage: 0.1
Peptide Without Protein XCorr Threshold: 1.5
1.2 Protein Scoring Options:

Maximum Protein References Per Peptide: 100
Protein Relevance Threshold: 1.5
Peptide Relevance Factor: 0.4
2. Tolerances:

Precursor Mass Tolerance: 10 ppm
Fragment Mass Tolerance: 0.8 Da
Use Average Precursor Mass: False
Use Average Fragment Masses: False
3. Ion Series:

Use Neutral Loss a Ions: True
Use Neutral Loss b Ions: True
Use Neutral Loss y Ions: True
Weight of a Ions: 0
Weight of b Ions: 1
Weight of c Ions: 0
Weight of x Ions: 0
Weight of y Ions: 1
Weight of z Ions: 0
4. Dynamic Modifications:

Max. Modifications Per Peptide: 4
1. Dynamic Modification: Oxidation / +15.995 Da (M)
2. Dynamic Modification: Phospho / +79.966 Da (S, T, Y)

Processing node 3: Peptide Validator
---
1. Decoy Database Search:

Search Against Decoy Database: True
Target FDR (Strict): 0.01
Target FDR (Relaxed): 0.05
==========
Further information:
SEQUEST (2):
 - Number of sequences searched: 41893

==========
Processing details:
06/23/2011 07:14 PM (2):SEQUEST: Total search time was 7 min 51 s.
06/23/2011 07:14 PM (2):SEQUEST: Search completed
06/23/2011 07:14 PM (2):SEQUEST: Protein grouping (1264 groups) took: 1.41 s
06/23/2011 07:14 PM (2):SEQUEST: 1763 protein(s) + 1750 decoy proteins scored and inserted into result file in 6.2 s
06/23/2011 07:14 PM (2):SEQUEST: 1763 protein(s) scored
06/23/2011 07:14 PM (2):SEQUEST: Result finalization started
06/23/2011 07:14 PM (3):Peptide Validator: Start calculating relaxed False Discovery Rate
06/23/2011 07:14 PM (3):Peptide Validator: Start calculating strict False Discovery Rate
06/23/2011 07:14 PM (3):Peptide Validator: Evaluating peptides of SEQUEST (2) started
06/23/2011 07:14 PM (2):SEQUEST: Sending 763 decoy peptide hits (3813 peptides) to result file
06/23/2011 07:13 PM (2):SEQUEST: Starting SEQUEST decoy search
06/23/2011 07:13 PM (2):SEQUEST: Sending 763 peptide hits (3820 peptides) to result file
06/23/2011 07:13 PM (2):SEQUEST: Starting SEQUEST search
06/23/2011 07:13 PM (2):SEQUEST: Receiving spectra 3001 to 3764.
06/23/2011 07:13 PM (2):SEQUEST: Sending 1000 decoy peptide hits (6705 peptides) to result file
06/23/2011 07:12 PM (2):SEQUEST: Starting SEQUEST decoy search
06/23/2011 07:12 PM (2):SEQUEST: Sending 1000 peptide hits (6703 peptides) to result file
06/23/2011 07:11 PM (2):SEQUEST: Starting SEQUEST search
06/23/2011 07:11 PM (2):SEQUEST: Receiving spectra 2001 to 3001.
06/23/2011 07:11 PM (2):SEQUEST: Sending 1000 decoy peptide hits (9207 peptides) to result file
06/23/2011 07:09 PM (2):SEQUEST: Starting SEQUEST decoy search
06/23/2011 07:09 PM (2):SEQUEST: Sending 1000 peptide hits (9205 peptides) to result file
06/23/2011 07:08 PM (2):SEQUEST: Starting SEQUEST search
06/23/2011 07:08 PM (2):SEQUEST: Receiving spectra 1001 to 2001.
06/23/2011 07:07 PM (2):SEQUEST: Sending 1000 decoy peptide hits (4761 peptides) to result file
06/23/2011 07:07 PM (2):SEQUEST: Starting SEQUEST decoy search
06/23/2011 07:07 PM (2):SEQUEST: Sending 1000 peptide hits (4741 peptides) to result file
06/23/2011 07:06 PM (2):SEQUEST: Starting SEQUEST search
06/23/2011 07:06 PM (2):SEQUEST: There is already an adequate decoy FASTA index.

06/23/2011 07:06 PM (2):SEQUEST: Looking for existing decoy FASTA index.
06/23/2011 07:06 PM (2):SEQUEST: There is already an adequate target FASTA index.
06/23/2011 07:06 PM (2):SEQUEST: Looking for existing target FASTA index.
06/23/2011 07:06 PM (2):SEQUEST: Receiving spectra 1 to 1001.
06/23/2011 07:06 PM (1):Spectrum Selector: Reading from File 1 of

1:C:\Users\Owner\Documents\Stephan_Data\CT.RAW (4563 spectra total)

Protein and peptide results for chymotrypsin digested myosin – generated by Proteome Discovery software

Accession	Description	Score	Coverage	# Proteins	# Unique Peptides	# PSMs	# AAs	MW [kDa]	calc. pI
IPI00488085.2	Myosin, light polypeptide 2, skeletal muscle	19.58	8.88	3	3	8	169	18.9	4.73

A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
High	SMFEQSQIQEYKEAF	6	2	1		0.0000	2.74	0.00	2	1864.84355	0.69	31.79	2
High	EQSQIQEYKEAF	1	3	1		0.0000	2.55	0.00	2	1499.70134	0.02	28.97	1
High	EQSQIQEY	1	3	1		0.0000	1.91	0.00	1	1024.45911	0.88	14.26	0

Accession	Description	Score	Coverage	# Proteins	# Unique Peptides	# PSMs	# AAs	MW [kDa]	calc. pI
IPI00504207.1	Skeletal alpha1 actin	8.20	6.37	14	2	3	377	41.9	5.39

A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
High	ELPDGQVITIGNERF	2	14	1		0.0000	3.11	0.00	2	1687.87175	3.96	23.35	0
High	ETFNVPAMY	1	9	1		0.0000	2.11	0.00	1	1071.48254	0.88	22.39	1

Accession	Description	Score	Coverage	# Proteins	# Unique Peptides	# PSMs	# AAs	MW [kDa]	calc. pI
IPI00975366.2	myosin heavy chain, fast skeletal muscle-like	7.65	2.27	35	3	3	1410	161.1	6.58

A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
High	LDKNKDPLNDSVVQLY	1	5	1		0.0000	2.98	0.00	2	1860.96770	-1.37	20.61	0
High	LLEKSRVTF	1	29	1		0.0000	2.79	0.00	2	1092.64092	-0.28	15.72	0
High	VLEQEEY	1	33	1		0.0000	1.88	0.00	1	909.41901	-1.13	14.95	0

Accession	Description	Score	Coverage	# Proteins	# Unique Peptides	# PSMs	# AAs	MW [kDa]	calc. pI
IPI00497753.5	Glyceraldehyde-3-phosphate dehydrogenase	4.45	6.61	2	1	1	333	35.8	8.12

A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
High	RVPTPNVSVVDLTVRLEKPAKY	1	2	1		0.0000	4.45	0.00	4	2481.42177	1.17	21.96	0

Accession	Description	Score	Coverage	# Proteins	# Unique Peptides	# PSMs	# AAs	MW [kDa]	calc. pI
IPI00516071.1	Creatine kinase, brain	3.80	9.94	4	1	1	171	19.6	4.86

A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
High	TLDDVIQTGVDNPGHPF	1	4	1		0.0000	3.80	0.00	2	1824.87737	0.56	22.38	0

Accession	Description	Score	Coverage	# Proteins	# Unique Peptides	# PSMs	# AAs	MW [kDa]	calc. pI
IPI00483373.1	Adenosine monophosphate deaminase 1	3.63	2.23	1	1	1	717	82.9	6.83

A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
High	NAKYNPVGASELRDLY	1	1	1		0.0000	3.63	0.00	2	1809.91374	0.38	20.09	1

Accession	Description	Score	Coverage	# Proteins	# Unique Peptides	# PSMs	# AAs	MW [kDa]	calc. pI
IPI00998694.1	Uncharacterized protein	2.97	4.13	1	1	2	606	69.0	5.36

A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages

	High	TQtTyVKmPNYIPRERsLWIMITIF	2	1	1	T3(Phospho); Y5(Phospho); M8(Oxidation); S17(Phospho)	0.0000	2.97	0.00	3	3357.49839	-8.08	20.40	3
IPI00920244.1	Uncharacterized protein	2.93	5.68	1	1	2	511	56.2	7.15					

A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
High	NNIFSIVPAIMmGVSEVAGsFEIIIVARF	2	1	1	M12(Oxidation); S20(Phospho)	0.0000	2.93	0.00	3	3220.64829	9.16	25.92	2

APPENDIX C
PROTEOME DISCOVERY RESULTS FOR TRYPSIN

Database search summary report (generated by PD software)

Search report summary of file(s): C:\Users\Owner\Documents\Stephan_Data\TR.msf
Created with Discoverer version: 1.3.0.339
==========
Number of filtered/unfiltered result items:
- 21/23 protein group(s)
- 129/129 merged protein(s)
- 93/93 peptide(s)
- 325/325 PSM(s)
- 4017/4017 search input(s)
==========
Peptide Grouping Options
- Show peptide groups: True
- Group peptides by: Mass and Sequence
Protein Grouping Options
- Enable protein grouping: True
- Consider leucine and isoleucine as equal: True
- Consider only PSMs with confidence at least: Medium
- Consider only PSMs with delta Cn better than: 0.15
- Apply strict maximum parsimony principle: True
Data reduction filters:
- Peptide Confidence (Minimum confidence: High)
No result filters applied
==========
Summary of file C:\Users\Owner\Documents\Stephan_Data\TR.msf
Workflow created with Discoverer version: 1.3.0.339 (DBVersion:78)
==========
Search name: TR
Search description: danre database, oxi and phos is dynamic
Search date: 06/23/2011 18:55:40
==========
The pipeline tree:
|-(0) Spectrum Files
  |-(1) Spectrum Selector
    |-(2) SEQUEST
      |-(3) Peptide Validator

Processing node 0: Spectrum Files

Input Data:

File Name(s): C:\Users\Owner\Documents\Stephan_Data\TR.RAW

Processing node 1: Spectrum Selector
---
1. General Settings:

Precursor Selection: Use MS1 Precursor
Use New Precursor Reevaluation: True
2. Spectrum Properties Filter:

Lower RT Limit: 0
Upper RT Limit: 0
First Scan: 0
Last Scan: 0
Lowest Charge State: 0
Highest Charge State: 0
Min. Precursor Mass: 350 Da
Max. Precursor Mass: 5000 Da
Total Intensity Threshold: 0
Minimum Peak Count: 1
3. Scan Event Filters:

MS Order: Is MS2
Scan Type: Is Full
4. Peak Filters:

S/N Threshold (FT-only): 1.5
5. Replacements for Unrecognized Properties:

Unrecognized Charge Replacements: Automatic
Unrecognized Mass Analyzer Replacements: ITMS
Unrecognized MS Order Replacements: MS2
Unrecognized Activation Type Replacements: CID
Unrecognized Polarity Replacements: +
6. Just for Testing:

Precursor Clipping Range Before: 2.5 Da
Precursor Clipping Range After: 5.5 Da

Processing node 2: SEQUEST
---
1. Input Data:

Protein Database: ipi.DANRE.v3.82.fasta
Enzyme Name: Trypsin (Full)
Maximum Missed Cleavage Sites: 3
1.1 Peptide Scoring Options:

Maximum Peptides Considered: 500
Maximum Peptides Output: 10
Calculate Probability Scores: False
Absolute XCorr Threshold: 0.4
Fragment Ion Cutoff Percentage: 0.1
Peptide Without Protein XCorr Threshold: 1.5
1.2 Protein Scoring Options:

Maximum Protein References Per Peptide: 100
Protein Relevance Threshold: 1.5
Peptide Relevance Factor: 0.4
2. Tolerances:

Precursor Mass Tolerance: 10 ppm
Fragment Mass Tolerance: 0.8 Da
Use Average Precursor Mass: False
Use Average Fragment Masses: False
3. Ion Series:

Use Neutral Loss a Ions: True
Use Neutral Loss b Ions: True
Use Neutral Loss y Ions: True
Weight of a Ions: 0
Weight of b Ions: 1
Weight of c Ions: 0
Weight of x Ions: 0
Weight of y Ions: 1
Weight of z Ions: 0
4. Dynamic Modifications:

Max. Modifications Per Peptide: 4
1. Dynamic Modification: Oxidation / +15.995 Da (M)
2. Dynamic Modification: Phospho / +79.966 Da (S, T, Y)

Processing node 3: Peptide Validator
---
1. Decoy Database Search:

Search Against Decoy Database: True
Target FDR (Strict): 0.01
Target FDR (Relaxed): 0.05
==========
Further information:
SEQUEST (2):
 - Number of sequences searched: 41893
==========

Processing details:
06/23/2011 07:06 PM (2):SEQUEST: Total search time was 9 min 26 s.
06/23/2011 07:06 PM (2):SEQUEST: Search completed
06/23/2011 07:06 PM (2):SEQUEST: Protein grouping (2233 groups) took: 6.73 s
06/23/2011 07:06 PM (2):SEQUEST: 3315 protein(s) + 3143 decoy proteins scored and inserted into result file in 14.89 s
06/23/2011 07:06 PM (2):SEQUEST: 3315 protein(s) scored
06/23/2011 07:05 PM (2):SEQUEST: Result finalization started
06/23/2011 07:05 PM (3):Peptide Validator: Start calculating relaxed False Discovery Rate
06/23/2011 07:05 PM (3):Peptide Validator: Start calculating strict False Discovery Rate
06/23/2011 07:05 PM (3):Peptide Validator: Evaluating peptides of SEQUEST (2) started
06/23/2011 07:05 PM (2):SEQUEST: Sending 17 decoy peptide hits (48 peptides) to result file
06/23/2011 07:05 PM (2):SEQUEST: Starting SEQUEST decoy search
06/23/2011 07:05 PM (2):SEQUEST: Sending 17 peptide hits (45 peptides) to result file
06/23/2011 07:05 PM (2):SEQUEST: Starting SEQUEST search
06/23/2011 07:05 PM (2):SEQUEST: Receiving spectra 4001 to 4018.
06/23/2011 07:05 PM (2):SEQUEST: Sending 1000 decoy peptide hits (5856 peptides) to result file
06/23/2011 07:04 PM (2):SEQUEST: Starting SEQUEST decoy search
06/23/2011 07:04 PM (2):SEQUEST: Sending 1000 peptide hits (5833 peptides) to result file
06/23/2011 07:04 PM (2):SEQUEST: Starting SEQUEST search
06/23/2011 07:04 PM (2):SEQUEST: Receiving spectra 3001 to 4001.
06/23/2011 07:04 PM (2):SEQUEST: Sending 1000 decoy peptide hits (8840 peptides) to result file
06/23/2011 07:03 PM (2):SEQUEST: Starting SEQUEST decoy search
06/23/2011 07:03 PM (2):SEQUEST: Sending 1000 peptide hits (8835 peptides) to result file
06/23/2011 07:02 PM (2):SEQUEST: Starting SEQUEST search
06/23/2011 07:02 PM (2):SEQUEST: Receiving spectra 2001 to 3001.
06/23/2011 07:02 PM (2):SEQUEST: Sending 1000 decoy peptide hits (9754 peptides) to result file
06/23/2011 07:00 PM (2):SEQUEST: Starting SEQUEST decoy search
06/23/2011 07:00 PM (2):SEQUEST: Sending 1000 peptide hits (9746 peptides) to result file
06/23/2011 06:59 PM (2):SEQUEST: Starting SEQUEST search
06/23/2011 06:59 PM (2):SEQUEST: Receiving spectra 1001 to 2001.
06/23/2011 06:59 PM (2):SEQUEST: Sending 1000 decoy peptide hits (4452 peptides) to result file
06/23/2011 06:57 PM (2):SEQUEST: Starting SEQUEST decoy search

06/23/2011 06:57 PM (2):SEQUEST: Sending 1000 peptide hits (4378 peptides) to result file
06/23/2011 06:55 PM (2):SEQUEST: Starting SEQUEST search
06/23/2011 06:55 PM (2):SEQUEST: There is already an adequate decoy FASTA index.
06/23/2011 06:55 PM (2):SEQUEST: Looking for existing decoy FASTA index.
06/23/2011 06:55 PM (2):SEQUEST: There is already an adequate target FASTA index.
06/23/2011 06:55 PM (2):SEQUEST: Looking for existing target FASTA index.
06/23/2011 06:55 PM (2):SEQUEST: Receiving spectra 1 to 1001.
06/23/2011 06:55 PM (1):Spectrum Selector: Reading from File 1 of 1:C:\Users\Owner\Documents\Stephan_Data\TR.RAW (4598 spectra total)

Protein and peptide results for trypsin digested myosin – generated by Proteome Discovery software

Accession	Description	Score	Coverage	# Proteins	# Unique Peptides	# PSMs	# AAs	MW [kDa]	calc. pI
IPI00503572.3	myosin, heavy polypeptide 1.1, skeletal muscle	771.63	21.17	18	2	199	1937	222.0	5.67

A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
High	KMEGDLNEMEIQLSHANR	6	14	4		0.0000	6.39	0.00	2	2114.99809	1.06	19.06	1
High	KAITDAAMMAEELKK	23	26	7		0.0000	6.13	0.00	3	1649.86081	0.37	16.94	2
High	KKMEGDLNEMEIQLSHANR	16	14	4		0.0000	6.06	0.00	3	2243.09067	-0.07	17.09	2
High	DLEESTLQHEATAAALR	1	12	4		0.0000	6.00	0.00	2	1854.91863	-0.35	19.56	0
High	TKLEQQVDDLEGSLEQEKKLR	2	8	3		0.0000	5.61	0.00	3	2486.30655	-1.30	21.31	3
High	KmEGDLNEMEIQLSHANR	4	14	4	M2(Oxidation)	0.0000	5.53	0.00	3	2130.99002	-0.35	17.56	1
High	KKQADSVAELGEQIDNLQR	7	14	5		0.0000	5.27	0.00	3	2142.11808	1.42	18.87	2
High	RDLEESTLQHEATAAALR	3	12	4		0.0000	5.21	0.00	2	2011.02190	0.74	17.25	1
High	QADSVAELGEQIDNLQR	3	14	5		0.0000	5.13	0.00	3	1885.92643	0.70	22.26	0
High	EQFEEEQEAKAELQR	1	12	5		0.0000	5.10	0.00	2	1863.87004	-1.05	16.36	1
High	KAITDAAmMAEELKK	4	26	7	M8(Oxidation)	0.0000	5.09	0.00	3	1665.85453	-0.35	16.71	2
High	AITDAAMMAEELKK	2	26	7		0.0000	4.99	0.00	2	1521.76567	0.29	18.57	1
High	MEGDLNEMEIQLSHANR	12	14	4		0.0000	4.96	0.00	2	1986.90093	0.02	20.60	0
High	EKSEYKMEIDDLSSNmEAVAK	1	11	4	M16(Oxidation)	0.0000	4.78	0.00	3	2433.11716	0.43	21.05	2
High	LQEAEEQIEAVNSK	13	7	3		0.0000	4.76	0.00	2	1587.78459	-0.97	25.97	0
High	QLEEKEALVSQLTR	3	9	4		0.0000	4.62	0.00	3	1643.89469	-1.01	17.36	1
High	IEDEQSLGAQLQKK	1	10	4		0.0000	4.60	0.00	2	1586.83782	-0.43	14.91	1
High	TKLEQQVDDLEGSLEQEK	1	8	3		0.0000	4.60	0.00	3	2089.02756	-0.99	21.99	1
High	KVQHELEEAEER	2	11	3		0.0000	4.53	0.00	3	1496.73319	-0.56	12.10	1
High	KQADSVAELGEQIDNLQR	3	14	5		0.0000	4.53	0.00	3	2014.01932	-0.37	20.72	1
High	TPGLMENFLVIHQLR	2	16	4		0.0000	4.43	0.00	2	1767.95696	-0.32	25.10	0
High	VKELTYQTEEDKK	2	15	4		0.0000	4.42	0.00	3	1610.82694	-0.19	12.38	2
High	IEDEQSLGAQLQK	1	10	4		0.0000	4.40	0.00	2	1458.74199	-1.06	15.83	0
High	NLQQEISDLTEQLGETGK	1	12	4		0.0000	4.34	0.00	2	2002.99089	-0.97	27.01	0
High	KVAEQELVDASER	3	14	4		0.0000	4.27	0.00	2	1473.75456	0.08	14.24	1
High	SEYKMEIDDLSSNmEAVAK	2	11	4	M14(Oxidation)	0.0000	4.27	0.00	2	2175.97905	0.24	21.67	1
High	DLEESTLQHEATAAALRK	1	12	4		0.0000	4.22	0.00	3	1983.01480	0.28	18.03	1
High	KGGSMQTVSSQFR	2	11	3		0.0000	4.17	0.00	2	1412.69414	-0.71	14.06	1
High	IEELEEEIEAERAAR	1	22	6		0.0000	4.13	0.00	2	1786.88127	-0.32	18.44	1

	High	KDFETSQLLSK	1	5	2		0.0000	4.08	0.00	2	1295.68401	-0.16	15.28	1
	High	LEQQVDDLEGSLEQEKK	1	25	7		0.0000	3.99	0.00	3	1987.98301	0.53	18.21	1
	High	NLTEEmAAQDESIGKLTK	1	4	1	M6(Oxidation)	0.0000	3.94	0.00	2	1993.97551	0.37	19.31	1
	High	KDIDDLELTLAK	1	27	7		0.0000	3.87	0.00	2	1373.75383	1.11	19.01	1
	High	MEGDLNEmEIQLSHANR	1	14	4	M8(Oxidation)	0.0000	3.85	0.00	3	2002.89658	0.39	16.54	0
	High	KKDFETSQLLSK	1	5	2		0.0000	3.83	0.00	2	1423.77947	0.20	14.25	2
	High	FTGAVLHHGNMK	1	12	3		0.0000	3.80	0.00	2	1311.66155	-0.89	13.25	0
	High	IEELEEEIEAER	1	22	6		0.0000	3.77	0.00	2	1488.70635	-0.10	19.27	0
	High	LQDLVDKLQLK	17	25	6		0.0000	3.65	0.00	2	1312.78215	-1.06	37.60	1
	High	VLNASVIPEGQFIDNK	1	16	4		0.0000	3.60	0.00	2	1743.92778	0.07	21.41	0
	High	VQHELEEAEER	2	11	3		0.0000	3.55	0.00	2	1368.63823	-0.61	12.92	0
	High	ADLSRELEEISER	1	19	4		0.0000	3.55	0.00	3	1546.77298	1.40	20.92	1
	High	DAQLHLDDAVR	5	9	3		0.0000	3.49	0.00	2	1252.62871	0.49	15.26	0
	High	TKLEQQVDDLEGSLEQEKK	2	8	3		0.0000	3.36	0.00	4	2217.12490	0.13	20.84	2
	High	MEIDDLSSNmEAVAK	3	11	4	M10(Oxidation)	0.0000	3.35	0.00	2	1668.74529	-0.20	50.43	0
	High	TLEDQLSEIK	2	8	3		0.0000	3.32	0.00	2	1175.61357	-1.61	18.53	0
	High	GGSMQTVSSQFR	3	11	3		0.0000	3.27	0.00	2	1284.59941	-0.59	14.97	0
	High	AGLLGTLEEMR	11	28	5		0.0000	3.24	0.00	2	1189.62444	-0.15	37.34	0
	High	DLQHRLDEAENLAMK	3	14	4		0.0000	3.22	0.00	2	1782.88249	1.17	20.12	1
	High	VAEQELVDASER	1	14	4		0.0000	3.19	0.00	2	1345.65996	0.36	15.02	0
	High	LDEAENLAmK	1	14	4	M9(Oxidation)	0.0000	3.15	0.00	2	1149.54521	-0.41	13.76	0
	High	GGSmQTVSSQFR	2	11	3	M4(Oxidation)	0.0000	3.14	0.00	2	1300.59416	-0.71	13.53	0
	High	DFETSQLLSK	5	5	2		0.0000	3.13	0.00	2	1167.58953	0.24	18.02	0
	High	NLTEEmAAQDESIGK	1	4	1	M6(Oxidation)	0.0000	3.11	0.00	2	1651.74919	0.69	16.17	0
	High	EALVSQLTR	2	10	4		0.0000	3.07	0.00	2	1016.57408	0.54	16.01	0
	High	ELTYQTEEDKK	1	15	4		0.0000	3.02	0.00	2	1383.66326	-0.44	12.30	1
	High	AITDAAMmAEELKK	3	26	7	M8(Oxidation)	0.0000	3.00	0.00	2	1537.75969	-0.30	16.17	1
	High	LDEAENLAMK	2	14	4		0.0000	2.42	0.00	1	1133.55103	0.22	14.81	0
IPI00500057.4	myosin heavy chain, fast skeletal muscle	768.21	20.90	15	1	198	1933	222.1	5.67					

A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
High	KMEGDLNEMEIQLSHANR	6	14	4		0.0000	6.39	0.00	2	2114.99809	1.06	19.06	1
High	KAITDAAMMAEELKK	23	26	7		0.0000	6.13	0.00	3	1649.86081	0.37	16.94	2
High	KKMEGDLNEMEIQLSHANR	16	14	4		0.0000	6.06	0.00	3	2243.09067	-0.07	17.09	2
High	DLEESTLQHEATAAALR	1	12	4		0.0000	6.00	0.00	2	1854.91863	-0.35	19.56	0

High	TKLEQQVDDLEGSLEQEKKLR	2	8	3		0.0000	5.61	0.00	3	2486.30655	-1.30	21.31	3
High	KmEGDLNEMEIQLSHANR	4	14	4	M2(Oxidation)	0.0000	5.53	0.00	3	2130.99002	-0.35	17.56	1
High	KKQADSVAELGEQIDNLQR	7	14	5		0.0000	5.27	0.00	3	2142.11808	1.42	18.87	2
High	RDLEESTLQHEATAAALR	3	12	4		0.0000	5.21	0.00	2	2011.02190	0.74	17.25	1
High	QADSVAELGEQIDNLQR	3	14	5		0.0000	5.13	0.00	3	1885.92643	0.70	22.26	0
High	EQFEEEQEAKAELQR	1	12	5		0.0000	5.10	0.00	2	1863.87004	-1.05	16.36	1
High	KAITDAAmMAEELKK	4	26	7	M8(Oxidation)	0.0000	5.09	0.00	3	1665.85453	-0.35	16.71	2
High	AITDAAMMAEELKK	2	26	7		0.0000	4.99	0.00	2	1521.76567	0.29	18.57	1
High	MEGDLNEMEIQLSHANR	12	14	4		0.0000	4.96	0.00	2	1986.90093	0.02	20.60	0
High	EKSEYKMEIDDLSSNmEAVAK	1	11	4	M16(Oxidation)	0.0000	4.78	0.00	3	2433.11716	0.43	21.05	2
High	LQEAEEQIEAVNSK	13	7	3		0.0000	4.76	0.00	2	1587.78459	-0.97	25.97	0
High	QLEEKEALVSQLTR	3	9	4		0.0000	4.62	0.00	3	1643.89469	-1.01	17.36	1
High	IEDEQSLGAQLQKK	1	10	4		0.0000	4.60	0.00	2	1586.83782	-0.43	14.91	1
High	TKLEQQVDDLEGSLEQEK	1	8	3		0.0000	4.60	0.00	3	2089.02756	-0.99	21.99	1
High	KVQHELEEAEER	2	11	3		0.0000	4.53	0.00	3	1496.73319	-0.56	12.10	1
High	KQADSVAELGEQIDNLQR	3	14	5		0.0000	4.53	0.00	3	2014.01932	-0.37	20.72	1
High	TPGLMENFLVIHQLR	2	16	4		0.0000	4.43	0.00	2	1767.95696	-0.32	25.10	0
High	VKELTYQTEEDKK	2	15	4		0.0000	4.42	0.00	3	1610.82694	-0.19	12.38	2
High	IEDEQSLGAQLQK	1	10	4		0.0000	4.40	0.00	2	1458.74199	-1.06	15.83	0
High	NLQQEISDLTEQIGETGK	1	12	4		0.0000	4.34	0.00	2	2002.99089	-0.97	27.01	0
High	KVAEQELVDASER	3	14	4		0.0000	4.27	0.00	2	1473.75456	0.08	14.24	1
High	SEYKMEIDDLSSNmEAVAK	2	11	4	M14(Oxidation)	0.0000	4.27	0.00	2	2175.97905	0.24	21.67	1
High	DLEESTLQHEATAAALRK	1	12	4		0.0000	4.22	0.00	3	1983.01480	0.28	18.03	1
High	KGGSMQTVSSQFR	2	11	3		0.0000	4.17	0.00	2	1412.69414	-0.71	14.06	1
High	IEELEEEIEAERAAR	1	22	6		0.0000	4.13	0.00	2	1786.88127	-0.32	18.44	1
High	KDFETSQLLSK	1	5	2		0.0000	4.08	0.00	2	1295.68401	-0.16	15.28	1
High	LEQQVDDLEGSLEQEKK	1	25	7		0.0000	3.99	0.00	3	1987.98301	0.53	18.21	1
High	KDIDDLELTLAK	1	27	7		0.0000	3.87	0.00	2	1373.75383	1.11	19.01	1
High	MEGDLNEmEIQLSHANR	1	14	4	M8(Oxidation)	0.0000	3.85	0.00	3	2002.89658	0.39	16.54	0
High	KKDFETSQLLSK	1	5	2		0.0000	3.83	0.00	2	1423.77947	0.20	14.25	2
High	FTGAVLHHGNMK	1	12	3		0.0000	3.80	0.00	2	1311.66155	-0.89	13.25	0
High	IEELEEEIEAER	1	22	6		0.0000	3.77	0.00	2	1488.70635	-0.10	19.27	0
High	LQDLVDKLQLK	17	25	6		0.0000	3.65	0.00	2	1312.78215	-1.06	37.60	1
High	SAETEKELANMK	1	1	1		0.0000	3.62	0.00	2	1350.65618	-0.63	13.76	1
High	VLNASVIPEGQFIDNK	1	16	4		0.0000	3.60	0.00	2	1743.92778	0.07	21.41	0

	High	VQHELEEAEER	2	11	3		0.0000	3.55	0.00	2	1368.63823	-0.61	12.92	0
	High	ADLSRELEEISER	1	19	4		0.0000	3.55	0.00	3	1546.77298	1.40	20.92	1
	High	DAQLHLDDAVR	5	9	3		0.0000	3.49	0.00	2	1252.62871	0.49	15.26	0
	High	TKLEQQVDDLEGSLEQEKK	2	8	3		0.0000	3.36	0.00	4	2217.12490	0.13	20.84	2
	High	MEIDDLSSNmEAVAK	3	11	4	M10(Oxidation)	0.0000	3.35	0.00	2	1668.74529	-0.20	50.43	0
	High	TLEDQLSEIK	2	8	3		0.0000	3.32	0.00	2	1175.61357	-1.61	18.53	0
	High	GGSMQTVSSQFR	3	11	3		0.0000	3.27	0.00	2	1284.59941	-0.59	14.97	0
	High	AGLLGTLEEMR	11	28	5		0.0000	3.24	0.00	2	1189.62444	-0.15	37.34	0
	High	DLQHRLDEAENLAMK	3	14	4		0.0000	3.22	0.00	2	1782.88249	1.17	20.12	1
	High	VAEQELVDASER	1	14	4		0.0000	3.19	0.00	2	1345.65996	0.36	15.02	0
	High	LDEAENLAmK	1	14	4	M9(Oxidation)	0.0000	3.15	0.00	2	1149.54521	-0.41	13.76	0
	High	GGSmQTVSSQFR	2	11	3	M4(Oxidation)	0.0000	3.14	0.00	2	1300.59416	-0.71	13.53	0
	High	DFETSQLLSK	5	5	2		0.0000	3.13	0.00	2	1167.58953	0.24	18.02	0
	High	EALVSQLTR	2	10	4		0.0000	3.07	0.00	2	1016.57408	0.54	16.01	0
	High	ELTYQTEEDKK	1	15	4		0.0000	3.02	0.00	2	1383.66326	-0.44	12.30	1
	High	AITDAAMmAEELKK	3	26	7	M8(Oxidation)	0.0000	3.00	0.00	2	1537.75969	-0.30	16.17	1
	High	LDEAENLAMK	2	14	4		0.0000	2.42	0.00	1	1133.55103	0.22	14.81	0
IPI00933204.1	Myosin, heavy polypeptide 2, fast muscle specific	761.94	19.84	15	3	194	1935	221.7	5.69					

A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
High	KMEGDLNEMEIQLSHANR	6	14	4		0.0000	6.39	0.00	2	2114.99809	1.06	19.06	1
High	KAITDAAMMAEELKK	23	26	7		0.0000	6.13	0.00	3	1649.86081	0.37	16.94	2
High	KKMEGDLNEMEIQLSHANR	16	14	4		0.0000	6.06	0.00	3	2243.09067	-0.07	17.09	2
High	DLEESTLQHEATAAALR	1	12	4		0.0000	6.00	0.00	2	1854.91863	-0.35	19.56	0
High	TKLEQQVDDLEGSLEQEKKLR	2	8	3		0.0000	5.61	0.00	3	2486.30655	-1.30	21.31	3
High	KmEGDLNEMEIQLSHANR	4	14	4	M2(Oxidation)	0.0000	5.53	0.00	3	2130.99002	-0.35	17.56	1
High	KKQADSVAELGEQIDNLQR	7	14	5		0.0000	5.27	0.00	3	2142.11808	1.42	18.87	2
High	RDLEESTLQHEATAAALR	3	12	4		0.0000	5.21	0.00	2	2011.02190	0.74	17.25	1
High	QADSVAELGEQIDNLQR	3	14	5		0.0000	5.13	0.00	3	1885.92643	0.70	22.26	0
High	EQFEEEQEAKAELQR	1	12	5		0.0000	5.10	0.00	2	1863.87004	-1.05	16.36	1
High	KAITDAAmMAEELKK	4	26	7	M8(Oxidation)	0.0000	5.09	0.00	3	1665.85453	-0.35	16.71	2
High	KLAEKDEEmEQIKR	1	1	1	M9(Oxidation)	0.0000	5.02	0.00	3	1762.89896	-0.86	13.05	3
High	AITDAAMMAEELKK	2	26	7		0.0000	4.99	0.00	2	1521.76567	0.29	18.57	1
High	MEGDLNEMEIQLSHANR	12	14	4		0.0000	4.96	0.00	2	1986.90093	0.02	20.60	0

High	EKSEYKMEIDDLSSNmEAVAK	1	11	4	M16(Oxidation)	0.0000	4.78	0.00	3	2433.11716	0.43	21.05	2
High	LQEAEEQIEAVNSK	13	7	3		0.0000	4.76	0.00	2	1587.78459	-0.97	25.97	0
High	QLEEKEALVSQLTR	3	9	4		0.0000	4.62	0.00	3	1643.89469	-1.01	17.36	1
High	IEDEQSLGAQLQKK	1	10	4		0.0000	4.60	0.00	2	1586.83782	-0.43	14.91	1
High	TKLEQQVDDLEGSLEQEK	1	8	3		0.0000	4.60	0.00	3	2089.02756	-0.99	21.99	1
High	KLAEKDEEMEQIKR	2	1	1		0.0000	4.60	0.00	3	1746.90525	-0.18	13.03	3
High	KVQHELEEAEER	2	11	3		0.0000	4.53	0.00	3	1496.73319	-0.56	12.10	1
High	KQADSVAELGEQIDNLQR	3	14	5		0.0000	4.53	0.00	3	2014.01932	-0.37	20.72	1
High	TPGLMENFLVIHQLR	2	16	4		0.0000	4.43	0.00	2	1767.95696	-0.32	25.10	0
High	VKELTYQTEEDKK	2	15	4		0.0000	4.42	0.00	3	1610.82694	-0.19	12.38	2
High	IEDEQSLGAQLQK	1	10	4		0.0000	4.40	0.00	2	1458.74199	-1.06	15.83	0
High	NLQQEISDLTEQLGETGK	1	12	4		0.0000	4.34	0.00	2	2002.99089	-0.97	27.01	0
High	LAEKDEEMEQIKR	2	1	1		0.0000	4.31	0.00	3	1618.81034	-0.16	13.51	2
High	KVAEQELVDASER	3	14	4		0.0000	4.27	0.00	2	1473.75456	0.08	14.24	1
High	SEYKMEIDDLSSNmEAVAK	2	11	4	M14(Oxidation)	0.0000	4.27	0.00	2	2175.97905	0.24	21.67	1
High	DLEESTLQHEATAAALRK	1	12	4		0.0000	4.22	0.00	3	1983.01480	0.28	18.03	1
High	KGGSMQTVSSQFR	2	11	3		0.0000	4.17	0.00	2	1412.69414	-0.71	14.06	1
High	IEELEEEIEAERAAR	1	22	6		0.0000	4.13	0.00	2	1786.88127	-0.32	18.44	1
High	LEQQVDDLEGSLEQEKK	1	25	7		0.0000	3.99	0.00	3	1987.98301	0.53	18.21	1
High	KDIDDLELTLAK	1	27	7		0.0000	3.87	0.00	2	1373.75383	1.11	19.01	1
High	MEGDLNEmEIQLSHANR	1	14	4	M8(Oxidation)	0.0000	3.85	0.00	3	2002.89658	0.39	16.54	0
High	LAEKDEEMEQIK	1	1	1		0.0000	3.84	0.00	3	1462.70771	-1.21	13.89	1
High	FTGAVLHHGNMK	1	12	3		0.0000	3.80	0.00	2	1311.66155	-0.89	13.25	0
High	IEELEEEIEAER	1	22	6		0.0000	3.77	0.00	2	1488.70635	-0.10	19.27	0
High	LQDLVDKLQLK	17	25	6		0.0000	3.65	0.00	2	1312.78215	-1.06	37.60	1
High	VLNASVIPEGQFIDNK	1	16	4		0.0000	3.60	0.00	2	1743.92778	0.07	21.41	0
High	VQHELEEAEER	2	11	3		0.0000	3.55	0.00	2	1368.63823	-0.61	12.92	0
High	ADLSRELEEISER	1	19	4		0.0000	3.55	0.00	3	1546.77298	1.40	20.92	1
High	DAQLHLDDAVR	5	9	3		0.0000	3.49	0.00	2	1252.62871	0.49	15.26	0
High	TKLEQQVDDLEGSLEQEKK	2	8	3		0.0000	3.36	0.00	4	2217.12490	0.13	20.84	2
High	MEIDDLSSNmEAVAK	3	11	4	M10(Oxidation)	0.0000	3.35	0.00	2	1668.74529	-0.20	50.43	0
High	GGSMQTVSSQFR	3	11	3		0.0000	3.27	0.00	2	1284.59941	-0.59	14.97	0
High	AGLLGTLEEMR	11	28	5		0.0000	3.24	0.00	2	1189.62444	-0.15	37.34	0
High	DLQHRLDEAENLAMK	3	14	4		0.0000	3.22	0.00	2	1782.88249	1.17	20.12	1
High	VAEQELVDASER	1	14	4		0.0000	3.19	0.00	2	1345.65996	0.36	15.02	0

	High	LDEAENLAmK	1	14	4	M9(Oxidation)	0.0000	3.15	0.00	2	1149.54521	-0.41	13.76	0
	High	GGSmQTVSSQFR	2	11	3	M4(Oxidation)	0.0000	3.14	0.00	2	1300.59416	-0.71	13.53	0
	High	EALVSQLTR	2	10	4		0.0000	3.07	0.00	2	1016.57408	0.54	16.01	0
	High	ELTYQTEEDKK	1	15	4		0.0000	3.02	0.00	2	1383.66326	-0.44	12.30	1
	High	AITDAAMmAEELKK	3	26	7	M8(Oxidation)	0.0000	3.00	0.00	2	1537.75969	-0.30	16.17	1
	High	LDEAENLAMK	2	14	4		0.0000	2.42	0.00	1	1133.55103	0.22	14.81	0
IPI00961738.2	myosin heavy chain, fast skeletal muscle	724.07	17.74	9	2	192	1934	221.3	5.77					

A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
High	KMEGDLNEMEIQLSHANR	6	14	4		0.0000	6.39	0.00	2	2114.99809	1.06	19.06	1
High	KAITDAAMMAEELKK	23	26	7		0.0000	6.13	0.00	3	1649.86081	0.37	16.94	2
High	KKMEGDLNEMEIQLSHANR	16	14	4		0.0000	6.06	0.00	3	2243.09067	-0.07	17.09	2
High	DLEESTLQHEATAAALR	1	12	4		0.0000	6.00	0.00	2	1854.91863	-0.35	19.56	0
High	KmEGDLNEMEIQLSHANR	4	14	4	M2(Oxidation)	0.0000	5.53	0.00	3	2130.99002	-0.35	17.56	1
High	KKQADSVAELGEQIDNLQR	7	14	5		0.0000	5.27	0.00	3	2142.11808	1.42	18.87	2
High	RDLEESTLQHEATAAALR	3	12	4		0.0000	5.21	0.00	2	2011.02190	0.74	17.25	1
High	QADSVAELGEQIDNLQR	3	14	5		0.0000	5.13	0.00	3	1885.92643	0.70	22.26	0
High	EQFEEEQEAKAELQR	1	12	5		0.0000	5.10	0.00	2	1863.87004	-1.05	16.36	1
High	KAITDAAmMAEELKK	4	26	7	M8(Oxidation)	0.0000	5.09	0.00	3	1665.85453	-0.35	16.71	2
High	AITDAAMMAEELKK	2	26	7		0.0000	4.99	0.00	2	1521.76567	0.29	18.57	1
High	MEGDLNEMEIQLSHANR	12	14	4		0.0000	4.96	0.00	2	1986.90093	0.02	20.60	0
High	EKSEYKMEIDDLSSNmEAVAK	1	11	4	M16(Oxidation)	0.0000	4.78	0.00	3	2433.11716	0.43	21.05	2
High	QLEEKEALVSQLTR	3	9	4		0.0000	4.62	0.00	3	1643.89469	-1.01	17.36	1
High	IEDEQSLGAQLQKK	1	10	4		0.0000	4.60	0.00	2	1586.83782	-0.43	14.91	1
High	NKDPLNDSVVQLYQK	2	5	1		0.0000	4.56	0.00	3	1760.91831	0.29	18.22	1
High	KQADSVAELGEQIDNLQR	3	14	5		0.0000	4.53	0.00	3	2014.01932	-0.37	20.72	1
High	TPGLMENFLVIHQLR	2	16	4		0.0000	4.43	0.00	2	1767.95696	-0.32	25.10	0
High	VKELTYQTEEDKK	2	15	4		0.0000	4.42	0.00	3	1610.82694	-0.19	12.38	2
High	IEDEQSLGAQLQK	1	10	4		0.0000	4.40	0.00	2	1458.74199	-1.06	15.83	0
High	NLQQEISDLTEQLGETGK	1	12	4		0.0000	4.34	0.00	2	2002.99089	-0.97	27.01	0
High	KVAEQELVDASER	3	14	4		0.0000	4.27	0.00	2	1473.75456	0.08	14.24	1
High	SEYKMEIDDLSSNmEAVAK	2	11	4	M14(Oxidation)	0.0000	4.27	0.00	2	2175.97905	0.24	21.67	1
High	DLEESTLQHEATAAALRK	1	12	4		0.0000	4.22	0.00	3	1983.01480	0.28	18.03	1
High	IEELEEEIEAERAAR	1	22	6		0.0000	4.13	0.00	2	1786.88127	-0.32	18.44	1
High	LEQQVDDLEGSLEQEKK	1	25	7		0.0000	3.99	0.00	3	1987.98301	0.53	18.21	1

	High	KDIDDLELTLAK	1	27	7		0.0000	3.87	0.00	2	1373.75383	1.11	19.01	1
	High	MEGDLNEmEIQLSHANR	1	14	4	M8(Oxidation)	0.0000	3.85	0.00	3	2002.89658	0.39	16.54	0
	High	IEELEEEIEAER	1	22	6		0.0000	3.77	0.00	2	1488.70635	-0.10	19.27	0
	High	VLDAMQSTLDSEVR	32	1	1		0.0000	3.75	0.00	2	1563.76824	-0.09	19.07	0
	High	LQDLVDKLQLK	17	25	6		0.0000	3.65	0.00	2	1312.78215	-1.06	37.60	1
	High	VLDAmQSTLDSEVR	3	1	1	M5(Oxidation)	0.0000	3.61	0.00	2	1579.76433	0.65	15.72	0
	High	VLNASVIPEGQFIDNK	1	16	4		0.0000	3.60	0.00	2	1743.92778	0.07	21.41	0
	High	ADLSRELEEISER	1	19	4		0.0000	3.55	0.00	3	1546.77298	1.40	20.92	1
	High	MEIDDLSSNmEAVAK	3	11	4	M10(Oxidation)	0.0000	3.35	0.00	2	1668.74529	-0.20	50.43	0
	High	TLEDQLSEIK	2	8	3		0.0000	3.32	0.00	2	1175.61357	-1.61	18.53	0
	High	AGLLGTLEEMR	11	28	5		0.0000	3.24	0.00	2	1189.62444	-0.15	37.34	0
	High	DLQHRLDEAENLAMK	3	14	4		0.0000	3.22	0.00	2	1782.88249	1.17	20.12	1
	High	VAEQELVDASER	1	14	4		0.0000	3.19	0.00	2	1345.65996	0.36	15.02	0
	High	LDEAENLAmK	1	14	4	M9(Oxidation)	0.0000	3.15	0.00	2	1149.54521	-0.41	13.76	0
	High	EALVSQLTR	2	10	4		0.0000	3.07	0.00	2	1016.57408	0.54	16.01	0
	High	ELTYQTEEDKK	1	15	4		0.0000	3.02	0.00	2	1383.66326	-0.44	12.30	1
	High	AITDAAMmAEELKK	3	26	7	M8(Oxidation)	0.0000	3.00	0.00	2	1537.75969	-0.30	16.17	1
	High	LDEAENLAMK	2	14	4		0.0000	2.42	0.00	1	1133.55103	0.22	14.81	0

IPI00882712.1	Ventricular myosin heavy chain	281.58	6.50	3	1	70	1938	223.1	5.73	

A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
High	KAITDAAMMAEELKK	23	26	7		0.0000	6.13	0.00	3	1649.86081	0.37	16.94	2
High	KKQADSVAELGEQIDNLQR	7	14	5		0.0000	5.27	0.00	3	2142.11808	1.42	18.87	2
High	QADSVAELGEQIDNLQR	3	14	5		0.0000	5.13	0.00	3	1885.92643	0.70	22.26	0
High	KAITDAAmMAEELKK	4	26	7	M8(Oxidation)	0.0000	5.09	0.00	3	1665.85453	-0.35	16.71	2
High	AITDAAMMAEELKK	2	26	7		0.0000	4.99	0.00	2	1521.76567	0.29	18.57	1
High	KQADSVAELGEQIDNLQR	3	14	5		0.0000	4.53	0.00	3	2014.01932	-0.37	20.72	1
High	IEELEEELEAERAAR	1	22	6		0.0000	4.13	0.00	2	1786.88127	-0.32	18.44	1
High	LEQQVDDLEGSLEQEKK	1	25	7		0.0000	3.99	0.00	3	1987.98301	0.53	18.21	1
High	KDIDDLELTLAK	1	27	7		0.0000	3.87	0.00	2	1373.75383	1.11	19.01	1
High	IEELEEELEAER	1	22	6		0.0000	3.77	0.00	2	1488.70635	-0.10	19.27	0
High	ALQEAHQQTLDDLQSEEDKVNTLTK	1	11	2		0.0000	3.77	0.00	3	2854.41281	2.18	20.53	1
High	KALQEAHQQTLDDLQSEEDKVNTLTK	2	11	2		0.0000	3.71	0.00	4	2982.50112	-0.15	19.37	2
High	LQDLVDKLQLK	17	25	6		0.0000	3.65	0.00	2	1312.78215	-1.06	37.60	1
High	AGLLGQLEEMR	1	3	1		0.0000	3.44	0.00	2	1216.63896	2.84	23.18	0

	High	AITDAAMmAEELKK	3	26	7	M8(Oxidation)	0.0000	3.00	0.00	2	1537.75969	-0.30	16.17	1
IPI00490216.3	Myosin, heavy polypeptide 6, cardiac muscle, alpha	265.01	6.97	4	1	71	1936	222.7	5.68					
	A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
	High	KAITDAAMMAEELKK	23	26	7		0.0000	6.13	0.00	3	1649.86081	0.37	16.94	2
	High	EQFEEEQEAKAELQR	1	12	5		0.0000	5.10	0.00	2	1863.87004	-1.05	16.36	1
	High	KAITDAAmMAEELKK	4	26	7	M8(Oxidation)	0.0000	5.09	0.00	3	1665.85453	-0.35	16.71	2
	High	AITDAAMMAEELKK	2	26	7		0.0000	4.99	0.00	2	1521.76567	0.29	18.57	1
	High	LEQQVDDLEGSLEQEKK	1	25	7		0.0000	3.99	0.00	3	1987.98301	0.53	18.21	1
	High	KDIDDLELTLAK	1	27	7		0.0000	3.87	0.00	2	1373.75383	1.11	19.01	1
	High	ALQEAHQQTLDDLQSEEDKVNTLTK	1	11	2		0.0000	3.77	0.00	3	2854.41281	2.18	20.53	1
	High	KALQEAHQQTLDDLQSEEDKVNTLTK	2	11	2		0.0000	3.71	0.00	4	2982.50112	-0.15	19.37	2
	High	LQDLVDKLQLK	17	25	6		0.0000	3.65	0.00	2	1312.78215	-1.06	37.60	1
	High	LSSADIETYLLEK	2	2	1		0.0000	3.50	0.00	2	1481.77165	-1.19	23.88	0
	High	DLQHRLDEAEQVAMK	2	1	1		0.1570	3.49	0.00	2	1782.88249	1.17	20.09	1
	High	LDEAEQVAMK	1	1	1		0.1067	3.35	0.00	2	1133.55242	1.45	14.79	0
	High	AGLLGTLEEMR	11	28	5		0.0000	3.24	0.00	2	1189.62444	-0.15	37.34	0
	High	AITDAAMmAEELKK	3	26	7	M8(Oxidation)	0.0000	3.00	0.00	2	1537.75969	-0.30	16.17	1
IPI00501288.3	Uncharacterized protein	155.35	3.54	2	1	37	1947	226.5	6.07					
	A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
	High	KAITDAAMMAEELKK	23	26	7		0.0000	6.13	0.00	3	1649.86081	0.37	16.94	2
	High	KAITDAAmMAEELKK	4	26	7	M8(Oxidation)	0.0000	5.09	0.00	3	1665.85453	-0.35	16.71	2
	High	AITDAAMMAEELKKEQDTSSHLER	1	2	1		0.0000	5.06	0.00	3	2704.28830	-1.29	19.86	2
	High	AITDAAMMAEELKK	2	26	7		0.0000	4.99	0.00	2	1521.76567	0.29	18.57	1
	High	IEELEEELEAERAAR	1	22	6		0.0000	4.13	0.00	2	1786.88127	-0.32	18.44	1
	High	LEQQVDDLEGSLEQEKK	1	25	7		0.0000	3.99	0.00	3	1987.98301	0.53	18.21	1
	High	KDLDDLEITLAK	1	27	7		0.0000	3.87	0.00	2	1373.75383	1.11	19.01	1
	High	IEELEEELEAER	1	22	6		0.0000	3.77	0.00	2	1488.70635	-0.10	19.27	0
	High	AITDAAMmAEELKK	3	26	7	M8(Oxidation)	0.0000	3.00	0.00	2	1537.75969	-0.30	16.17	1
IPI00488248.1	Myosin, light polypeptide 3, skeletal muscle	101.85	17.88	17	2	30	151	16.8	4.55					
	A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
	High	VFDKEGNGTVMGAELR	23	16	1		0.0000	4.14	0.00	2	1722.84917	0.65	16.52	1
	High	VFDKEGNGTVmGAELR	1	16	1	M11(Oxidation)	0.0000	3.48	0.00	3	1738.84275	-0.13	14.62	1

	High	GTYDDYVEGLR	6	2	1		0.0000	3.20	0.00	2	1287.58623	0.79	29.91	0
IPI00504207.1	Skeletal alpha1 actin	43.78	26.53	18	7	11	377	41.9	5.39					
	A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
	High	KDLYANNVLSGGTTMYPGIADR	2	7	1		0.0000	5.62	0.00	3	2356.16288	1.11	21.22	1
	High	DLYANNVLSGGTTMYPGIADR	2	7	1		0.0000	4.69	0.00	2	2228.06719	0.85	23.04	0
	High	HQGVMVGMGQKDSYVGDEAQSKR	1	16	1		0.0000	4.37	0.00	4	2507.17397	-1.09	14.47	2
	High	SYELPDGQVITIGNER	2	14	1		0.0000	4.09	0.00	2	1790.89055	-0.80	22.39	0
	High	AGFAGDDAPR	1	17	1		0.0000	3.32	0.00	2	976.44890	0.56	12.82	0
	High	VAPEEHPTLLTEAPLNPK	1	7	1		0.0000	3.26	0.00	3	1956.04355	-0.11	18.15	0
	High	EITALAPSTMK	2	9	1		0.0000	3.02	0.00	2	1161.61772	-0.63	16.07	0
IPI00488085.2	Myosin, light polypeptide 2, skeletal muscle	21.09	18.93	2	1	6	169	18.9	4.73					
	A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
	High	DVLASMGQLNVK	3	2	1		0.0000	4.01	0.00	2	1274.67864	0.99	20.23	0
	High	DVLASmGQLNVK	1	2	1	M6(Oxidation)	0.0000	3.62	0.00	2	1290.67571	2.65	20.29	0
	High	EAFTIIDQNRDGIISKDDLR	1	3	2		0.0000	3.37	0.00	3	2319.19297	-0.46	20.60	2
	High	EAFTIIDQNR	1	3	2		0.0000	3.08	0.00	2	1206.61125	-0.11	17.08	0
IPI00508152.1	Tropomyosin alpha-1 chain	15.46	15.14	16	2	4	284	32.7	4.74					
	A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
	High	SKQLEDDLVALQK	1	1	1		0.0000	4.71	0.00	2	1486.80986	-0.91	17.67	1
	High	TIDDLEDELYAQKLK	1	3	1		0.0000	3.89	0.00	2	1793.91594	-0.49	21.68	1
	High	RIQLVEEELDRAQER	1	17	2		0.0000	3.70	0.00	3	1883.99247	-0.53	17.71	2
	High	IQLVEEELDRAQER	1	17	2		0.0000	3.17	0.00	2	1727.88970	-1.53	18.72	1
IPI00487267.1	Zgc:63734	15.10	12.50	14	1	4	248	28.7	4.75					
	A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
	High	AMKDEEKMEIQEIQLK	2	1	1		0.0000	4.90	0.00	3	1962.98966	1.05	18.08	2
	High	RIQLVEEELDRAQER	1	17	2		0.0000	3.70	0.00	3	1883.99247	-0.53	17.71	2
	High	IQLVEEELDRAQER	1	17	2		0.0000	3.17	0.00	2	1727.88970	-1.53	18.72	1
IPI00919778.1	Uncharacterized protein	9.03	21.32	2	1	3	136	15.3	4.48					
	A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
	High	EAFTIIDQNRDGIISKDDLR	1	3	2		0.0000	3.37	0.00	3	2319.19297	-0.46	20.60	2
	High	EAFTIIDQNR	1	3	2		0.0000	3.08	0.00	2	1206.61125	-0.11	17.08	0
	High	NEELEAMVK	1	2	1		0.0000	2.57	0.00	1	1062.51379	0.13	15.60	0
IPI00501538.1	Zgc:91930	7.31	6.70	1	1	2	194	21.4	8.00					

	A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
	High	YGYTHLSSGDLLR	2	1	1		0.0000	3.99	0.00	3	1481.73923	0.59	17.84	0
IPI00817940.5	Uncharacterized protein	4.05	5.00	9	1	1	220	26.4	5.91					
	A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
	High	KKEEEELIALK	1	9	1		0.0000	4.05	0.00	2	1329.76225	-0.17	14.60	2
IPI00919917.1	Novel protein	3.52	5.38	6	1	1	260	29.4	7.59					
	A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
	High	GGDDLDPNYVLSSR	1	6	1		0.0000	3.52	0.00	2	1507.70098	-0.94	18.83	0
IPI00809962.2	ATPase, Ca++ transporting, cardiac muscle, fast twitch 1 like	3.40	1.51	9	1	1	991	108.9	5.15					
	A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
	High	VDQSILTGESVSVIK	1	9	1		0.0000	3.40	0.00	2	1574.86528	1.04	20.48	0
IPI00901053.1	Uncharacterized protein	3.26	0.64	1	1	1	1560	179.4	5.58					
	A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
	High	ALQDELSELK	1	1	1		0.0000	3.26	0.00	2	1145.60405	-0.74	17.45	0
IPI00497753.5	Glyceraldehyde-3-phosphate dehydrogenase	3.22	4.20	2	1	1	333	35.8	8.12					
	A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
	High	VPTPNVSVVDLTVR	1	2	1		0.0000	3.22	0.00	2	1495.84917	0.82	21.63	0
IPI00852117.1	Novel protein similar to vertebrate synaptotagmin I	3.20	5.67	2	1	1	388	43.9	8.70					
	A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
	High	KMDVGGLSDPyVKIHLMQNGKR	1	2	1	Y11(Phospho)	0.0000	3.20	0.00	3	2566.27164	1.77	17.43	3
IPI00994333.1	Uncharacterized protein	2.37	0.78	1	1	1	1151	126.1	7.69					
	A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
	High	QLVQNILEK	1	1	1		0.0000	2.37	0.00	1	1084.63525	-0.81	17.14	0

APPENDIX D
PROTEOME DISCOVERY RESULTS FOR ELASTASE

Database search summary report (generated by PD software)

Search report summary of file(s): - C:\Users\Owner\Documents\Stephan_Data\EL.msf
Created with Discoverer version: 1.3.0.339
==========
Number of filtered/unfiltered result items:
- 8/9 protein group(s)
- 64/64 merged protein(s)
- 15/15 peptide(s)
- 17/17 PSM(s)
- 3701/3701 search input(s)

==========
Peptide Grouping Options
- Show peptide groups: True
- Group peptides by: Mass and Sequence

Protein Grouping Options
- Enable protein grouping: True
- Consider leucine and isoleucine as equal: True
- Consider only PSMs with confidence at least: Medium
- Consider only PSMs with delta Cn better than: 0.15
- Apply strict maximum parsimony principle: True

Data reduction filters:
- Peptide Confidence (Minimum confidence: High)

No result filters applied
==========
Summary of file C:\Users\Owner\Documents\Stephan_Data\EL.msf
Workflow created with Discoverer version: 1.3.0.339 (DBVersion:78)
==========
Search name: EL
Search description: danre database, oxi and phos is dynamic
Search date: 06/23/2011 18:57:31
==========
The pipeline tree:

|-(0) Spectrum Files
  |-(1) Spectrum Selector
    |-(2) SEQUEST
      |-(3) Peptide Validator

Processing node 0: Spectrum Files

Input Data:

File Name(s): C:\Users\Owner\Documents\Stephan_Data\EL.RAW

Processing node 1: Spectrum Selector
---
1. General Settings:

Precursor Selection: Use MS1 Precursor
Use New Precursor Reevaluation: True
2. Spectrum Properties Filter:

Lower RT Limit: 0
Upper RT Limit: 0
First Scan: 0
Last Scan: 0
Lowest Charge State: 0
Highest Charge State: 0
Min. Precursor Mass: 350 Da
Max. Precursor Mass: 5000 Da
Total Intensity Threshold: 0
Minimum Peak Count: 1
3. Scan Event Filters:

MS Order: Is MS2
Scan Type: Is Full
4. Peak Filters:

S/N Threshold (FT-only): 1.5
5. Replacements for Unrecognized Properties:

Unrecognized Charge Replacements: Automatic
Unrecognized Mass Analyzer Replacements: ITMS
Unrecognized MS Order Replacements: MS2
Unrecognized Activation Type Replacements: CID
Unrecognized Polarity Replacements: +
6. Just for Testing:

Precursor Clipping Range Before: 2.5 Da
Precursor Clipping Range After: 5.5 Da

Processing node 2: SEQUEST
---
1. Input Data:

Protein Database: ipi.DANRE.v3.82.fasta
Enzyme Name: Elastase (Full)
Maximum Missed Cleavage Sites: 3
1.1 Peptide Scoring Options:

Maximum Peptides Considered: 500
Maximum Peptides Output: 10
Calculate Probability Scores: False
Absolute XCorr Threshold: 0.4
Fragment Ion Cutoff Percentage: 0.1
Peptide Without Protein XCorr Threshold: 1.5
1.2 Protein Scoring Options:

Maximum Protein References Per Peptide: 100
Protein Relevance Threshold: 1.5
Peptide Relevance Factor: 0.4
2. Tolerances:

Precursor Mass Tolerance: 10 ppm
Fragment Mass Tolerance: 0.8 Da
Use Average Precursor Mass: False
Use Average Fragment Masses: False
3. Ion Series:

Use Neutral Loss a Ions: True
Use Neutral Loss b Ions: True
Use Neutral Loss y Ions: True
Weight of a Ions: 0
Weight of b Ions: 1
Weight of c Ions: 0
Weight of x Ions: 0
Weight of y Ions: 1
Weight of z Ions: 0
4. Dynamic Modifications:

Max. Modifications Per Peptide: 4
1. Dynamic Modification: Oxidation / +15.995 Da (M)
2. Dynamic Modification: Phospho / +79.966 Da (S, T, Y)

Processing node 3: Peptide Validator
---
1. Decoy Database Search:

Search Against Decoy Database: True
Target FDR (Strict): 0.01
Target FDR (Relaxed): 0.05
==========
Further information:
SEQUEST (2):
 - Number of sequences searched: 41893

==========
Processing details:
06/26/2011 09:41 AM (2):SEQUEST: Total search time was 9 min 51 s.
06/26/2011 09:41 AM (2):SEQUEST: Search completed
06/26/2011 09:41 AM (2):SEQUEST: Protein grouping (2142 groups) took: 2.2 s
06/26/2011 09:41 AM (2):SEQUEST: 3053 protein(s) + 2991 decoy proteins scored and inserted into result file in 7.46 s
06/26/2011 09:41 AM (2):SEQUEST: 3053 protein(s) scored
06/26/2011 09:41 AM (2):SEQUEST: Result finalization started
06/26/2011 09:41 AM (3):Peptide Validator: Start calculating relaxed False Discovery Rate
06/26/2011 09:40 AM (3):Peptide Validator: Start calculating strict False Discovery Rate
06/26/2011 09:40 AM (3):Peptide Validator: Evaluating peptides of SEQUEST (2) started
06/26/2011 09:40 AM (2):SEQUEST: Sending 701 decoy peptide hits (4480 peptides) to result file
06/26/2011 09:40 AM (2):SEQUEST: Starting SEQUEST decoy search
06/26/2011 09:40 AM (2):SEQUEST: Sending 701 peptide hits (4488 peptides) to result file
06/26/2011 09:39 AM (2):SEQUEST: Starting SEQUEST search
06/26/2011 09:39 AM (2):SEQUEST: Receiving spectra 3001 to 3702.
06/26/2011 09:39 AM (2):SEQUEST: Sending 1000 decoy peptide hits (7407 peptides) to result file
06/26/2011 09:38 AM (2):SEQUEST: Starting SEQUEST decoy search
06/26/2011 09:38 AM (2):SEQUEST: Sending 1000 peptide hits (7390 peptides) to result file
06/26/2011 09:37 AM (2):SEQUEST: Starting SEQUEST search
06/26/2011 09:37 AM (2):SEQUEST: Receiving spectra 2001 to 3001.
06/26/2011 09:37 AM (2):SEQUEST: Sending 1000 decoy peptide hits (9179 peptides) to result file
06/26/2011 09:35 AM (2):SEQUEST: Starting SEQUEST decoy search
06/26/2011 09:35 AM (2):SEQUEST: Sending 1000 peptide hits (9191 peptides) to result file
06/26/2011 09:33 AM (2):SEQUEST: Starting SEQUEST search
06/26/2011 09:33 AM (2):SEQUEST: Receiving spectra 1001 to 2001.
06/26/2011 09:33 AM (2):SEQUEST: Sending 1000 decoy peptide hits (5591 peptides) to result file
06/26/2011 09:32 AM (2):SEQUEST: Starting SEQUEST decoy search
06/26/2011 09:32 AM (2):SEQUEST: Sending 1000 peptide hits (5593 peptides) to result file
06/26/2011 09:30 AM (2):SEQUEST: Starting SEQUEST search
06/26/2011 09:30 AM (2):SEQUEST: There is already an adequate decoy FASTA index.

06/26/2011 09:30 AM (2):SEQUEST: Looking for existing decoy FASTA index.
06/26/2011 09:30 AM (2):SEQUEST: There is already an adequate target FASTA index.
06/26/2011 09:30 AM (2):SEQUEST: Looking for existing target FASTA index.
06/26/2011 09:30 AM (2):SEQUEST: Receiving spectra 1 to 1001.
06/26/2011 09:30 AM (1):Spectrum Selector: Reading from File 1 of 1:C:\Users\Owner\Documents\Stephan_Data\EL.RAW (4359 spectra total)

Protein and peptide results for elastase digested myosin – generated by Proteome Discovery software

Accession	Description	Score	Coverage	# Proteins	# Unique Peptides	# PSMs	# AAs	MW [kDa]	calc. pI
IPI00500057.4	myosin heavy chain, fast skeletal muscle	15.67	2.85	35	3	5	1933	222.1	5.67

A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
High	REQFEEEQEAKAELQRGMSKA	1	10	1		0.0000	4.47	0.00	4	2494.20400	1.92	18.20	3
High	SSQFRENLGKLMTNL	2	11	1		0.0000	3.34	0.00	2	1737.89751	1.26	23.27	2
High	RNDNSSRFGKFI	1	35	2		0.0000	2.96	0.00	2	1440.74516	7.54	15.61	0
High	SDLTEQI	1	17	1		0.0000	1.86	0.00	1	805.39459	0.96	16.40	1

Accession	Description	Score	Coverage	# Proteins	# Unique Peptides	# PSMs	# AAs	MW [kDa]	calc. pI
IPI00800858.4	myosin-7	8.13	1.64	17	2	3	1952	225.4	5.96

A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
High	SERLEEAGGATSA	1	3	1		0.0000	3.30	0.00	2	1277.59624	-0.49	12.57	3
High	RNDNSSRFGKFI	1	35	2		0.0000	2.96	0.00	2	1440.74516	7.54	15.61	0
High	QLELNQI	1	1	1		0.0000	1.87	0.00	1	857.47040	-2.73	19.52	2

Accession	Description	Score	Coverage	# Proteins	# Unique Peptides	# PSMs	# AAs	MW [kDa]	calc. pI
IPI00504207.1	Skeletal alpha1 actin	6.93	8.49	13	2	2	377	41.9	5.39

A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
High	YEGYALPHAIMRL	1	9	1		0.0000	3.69	0.00	2	1533.78691	-0.91	22.64	3
High	SSSSLEKSYELPDGQVITI	1	12	1		0.0000	3.25	0.00	2	2053.03398	0.17	25.86	3

Accession	Description	Score	Coverage	# Proteins	# Unique Peptides	# PSMs	# AAs	MW [kDa]	calc. pI
IPI00919778.1	Uncharacterized protein	6.19	19.12	5	2	2	136	15.3	4.48

A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
High	mFEQSQIQEYKEA	1	1	1	M1(Oxidation)	0.0000	3.18	0.00	2	1646.73857	1.12	17.51	1
High	KEASGPINFTVFL	1	5	1		0.0000	3.01	0.00	2	1422.76189	-0.65	26.97	3

Accession	Description	Score	Coverage	# Proteins	# Unique Peptides	# PSMs	# AAs	MW [kDa]	calc. pI
IPI00804071.4	myosin-10-like	3.47	0.72	2	1	1	1808	209.8	5.50

A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
High	NPILESFGNAKTV	1	2	1		0.0000	3.47	0.00	2	1389.73772	0.29	19.38	3

Accession	Description	Score	Coverage	# Proteins	# Unique Peptides	# PSMs	# AAs	MW [kDa]	calc. pI
IPI00493726.3	Zgc:175264 protein	2.85	2.60	2	1	1	691	77.8	8.47

A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
High	NLyLKmEKKPNKKDQLNI	1	2	1	Y3(Phospho); M6(Oxidation)	0.0000	2.85	0.00	2	2313.22002	7.04	25.63	3

Accession	Description	Score	Coverage	# Proteins	# Unique Peptides	# PSMs	# AAs	MW [kDa]	calc. pI
IPI00505707.1	Doublesex- and mab-3-related transcription factor A2	2.61	2.73	2	1	1	440	47.3	8.16

A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
High	FPNHKRsVLELV	1	2	1	S7(Phospho)	0.0000	2.61	0.00	2	1518.79070	5.13	19.20	3

IPI00488184.1	Estradiol 17-beta-dehydrogenase 12-B	2.59	3.86	1	1	1	311	34.3	9.55					

A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
High	IESKyKVETKTI	1	1	1	Y5(Phospho)	0.0000	2.59	0.00	2	1518.79021	5.70	37.28	2

APPENDIX E
PROTEOME DISCOVERY RESULTS FOR CEM LOW

Database search summary report (generated by PD software)

Search report summary of file(s): -
C:\Users\Owner\Documents\Stephan_Data\CEM_LOW.msf
Created with Discoverer version: 1.3.0.339
==========
Number of filtered/unfiltered result items:
- 7/7 protein group(s)
- 56/56 merged protein(s)
- 13/13 peptide(s)
- 19/19 PSM(s)
- 3783/3783 search input(s)
==========
Peptide Grouping Options
- Show peptide groups: True
- Group peptides by: Mass and Sequence
Protein Grouping Options
- Enable protein grouping: True
- Consider leucine and isoleucine as equal: True
- Consider only PSMs with confidence at least: Medium
- Consider only PSMs with delta Cn better than: 0.15
- Apply strict maximum parsimony principle: True
Data reduction filters:
- Peptide Confidence (Minimum confidence: High)
No result filters applied
==========
Summary of file C:\Users\Owner\Documents\Stephan_Data\CEM_LOW.msf
Workflow created with Discoverer version: 1.3.0.339 (DBVersion:78)
==========
Search name: CEM_LOW
Search description: danre database, oxi and phos is dynamic
Search date: 06/23/2011 18:57:01
==========
The pipeline tree:

|-(0) Spectrum Files
  |-(1) Spectrum Selector
    |-(2) SEQUEST
      |-(3) Peptide Validator

Processing node 0: Spectrum Files

Input Data:

File Name(s): C:\Users\Owner\Documents\Stephan_Data\CEM_LOW.RAW

Processing node 1: Spectrum Selector

---

1. General Settings:

Precursor Selection: Use MS1 Precursor
Use New Precursor Reevaluation: True

2. Spectrum Properties Filter:

Lower RT Limit: 0
Upper RT Limit: 0
First Scan: 0
Last Scan: 0
Lowest Charge State: 0
Highest Charge State: 0
Min. Precursor Mass: 350 Da
Max. Precursor Mass: 5000 Da
Total Intensity Threshold: 0
Minimum Peak Count: 1

3. Scan Event Filters:

MS Order: Is MS2
Scan Type: Is Full

4. Peak Filters:

S/N Threshold (FT-only): 1.5

5. Replacements for Unrecognized Properties:

Unrecognized Charge Replacements: Automatic
Unrecognized Mass Analyzer Replacements: ITMS
Unrecognized MS Order Replacements: MS2
Unrecognized Activation Type Replacements: CID
Unrecognized Polarity Replacements: +

6. Just for Testing:

Precursor Clipping Range Before: 2.5 Da
Precursor Clipping Range After: 5.5 Da

Processing node 2: SEQUEST

---

1. Input Data:

Protein Database: ipi.DANRE.v3.82.fasta
Enzyme Name: Elastase/Tryp/Chymo (Full)
Maximum Missed Cleavage Sites: 3

1.1 Peptide Scoring Options:

Maximum Peptides Considered: 500
Maximum Peptides Output: 10
Calculate Probability Scores: False
Absolute XCorr Threshold: 0.4
Fragment Ion Cutoff Percentage: 0.1
Peptide Without Protein XCorr Threshold: 1.5
1.2 Protein Scoring Options:

Maximum Protein References Per Peptide: 100
Protein Relevance Threshold: 1.5
Peptide Relevance Factor: 0.4
2. Tolerances:

Precursor Mass Tolerance: 10 ppm
Fragment Mass Tolerance: 0.8 Da
Use Average Precursor Mass: False
Use Average Fragment Masses: False
3. Ion Series:

Use Neutral Loss a Ions: True
Use Neutral Loss b Ions: True
Use Neutral Loss y Ions: True
Weight of a Ions: 0
Weight of b Ions: 1
Weight of c Ions: 0
Weight of x Ions: 0
Weight of y Ions: 1
Weight of z Ions: 0
4. Dynamic Modifications:

Max. Modifications Per Peptide: 4
1. Dynamic Modification: Oxidation / +15.995 Da (M)
2. Dynamic Modification: Phospho / +79.966 Da (S, T, Y)

Processing node 3: Peptide Validator
---
1. Decoy Database Search:

Search Against Decoy Database: True
Target FDR (Strict): 0.01
Target FDR (Relaxed): 0.05
==========
Further information:
SEQUEST (2):

- Number of sequences searched: 41893

==========

Processing details:

06/26/2011 09:30 AM (2):SEQUEST: Total search time was 6 min 57 s.
06/26/2011 09:30 AM (2):SEQUEST: Search completed
06/26/2011 09:30 AM (2):SEQUEST: Protein grouping (1739 groups) took: 2.06 s
06/26/2011 09:30 AM (2):SEQUEST: 2596 protein(s) + 2523 decoy proteins scored and inserted into result file in 7.59 s
06/26/2011 09:30 AM (2):SEQUEST: 2596 protein(s) scored
06/26/2011 09:30 AM (2):SEQUEST: Result finalization started
06/26/2011 09:30 AM (3):Peptide Validator: Start calculating relaxed False Discovery Rate
06/26/2011 09:30 AM (3):Peptide Validator: Start calculating strict False Discovery Rate
06/26/2011 09:30 AM (3):Peptide Validator: Evaluating peptides of SEQUEST (2) started
06/26/2011 09:30 AM (2):SEQUEST: Sending 783 decoy peptide hits (4711 peptides) to result file
06/26/2011 09:29 AM (2):SEQUEST: Starting SEQUEST decoy search
06/26/2011 09:29 AM (2):SEQUEST: Sending 783 peptide hits (4706 peptides) to result file
06/26/2011 09:28 AM (2):SEQUEST: Starting SEQUEST search
06/26/2011 09:28 AM (2):SEQUEST: Receiving spectra 3001 to 3784.
06/26/2011 09:28 AM (2):SEQUEST: Sending 1000 decoy peptide hits (8419 peptides) to result file
06/26/2011 09:27 AM (2):SEQUEST: Starting SEQUEST decoy search
06/26/2011 09:27 AM (2):SEQUEST: Sending 1000 peptide hits (8418 peptides) to result file
06/26/2011 09:26 AM (2):SEQUEST: Starting SEQUEST search
06/26/2011 09:26 AM (2):SEQUEST: Receiving spectra 2001 to 3001.
06/26/2011 09:26 AM (2):SEQUEST: Sending 1000 decoy peptide hits (9389 peptides) to result file
06/26/2011 09:25 AM (2):SEQUEST: Starting SEQUEST decoy search
06/26/2011 09:25 AM (2):SEQUEST: Sending 1000 peptide hits (9417 peptides) to result file
06/26/2011 09:24 AM (2):SEQUEST: Starting SEQUEST search
06/26/2011 09:24 AM (2):SEQUEST: Receiving spectra 1001 to 2001.
06/26/2011 09:24 AM (2):SEQUEST: Sending 1000 decoy peptide hits (6557 peptides) to result file
06/26/2011 09:23 AM (2):SEQUEST: Starting SEQUEST decoy search
06/26/2011 09:23 AM (2):SEQUEST: Sending 1000 peptide hits (6597 peptides) to result file
06/26/2011 09:22 AM (2):SEQUEST: Starting SEQUEST search
06/26/2011 09:22 AM (2):SEQUEST: There is already an adequate decoy FASTA index.

06/26/2011 09:22 AM (2):SEQUEST: Looking for existing decoy FASTA index.
06/26/2011 09:22 AM (2):SEQUEST: There is already an adequate target FASTA index.
06/26/2011 09:22 AM (2):SEQUEST: Looking for existing target FASTA index.
06/26/2011 09:22 AM (2):SEQUEST: Receiving spectra 1 to 1001.
06/26/2011 09:22 AM (1):Spectrum Selector: Reading from File 1 of 1:C:\Users\Owner\Documents\Stephan_Data\CEM_LOW.RAW (4425 spectra total)

Protein and peptide results for CEM low digested myosin – generated by Proteome Discovery software

Accession	Description	Score	Coverage	# Proteins	# Unique Peptides	# PSMs	# AAs	MW [kDa]	calc. pI
IPI00500057.4	myosin heavy chain, fast skeletal muscle	32.02	3.16	31	5	10	1933	222.1	5.67

A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
High	SDLTEQIGETGK	1	13	1		0.0000	3.85	0.00	2	1277.61565	-4.98	15.08	2
High	REQFEEEQEAK	2	14	2		0.0000	3.75	0.00	2	1422.64983	0.14	12.06	3
High	GGSmQTVSSQFR	1	11	1	M4(Oxidation)	0.0000	3.23	0.00	2	1300.59502	-0.05	15.41	2
High	TLEDQLSEIK	3	8	1		0.0000	3.10	0.00	2	1175.61687	1.20	18.51	3
High	GGSMQTVSSQFR	1	11	1		0.0000	2.91	0.00	2	1284.60039	0.17	15.40	2
High	DASERVGL	1	13	1		0.0000	2.72	0.00	2	846.43608	5.27	13.97	3
High	YETDAIQR	1	23	1		0.0000	2.68	0.00	2	995.47966	0.38	12.75	3

IPI00490216.3	Myosin, heavy polypeptide 6, cardiac muscle, alpha	10.29	0.98	1	1	3	1936	222.7	5.68

A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
High	REQFEEEQEAK	2	14	2		0.0000	3.75	0.00	2	1422.64983	0.14	12.06	3
High	VGNEYVTK	1	1	1		0.0000	2.84	0.00	2	909.46745	-0.22	11.62	3

IPI00998237.1	Uncharacterized protein	6.01	16.41	17	2	2	128	14.1	5.76

A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
High	DSYVGDEAQSK	1	16	1		0.0000	3.01	0.00	2	1198.52251	0.19	12.06	3
High	AGFAGDDAPR	1	17	1		0.0000	3.00	0.00	2	976.44878	0.44	12.89	3

IPI00492089.6	synaptotagmin-14	5.41	2.28	1	1	2	526	58.0	6.20

A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
High	TmLDsKGKEMSK	2	1	1	M2(Oxidation); S5(Phospho)	0.0000	2.76	0.00	2	1450.63494	2.14	33.18	3

IPI00901816.4	FYVE and coiled-coil domain-containing protein 1-like	2.87	0.89	2	1	1	1346	153.5	5.22

A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
High	ELDQSELKQQQL	1	2	1		0.0000	2.87	0.00	2	1458.74382	0.21	16.10	3

IPI00800858.4	myosin-7	2.86	0.51	1	1	1	1952	225.4	5.96

A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
High	ALQESHQQTL	1	1	1		0.0000	2.86	0.00	2	1154.58330	2.80	13.00	2

IPI00996062.1	Uncharacterized protein	2.54	1.33	3	1	1	527	59.0	5.26					

A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
High	EEIIKmL	1	3	1	M6(Oxidation)	0.0000	2.54	0.00	1	891.48291	-3.06	26.29	3

APPENDIX F
PROTEOME DISCOVERY RESULTS FOR CEM HIGH

Database search summary report (generated by PD software)

Search report summary of file(s): -
C:\Users\Owner\Documents\Stephan_Data\CEM_HIGH.msf
Created with Discoverer version: 1.3.0.339
==========
Number of filtered/unfiltered result items:
- 6/7 protein group(s)
- 52/52 merged protein(s)
- 20/20 peptide(s)
- 38/38 PSM(s)
- 3925/3925 search input(s)
==========
Peptide Grouping Options
- Show peptide groups: True
- Group peptides by: Mass and Sequence
Protein Grouping Options
- Enable protein grouping: True
- Consider leucine and isoleucine as equal: True
- Consider only PSMs with confidence at least: Medium
- Consider only PSMs with delta Cn better than: 0.15
- Apply strict maximum parsimony principle: True
Data reduction filters:
- Peptide Confidence (Minimum confidence: High)
No result filters applied
==========
Summary of file C:\Users\Owner\Documents\Stephan_Data\CEM_HIGH.msf
Workflow created with Discoverer version: 1.3.0.339 (DBVersion:78)
==========
Search name: CEM_HIGH
Search description: danre database, oxi and phos is dynamic
Search date: 06/23/2011 18:56:40
==========
The pipeline tree:

|-(0) Spectrum Files
  |-(1) Spectrum Selector
    |-(2) SEQUEST
      |-(3) Peptide Validator

Processing node 0: Spectrum Files

Input Data:

File Name(s): C:\Users\Owner\Documents\Stephan_Data\CEM_HIGH.RAW

Processing node 1: Spectrum Selector

---

1. General Settings:

Precursor Selection: Use MS1 Precursor
Use New Precursor Reevaluation: True

2. Spectrum Properties Filter:

Lower RT Limit: 0
Upper RT Limit: 0
First Scan: 0
Last Scan: 0
Lowest Charge State: 0
Highest Charge State: 0
Min. Precursor Mass: 350 Da
Max. Precursor Mass: 5000 Da
Total Intensity Threshold: 0
Minimum Peak Count: 1

3. Scan Event Filters:

MS Order: Is MS2
Scan Type: Is Full

4. Peak Filters:

S/N Threshold (FT-only): 1.5

5. Replacements for Unrecognized Properties:

Unrecognized Charge Replacements: Automatic
Unrecognized Mass Analyzer Replacements: ITMS
Unrecognized MS Order Replacements: MS2
Unrecognized Activation Type Replacements: CID
Unrecognized Polarity Replacements: +

6. Just for Testing:

Precursor Clipping Range Before: 2.5 Da
Precursor Clipping Range After: 5.5 Da

Processing node 2: SEQUEST

---

1. Input Data:

Protein Database: ipi.DANRE.v3.82.fasta
Enzyme Name: Elastase/Tryp/Chymo (Full)
Maximum Missed Cleavage Sites: 3

1.1 Peptide Scoring Options:

Maximum Peptides Considered: 500
Maximum Peptides Output: 10
Calculate Probability Scores: False
Absolute XCorr Threshold: 0.4
Fragment Ion Cutoff Percentage: 0.1
Peptide Without Protein XCorr Threshold: 1.5
1.2 Protein Scoring Options:

Maximum Protein References Per Peptide: 100
Protein Relevance Threshold: 1.5
Peptide Relevance Factor: 0.4
2. Tolerances:

Precursor Mass Tolerance: 10 ppm
Fragment Mass Tolerance: 0.8 Da
Use Average Precursor Mass: False
Use Average Fragment Masses: False
3. Ion Series:

Use Neutral Loss a Ions: True
Use Neutral Loss b Ions: True
Use Neutral Loss y Ions: True
Weight of a Ions: 0
Weight of b Ions: 1
Weight of c Ions: 0
Weight of x Ions: 0
Weight of y Ions: 1
Weight of z Ions: 0
4. Dynamic Modifications:

Max. Modifications Per Peptide: 4
1. Dynamic Modification: Oxidation / +15.995 Da (M)
2. Dynamic Modification: Phospho / +79.966 Da (S, T, Y)

Processing node 3: Peptide Validator
---
1. Decoy Database Search:

Search Against Decoy Database: True
Target FDR (Strict): 0.01
Target FDR (Relaxed): 0.05
==========
Further information:
SEQUEST (2):

- Number of sequences searched: 41893

==========

Processing details:

06/26/2011 09:22 AM (2):SEQUEST: Total search time was 62 h 8 min.
06/26/2011 09:22 AM (2):SEQUEST: Search completed
06/26/2011 09:22 AM (2):SEQUEST: Protein grouping (2041 groups) took: 2.22 s
06/26/2011 09:22 AM (2):SEQUEST: 2927 protein(s) + 3095 decoy proteins scored and inserted into result file in 9.26 s
06/26/2011 09:22 AM (2):SEQUEST: 2927 protein(s) scored
06/26/2011 09:22 AM (2):SEQUEST: Result finalization started
06/26/2011 09:21 AM (3):Peptide Validator: Start calculating relaxed False Discovery Rate
06/26/2011 09:21 AM (3):Peptide Validator: Start calculating strict False Discovery Rate
06/26/2011 09:21 AM (3):Peptide Validator: Evaluating peptides of SEQUEST (2) started
06/26/2011 09:21 AM (2):SEQUEST: Sending 925 decoy peptide hits (5118 peptides) to result file
06/26/2011 09:21 AM (2):SEQUEST: Starting SEQUEST decoy search
06/26/2011 09:21 AM (2):SEQUEST: Sending 925 peptide hits (5134 peptides) to result file
06/26/2011 09:20 AM (2):SEQUEST: Starting SEQUEST search
06/26/2011 09:20 AM (2):SEQUEST: Receiving spectra 3001 to 3926.
06/26/2011 09:20 AM (2):SEQUEST: Sending 1000 decoy peptide hits (7545 peptides) to result file
06/26/2011 09:19 AM (2):SEQUEST: Starting SEQUEST decoy search
06/26/2011 09:19 AM (2):SEQUEST: Sending 1000 peptide hits (7607 peptides) to result file
06/26/2011 09:18 AM (2):SEQUEST: Starting SEQUEST search
06/26/2011 09:18 AM (2):SEQUEST: Receiving spectra 2001 to 3001.
06/26/2011 09:18 AM (2):SEQUEST: Sending 1000 decoy peptide hits (9229 peptides) to result file
06/26/2011 09:17 AM (2):SEQUEST: Starting SEQUEST decoy search
06/26/2011 09:17 AM (2):SEQUEST: Sending 1000 peptide hits (9262 peptides) to result file
06/23/2011 07:18 PM (2):SEQUEST: Starting SEQUEST search
06/23/2011 07:18 PM (2):SEQUEST: Receiving spectra 1001 to 2001.
06/23/2011 07:18 PM (2):SEQUEST: Sending 1000 decoy peptide hits (7090 peptides) to result file
06/23/2011 07:16 PM (2):SEQUEST: Starting SEQUEST decoy search
06/23/2011 07:16 PM (2):SEQUEST: Sending 1000 peptide hits (7072 peptides) to result file
06/23/2011 07:15 PM (2):SEQUEST: Starting SEQUEST search
06/23/2011 07:15 PM (2):SEQUEST: There is already an adequate decoy FASTA index.

06/23/2011 07:15 PM (2):SEQUEST: Looking for existing decoy FASTA index.
06/23/2011 07:15 PM (2):SEQUEST: There is already an adequate target FASTA index.
06/23/2011 07:15 PM (2):SEQUEST: Looking for existing target FASTA index.
06/23/2011 07:15 PM (2):SEQUEST: Receiving spectra 1 to 1001.
06/23/2011 07:15 PM (1):Spectrum Selector: Reading from File 1 of 1:C:\Users\Owner\Documents\Stephan_Data\CEM_HIGH.RAW (4447 spectra total)

Protein and peptide results for CEM high digested myosin – generated by Proteome Discovery software

Accession	Description	Score	Coverage	# Proteins	# Unique Peptides	# PSMs	# AAs	MW [kDa]	calc. pI
IPI00500057.4	myosin heavy chain, fast skeletal muscle	86.70	6.05	28	2	28	1933	222.1	5.67

A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
High	EQQVDDLEGSLEQEK	1	25	3		0.0000	4.43	0.00	2	1746.80193	-0.56	18.38	3
High	KMEIDDLSSNMEA	1	11	2		0.0000	3.72	0.00	2	1482.64519	0.02	19.45	3
High	SDLTEQIGETGK	1	13	2		0.0000	3.62	0.00	2	1277.62200	-0.01	15.25	2
High	REQFEEEQEAK	2	14	3		0.0000	3.43	0.00	2	1422.64958	-0.03	11.96	3
High	VQHELEEAEER	2	11	2		0.0000	3.34	0.00	2	1368.63835	-0.52	12.94	3
High	TLEDQLSEIK	15	8	1		0.0000	3.28	0.00	2	1175.61504	-0.36	37.99	3
High	SKIEDEQSLGA	1	10	2		0.0000	3.27	0.00	2	1176.57366	-0.57	13.77	3
High	DDLEGSLEQEKK	1	25	3		0.0000	2.93	0.00	2	1390.66777	-1.39	14.58	3
High	DDLQAEEDKV	1	12	2		0.0000	2.86	0.00	1	1161.52722	0.15	15.69	3
High	EEAEGTLEHEESK	1	16	2		0.0000	2.86	0.00	2	1487.64897	-0.48	12.38	2
High	SERLEEAGGA	1	25	3		0.0000	2.69	0.00	2	1018.48003	-0.01	11.75	3
High	TLEDQLSEI	1	8	1		0.0000	2.46	0.00	1	1047.51868	-1.73	21.72	2

Accession	Description	Score	Coverage	# Proteins	# Unique Peptides	# PSMs	# AAs	MW [kDa]	calc. pI
IPI00933204.1	Myosin, heavy polypeptide 2, fast muscle specific	44.81	6.10	21	1	13	1935	221.7	5.69

A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
High	EQQVDDLEGSLEQEK	1	25	3		0.0000	4.43	0.00	2	1746.80193	-0.56	18.38	3
High	AEKDEEMEQIK	1	1	1		0.0000	4.22	0.00	3	1349.62506	-0.25	12.79	3
High	KMEIDDLSSNMEA	1	11	2		0.0000	3.72	0.00	2	1482.64519	0.02	19.45	3
High	SDLTEQLGETGK	1	13	2		0.0000	3.62	0.00	2	1277.62200	-0.01	15.25	2
High	REQFEEEQEAK	2	14	3		0.0000	3.43	0.00	2	1422.64958	-0.03	11.96	3
High	VQHELEEAEER	2	11	2		0.0000	3.34	0.00	2	1368.63835	-0.52	12.94	3
High	SKIEDEQSLGA	1	10	2		0.0000	3.27	0.00	2	1176.57366	-0.57	13.77	3
High	DDLEGSLEQEKK	1	25	3		0.0000	2.93	0.00	2	1390.66777	-1.39	14.58	3
High	DDLQAEEDKV	1	12	2		0.0000	2.86	0.00	1	1161.52722	0.15	15.69	3
High	EEAEGTLEHEESK	1	16	2		0.0000	2.86	0.00	2	1487.64897	-0.48	12.38	2
High	SERLEEAGGA	1	25	3		0.0000	2.69	0.00	2	1018.48003	-0.01	11.75	3

Accession	Description	Score	Coverage	# Proteins	# Unique Peptides	# PSMs	# AAs	MW [kDa]	calc. pI
IPI00490216.3	Myosin, heavy polypeptide 6, cardiac muscle, alpha	20.66	2.43	10	1	6	1936	222.7	5.68

	A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
	High	EQQVDDLEGSLEQEK	1	25	3		0.0000	4.43	0.00	2	1746.80193	-0.56	18.38	3
	High	REQFEEEQEAK	2	14	3		0.0000	3.43	0.00	2	1422.64958	-0.03	11.96	3
	High	NSYEETLDHL	1	2	1		0.0000	3.27	0.00	2	1220.54057	-1.99	19.71	2
	High	DDLEGSLEQEKK	1	25	3		0.0000	2.93	0.00	2	1390.66777	-1.39	14.58	3
	High	SERLEEAGGA	1	25	3		0.0000	2.69	0.00	2	1018.48003	-0.01	11.75	3
IPI00998237.1	Uncharacterized protein	5.94	16.41	17	2	2	128	14.1	5.76					
	A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
	High	AGFAGDDAPR	1	17	1		0.0000	3.04	0.00	2	976.44780	-0.56	12.97	3
	High	DSYVGDEAQSK	1	16	1		0.0000	2.90	0.00	2	1198.52214	-0.12	12.03	3
IPI00901816.4	FYVE and coiled-coil domain-containing protein 1-like	3.13	0.89	2	1	1	1346	153.5	5.22					
	A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
	High	ELDQSELKQQQL	1	2	1		0.0000	3.13	0.00	2	1458.74321	-0.21	16.36	3
IPI00489530.5	Novel protein similar to H.sapiens HPS1, Hermansky-Pudlak syndrome 1	2.31	1.35	1	1	1	668	77.0	5.59					
	A2	Sequence	# PSMs	# Proteins	# Protein Groups	Modifications	ΔCn	XCorr	Probability	Charge	MH+ [Da]	ΔM [ppm]	RT [min]	# Missed Cleavages
	High	FENETGyKL	1	1	1	Y7(Phospho)	0.0000	2.31	0.00	1	1180.48669	-4.69	21.46	3

APPENDIX G
PEAKS DATABASE SEARCH RESULTS FOR CHYMOTRYPSIN

Database search summary report (generated by Peaks DB software)

1. Notes

2. Result Statistics

Figure 1: The false discovery rate (FDR) curve. X-axis is the number of peptide-spectrum matches (PSM) being kept and the y-axis is the FDR.

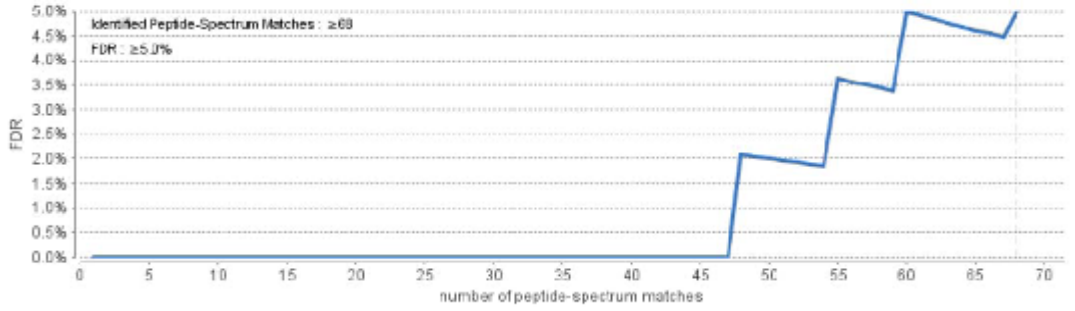

Figure 2: The distribution of PEAKS peptide score (-10lgP): **(a)** histogram of score; **(b)** The plot of precursor mass error vs. score.

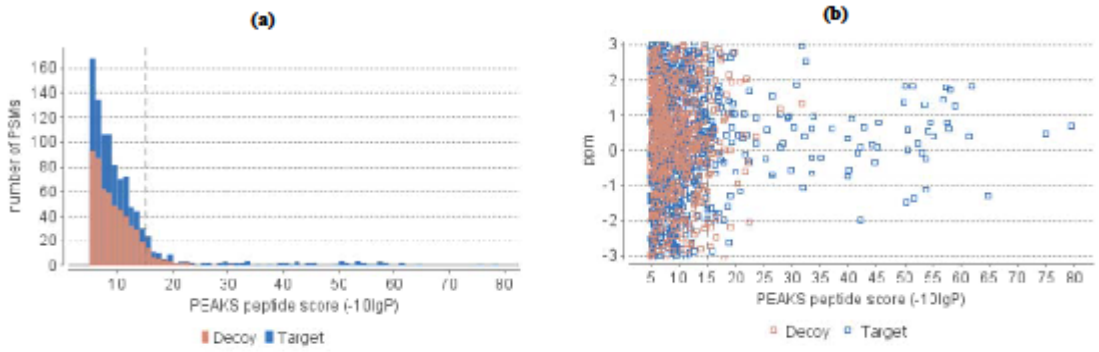

Table 1. Statistics of data.

# of MS Scans	867
# of MS/MS Scans	3696

Table 2. Result filtration parameters.

Peptide -10lgP	≥15 De Novo TLC ≥3
Protein -10lgP	≥20 De Novo ALC ≥50%
Proteins Unique Peptides	≥0

Table 3. Statistics of filtered result.

Peptide-Spectrum Matches	85
Peptide Sequences	43
Protein Groups	10
Proteins	27
Proteins (#Unique Peptides)	5 (>2); 4 (=2); 18 (=1);
FDR (Peptide-Spectrum Matches)	54.1%
FDR (Peptide Sequences)	79.1%
De Novo Only	1428

Table 4. PTM Profile.

T(+79.97)	4
M(+15.99)	2
S(+79.97)	2

3. Experiment Control

Figure 3: The precursor mass error (observed m/z - theoretical m/z) distribution of the PSMs in filtered result. **(a)** Each bar indicates the number of PSMs (y-axis) with a certain precursor error (x-axis); **(b)** Each data point represents a PSM. x-axis is the theoretical m/z and y-axis is the precursor mass error

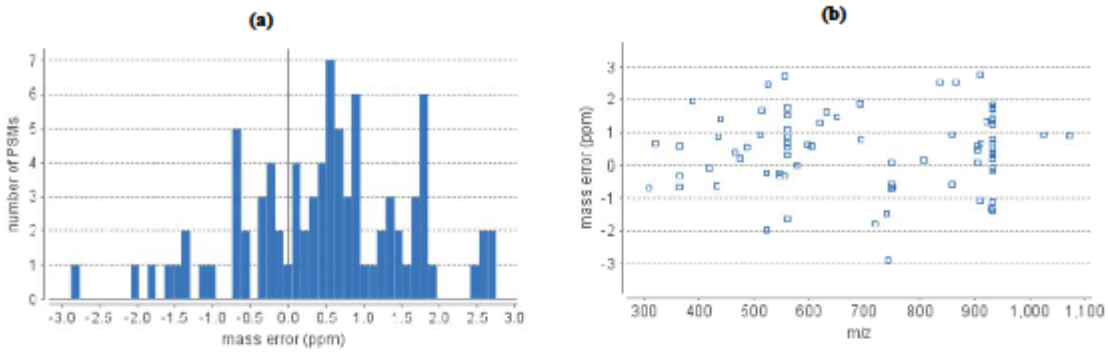

Table 5. number of peptides by number of missed cleavages

Missed Cleavages	0	1	2	3
Peptides	20	16	6	1

4. Other Information

Table 6. Search parameters.

Search Engine Name: PEAKS 5.3
Parent Mass Error Tolerance: 3.0 ppm
Fragment Mass Error Tolerance: 0.5 Da
Precursor Mass Search Type: monoisotopic
Enzyme: Chymptrypsin_fish
Max Missed Cleavages: 3
Variable Modifications:
  Oxidation M: 15.99
  Phosphorylation-STY: 79.97
Max variable PTM per peptide: 3
Database: IPI_danre.v3.82
Taxon: All
Searched Entry: 41893
Decoy Performed: true

Table 7. Instrument parameters.

Fractions: CT.RAW
Ion Source: ESI(nano-spray)
Fragmentation Mode: CID, CAD, IRMPD (y and b ions)
MS Scan Mode: FT-ICR/Orbitrap
MS/MS Scan Mode: Linear Ion Trap

Protein results for chymotrypsin digested myosin – generated by PEAKS DB Software

Protein Group	Protein ID	Accession	-10lgP	Coverage (%)	#Peptides	#Unique	Mass	Best Unique Peptide	Description
4	13	IPI00484075	150.95	4	10	1	222841.6	2039	Tax_Id=7955 Gene_Symbol=myhb Uncharacterized protein
3	12	IPI00975366	150.71	10	11	1	161231.6	1421	Tax_Id=7955 Gene_Symbol=LOC100537594 myosin heavy chain, fast skeletal muscle-like
3	10	IPI00997196	150.71	8	11	1	1200239	1421	Tax_Id=7955 Gene_Symbol=- Uncharacterized protein (Fragment)
2	6	IPI00500057	146.1	7	11	4	222199	1566	Tax_Id=7955 Gene_Symbol=LOC100149148 myosin heavy chain, fast skeletal muscle
2	3	IPI00503572	146.1	7	11	4	222148	1566	Tax_Id=7955 Gene_Symbol=myhz1.1 myosin, heavy polypeptide 1.1, skeletal muscle
2	2	IPI00773363	146.1	7	11	4	222157.9	1566	Tax_Id=7955 Gene_Symbol=myhz1.2 Novel myosin family protein
2	5	IPI00932699	146.1	7	11	4	222314.2	1566	Tax_Id=7955 Gene_Symbol=myhz1.1 Uncharacterized protein
1	52	IPI00496651	121.32	28	7	7	19122.63	2832	Tax_Id=7955 Gene_Symbol=zgc:103639 Zgc:103639
19	95	IPI00516071	79.53	10	1	1	19612.86	1825	Tax_Id=7955 Gene_Symbol=ckbb Creatine kinase, brain
19	97	IPI00919712	79.53	6	1	1	30369.56	1825	Tax_Id=7955 Gene_Symbol=ckba Novel protein
19	100	IPI00497388	79.53	4	1	1	42883.61	1825	Tax_Id=7955 Gene_Symbol=ckbb Creatine kinase, brain b
19	101	IPI00506249	79.53	4	1	1	42866.06	1825	Tax_Id=7955 Gene_Symbol=ckba Zgc:154095
9	4648	IPI00497753	78.58	18	2	2	35784.06	1785	Tax_Id=7955 Gene_Symbol=gapdh Glyceraldehyde-3-phosphate dehydrogenase
9	4649	IPI00963432	78.58	10	2	2	65912.7	1785	Tax_Id=7955 Gene_Symbol=- hypothetical protein LOC326976
10	4650	IPI00483373	75.07	2	1	1	82936.84	1610	Tax_Id=7955 Gene_Symbol=ampd1 Adenosine monophosphate deaminase 1
20	99	IPI00482319	42.07	2	1	1	42814.61	1099	Tax_Id=7955 Gene_Symbol=ckma Muscle-specific creatine kinase
21	20	IPI00504207	40.65	2	1	1	41972.96	1826	Tax_Id=7955 Gene_Symbol=actc1b Skeletal alpha1 actin
21	21	IPI00507230	40.65	2	1	1	41974.94	1826	Tax_Id=7955 Gene_Symbol=hm:zewp0073;actc1a Actin, alpha, cardiac muscle like
21	26	IPI00509458	40.65	2	1	1	42004.96	1826	Tax_Id=7955 Gene_Symbol=zgc:86709 Zgc:86709 protein
21	22	IPI00551966	40.65	2	1	1	41983	1826	Tax_Id=7955 Gene_Symbol=actc1b Actin, alpha 1, skeletal muscle
21	27	IPI00551994	40.65	2	1	1	41994.95	1826	Tax_Id=7955 Gene_Symbol=acta2 Actin, alpha 2, smooth muscle, aorta
21	28	IPI00570197	40.65	2	1	1	42018.99	1826	Tax_Id=7955 Gene_Symbol=acta1a Actin, alpha 1a, skeletal muscle
21	23	IPI00628880	40.65	2	1	1	41974.94	1826	Tax_Id=7955 Gene_Symbol=acta1b Actin, alpha 1b, skeletal muscle
21	41	IPI00931756	40.65	2	1	1	42006.01	1826	Tax_Id=7955 Gene_Symbol=zgc:86725 Zgc:86725
21	40	IPI00492396	40.65	2	1	1	42033.04	1826	Tax_Id=7955 Gene_Symbol=zgc:86725 Novel protein similar to vertebrate skeletal alpha-actin 1
8	164	IPI00993122	25.12	0	2	2	3026090	1727	Tax_Id=7955 Gene_Symbol=- Uncharacterized protein (Fragment)
8	175	IPI00890560	25.12	0	2	2	3200994	1727	Tax_Id=7955 Gene_Symbol=ttnb titin
total 27 proteins									

Peptide results for chymotrypsin digested myosin – generated by PEAKS DB software

Protein ID	Protein Accession	Peptide	isUnique	-10lgP	ppm	m/z	z	RT	Scan	#Spectra	Start	End	hasPTM
13	IPI00484075	W.LDKNKDPLNDSVVQLY.Q	N	64.8	-1.3	930.9875	2	20.608	1658	2	596	611	N
13	IPI00484075	Y.LLEKSRVTF.Q	N	53.74	-0.2	546.8241	2	15.72	1206	4	269	277	N
13	IPI00484075	F.TNEKLQQFF.N	N	50.56	0	577.7957	2	20.008	1601	1	483	491	N
13	IPI00484075	Y.KFGHTKVFF.K	N	44.56	-0.3	555.8082	2	15.656	1199	1	759	767	N
13	IPI00484075	Y.NISGWLDKNKDPLNDSVVQLY.Q	Y	44.27	0.2	806.7483	3	24.733	2039	1	591	611	N
13	IPI00484075	F.GHTKVFF.K	N	41.62	-0.1	418.2266	2	14.63	1103	1	761	767	N
13	IPI00484075	F.IGVLDIAGF.E	N	37.13	0.6	904.5143	1	27.379	2268	2	459	467	N
13	IPI00484075	F.VLEQEEY.K	N	31.9	-1.1	909.419	1	14.953	1133	1	497	503	N
13	IPI00484075	Y.KFGHTKVF.F	N	30.32	0.7	321.8521	3	13.82	1025	1	759	766	N
13	IPI00484075	Y.GNAKTVRNDNSSRFGKF.I	N	28.35	0.2	475.2462	4	13.839	1027	1	233	249	N
12	IPI00975366	W.LDKNKDPLNDSVVQLY.Q	N	64.8	-1.3	930.9875	2	20.608	1658	2	596	611	N
12	IPI00975366	Y.LLEKSRVTF.Q	N	53.74	-0.2	546.8241	2	15.72	1206	4	269	277	N
12	IPI00975366	F.TNEKLQQFF.N	N	50.56	0	577.7957	2	20.008	1601	1	483	491	N
12	IPI00975366	Y.KFGHTKVFF.K	N	44.56	-0.3	555.8082	2	15.656	1199	1	760	768	N
12	IPI00975366	F.GHTKVFF.K	N	41.62	-0.1	418.2266	2	14.63	1103	1	762	768	N
12	IPI00975366	F.IGVLDIAGF.E	N	37.13	0.6	904.5143	1	27.379	2268	2	459	467	N
12	IPI00975366	F.MLTDRENQSVLITGESGAGKTVNTKRVIQYF.A	N	32.39	2.5	864.7064	4	21.704	1761	2	165	195	N
12	IPI00975366	F.VLEQEEY.K	N	31.9	-1.1	909.419	1	14.953	1133	1	497	503	N
12	IPI00975366	Y.KFGHTKVF.F	N	30.32	0.7	321.8521	3	13.82	1025	1	760	767	N
12	IPI00975366	Y.GNAKTVRNDNSSRFGKF.I	N	28.35	0.2	475.2462	4	13.839	1027	1	233	249	N
12	IPI00975366	Y.DAVVVAGYRGKKRIEAPPHIFSISDNAY.Q	Y	18.89	1.4	439.9528	7	18.046	1421	5	135	162	N
12	IPI00975366	Y.AGTVDYNIVGW.L	Y	9.33	2.1	1194.5815	1	23.954	1969	1	585	595	N
10	IPI00997196	W.LDKNKDPLNDSVVQLY.Q	N	64.8	-1.3	930.9875	2	20.608	1658	2	597	612	N
10	IPI00997196	Y.LLEKSRVTF.Q	N	53.74	-0.2	546.8241	2	15.72	1206	4	270	278	N
10	IPI00997196	F.TNEKLQQFF.N	N	50.56	0	577.7957	2	20.008	1601	1	484	492	N
10	IPI00997196	Y.KFGHTKVFF.K	N	44.56	-0.3	555.8082	2	15.656	1199	1	762	770	N
10	IPI00997196	F.GHTKVFF.K	N	41.62	-0.1	418.2266	2	14.63	1103	1	764	770	N
10	IPI00997196	F.IGVLDIAGF.E	N	37.13	0.6	904.5143	1	27.379	2268	2	460	468	N

10	IPI00997196	F.MLTDRENQSVLITGESGAGKTVNTKRVIQYF.A	N	32.39	2.5	864.7064	4	21.704	1761	2	166	196	N
10	IPI00997196	F.VLEQEEY.K	N	31.9	-1.1	909.419	1	14.953	1133	1	498	504	N
10	IPI00997196	Y.KFGHTKVF.F	N	30.32	0.7	321.8521	3	13.82	1025	1	762	769	N
10	IPI00997196	Y.GNAKTVRNDNSSRFGKF.I	N	28.35	0.2	475.2462	4	13.839	1027	1	234	250	N
10	IPI00997196	Y.DAVVVAGYRGKKRIEAPPHIFSISDNAY.Q	Y	18.89	1.4	439.9528	7	18.046	1421	5	136	163	N
10	IPI00997196	Y.AGTVDYNIVGW.L	Y	9.33	2.1	1194.5815	1	23.954	1969	1	586	596	N
6	IPI00500057	F.GRQLEEKEALVSQLTRGKQAF.T	Y	57.88	0.6	597.8306	4	19.625	1566	1	1288	1308	N
6	IPI00500057	Y.LLEKSRVTF.Q	N	53.74	-0.2	546.8241	2	15.72	1206	4	271	279	N
6	IPI00500057	F.QLPDERGY.H	Y	50.58	0.6	489.2382	2	14.209	1062	1	280	287	N
6	IPI00500057	F.TNEKLQQFF.N	N	50.56	0	577.7957	2	20.008	1601	1	485	493	N
6	IPI00500057	F.GHTKVFF.K	N	41.62	-0.1	418.2266	2	14.63	1103	1	759	765	N
6	IPI00500057	F.IGVLDIAGF.E	N	37.13	0.6	904.5143	1	27.379	2268	2	461	469	N
6	IPI00500057	F.MLTDRENQSVLITGESGAGKTVNTKRVIQYF.A	N	32.39	2.5	864.7064	4	21.704	1761	2	167	197	N
6	IPI00500057	Y.ADFKQRY.K	Y	32.25	0.4	464.2379	2	12.884	949	2	716	722	N
6	IPI00500057	F.VLEQEEY.K	N	31.9	-1.1	909.419	1	14.953	1133	1	499	505	N
6	IPI00500057	Y.GNAKTVRNDNSSRFGKF.I	N	28.35	0.2	475.2462	4	13.839	1027	1	235	251	N
6	IPI00500057	Y.RGKKRMEAPPHIF.S	Y	25.34	-0.2	522.9609	3	14.081	1049	1	145	157	N
3	IPI00503572	F.GRQLEEKEALVSQLTRGKQAF.T	Y	57.88	0.6	597.8306	4	19.625	1566	1	1290	1310	N
3	IPI00503572	Y.LLEKSRVTF.Q	N	53.74	-0.2	546.8241	2	15.72	1206	4	271	279	N
3	IPI00503572	F.QLPDERGY.H	Y	50.58	0.6	489.2382	2	14.209	1062	1	280	287	N
3	IPI00503572	F.TNEKLQQFF.N	N	50.56	0	577.7957	2	20.008	1601	1	485	493	N
3	IPI00503572	F.GHTKVFF.K	N	41.62	-0.1	418.2266	2	14.63	1103	1	761	767	N
3	IPI00503572	F.IGVLDIAGF.E	N	37.13	0.6	904.5143	1	27.379	2268	2	461	469	N
3	IPI00503572	F.MLTDRENQSVLITGESGAGKTVNTKRVIQYF.A	N	32.39	2.5	864.7064	4	21.704	1761	2	167	197	N
3	IPI00503572	Y.ADFKQRY.K	Y	32.25	0.4	464.2379	2	12.884	949	2	718	724	N
3	IPI00503572	F.VLEQEEY.K	N	31.9	-1.1	909.419	1	14.953	1133	1	499	505	N
3	IPI00503572	Y.GNAKTVRNDNSSRFGKF.I	N	28.35	0.2	475.2462	4	13.839	1027	1	235	251	N
3	IPI00503572	Y.RGKKRMEAPPHIF.S	Y	25.34	-0.2	522.9609	3	14.081	1049	1	145	157	N
2	IPI00773363	F.GRQLEEKEALVSQLTRGKQAF.T	Y	57.88	0.6	597.8306	4	19.625	1566	1	1290	1310	N
2	IPI00773363	Y.LLEKSRVTF.Q	N	53.74	-0.2	546.8241	2	15.72	1206	4	271	279	N
2	IPI00773363	F.QLPDERGY.H	Y	50.58	0.6	489.2382	2	14.209	1062	1	280	287	N

2	IPI00773363	F.TNEKLQQFF.N	N	50.56	0	577.7957	2	20.008	1601	1	485	493	N
2	IPI00773363	F.GHTKVFF.K	N	41.62	-0.1	418.2266	2	14.63	1103	1	761	767	N
2	IPI00773363	F.IGVLDIAGF.E	N	37.13	0.6	904.5143	1	27.379	2268	2	461	469	N
2	IPI00773363	F.MLTDRENQSVLITGESGAGKTVNTKRVIQYF.A	N	32.39	2.5	864.7064	4	21.704	1761	2	167	197	N
2	IPI00773363	Y.ADFKQRY.K	Y	32.25	0.4	464.2379	2	12.884	949	2	718	724	N
2	IPI00773363	F.VLEQEEY.K	N	31.9	-1.1	909.419	1	14.953	1133	1	499	505	N
2	IPI00773363	Y.GNAKTVRNDNSSRFGKF.I	N	28.35	0.2	475.2462	4	13.839	1027	1	235	251	N
2	IPI00773363	Y.RGKKRMEAPPHIF.S	Y	25.34	-0.2	522.9609	3	14.081	1049	1	145	157	N
5	IPI00932699	F.GRQLEEKEALVSQLTRGKQAF.T	Y	57.88	0.6	597.8306	4	19.625	1566	1	1291	1311	N
5	IPI00932699	Y.LLEKSRVTF.Q	N	53.74	-0.2	546.8241	2	15.72	1206	4	270	278	N
5	IPI00932699	F.QLPDERGY.H	Y	50.58	0.6	489.2382	2	14.209	1062	1	279	286	N
5	IPI00932699	F.TNEKLQQFF.N	N	50.56	0	577.7957	2	20.008	1601	1	484	492	N
5	IPI00932699	F.GHTKVFF.K	N	41.62	-0.1	418.2266	2	14.63	1103	1	762	768	N
5	IPI00932699	F.IGVLDIAGF.E	N	37.13	0.6	904.5143	1	27.379	2268	2	460	468	N
5	IPI00932699	F.MLTDRENQSVLITGESGAGKTVNTKRVIQYF.A	N	32.39	2.5	864.7064	4	21.704	1761	2	166	196	N
5	IPI00932699	Y.ADFKQRY.K	Y	32.25	0.4	464.2379	2	12.884	949	2	719	725	N
5	IPI00932699	F.VLEQEEY.K	N	31.9	-1.1	909.419	1	14.953	1133	1	498	504	N
5	IPI00932699	Y.GNAKTVRNDNSSRFGKF.I	N	28.35	0.2	475.2462	4	13.839	1027	1	234	250	N
5	IPI00932699	Y.RGKKRMEAPPHIF.S	Y	25.34	-0.2	522.9609	3	14.081	1049	1	144	156	N
52	IPI00496651	F.SMFEQSQIQEYKEAF.T	Y	61.9	1.8	932.9264	2	34.172	2832	21	21	35	N
52	IPI00496651	F.SMFEQSQIQEY.K	Y	45.41	0.8	695.3037	2	46.426	3889	1	21	31	N
52	IPI00496651	F.EQSQIQEYKEAF.T	Y	45.03	0.1	750.3543	2	28.974	2402	4	24	35	N
52	IPI00496651	F.EQSQIQEY.K	Y	33.76	1	1024.4591	1	14.264	1067	2	24	31	N
52	IPI00496651	F.TVFLTMF.G	Y	29.89	-0.6	858.4425	1	28.162	2335	3	82	88	N
52	IPI00496651	F.KVLDPEATGTIKKEF.L	Y	26.67	1.5	559.3145	3	27.315	2262	29	106	120	N
52	IPI00496651	Y.VITHGEEKEEE	Y	19.92	-0.6	433.8733	3	10.942	794	1	160	170	N
95	IPI00516071	F.TLDDVIQTGVDNPGHPF.I	Y	79.53	0.7	912.9423	2	22.382	1825	1	52	68	N
97	IPI00919712	F.TLDDVIQTGVDNPGHPF.I	Y	79.53	0.7	912.9423	2	22.382	1825	1	62	78	N
100	IPI00497388	F.TLDDVIQTGVDNPGHPF.I	Y	79.53	0.7	912.9423	2	22.382	1825	1	52	68	N
101	IPI00506249	F.TLDDVIQTGVDNPGHPF.I	Y	79.53	0.7	912.9423	2	22.382	1825	1	52	68	N
4648	IPI00497753	F.RVPTPNVSVVDLTVRLEKPAKY.D	Y	53.42	1.3	621.1109	4	21.96	1785	1	232	253	N

4648	IPI00497753	W.RDGRGASQNIIPASTGAAKAVGKVIPELNGKLTGMAF.R	Y	50.34	-1.5	740.0049	5	25.231	2083	1	195	231	N
4649	IPI00963432	F.RVPTPNVSVVDLTVRLEKPAKY.D	Y	53.42	1.3	621.1109	4	21.96	1785	1	485	506	N
4649	IPI00963432	W.RDGRGASQNIIPASTGAAKAVGKVIPELNGKLTGMAF.R	Y	50.34	-1.5	740.0049	5	25.231	2083	1	448	484	N
4650	IPI00483373	F.NAKYNPVGASELRDLY.M	Y	75.07	0.5	905.4605	2	20.093	1610	2	347	362	N
99	IPI00482319	M.PFGNTHNNF.K	Y	42.07	-2	524.2347	2	14.584	1099	1	2	10	N
20	IPI00504207	F.ETFNVPAMY.V	Y	40.65	0.9	1071.4825	1	22.391	1826	1	127	135	N
21	IPI00507230	F.ETFNVPAMY.V	Y	40.65	0.9	1071.4825	1	22.391	1826	1	127	135	N
26	IPI00509458	F.ETFNVPAMY.V	Y	40.65	0.9	1071.4825	1	22.391	1826	1	127	135	N
22	IPI00551966	F.ETFNVPAMY.V	Y	40.65	0.9	1071.4825	1	22.391	1826	1	127	135	N
27	IPI00551994	F.ETFNVPAMY.V	Y	40.65	0.9	1071.4825	1	22.391	1826	1	127	135	N
28	IPI00570197	F.ETFNVPAMY.V	Y	40.65	0.9	1071.4825	1	22.391	1826	1	127	135	N
23	IPI00628880	F.ETFNVPAMY.V	Y	40.65	0.9	1071.4825	1	22.391	1826	1	127	135	N
41	IPI00931756	F.ETFNVPAMY.V	Y	40.65	0.9	1071.4825	1	22.391	1826	1	127	135	N
40	IPI00492396	F.ETFNVPAMY.V	Y	40.65	0.9	1071.4825	1	22.391	1826	1	127	135	N
164	IPI00993122	F.LRKLSNISIPMSQKLRLECKFT(+79.97)GDRKLFVTW.Y	Y	17.25	1.6	632.1782	6	21.351	1727	1	2915	2945	Y
164	IPI00993122	Y.T(+79.97)ITAKNDGGEVKKSVIVEVLDVPGPVGVPF.T	Y	15.74	2.4	524.9505	6	18.766	1487	1	10732	10761	Y
164	IPI00993122	F.LRKLSNIS(+79.97)IPMSQKLRLECKFTGDRKLFVTW.Y	Y	9.99	2.4	758.413	5	49.273	4124	1	2915	2945	Y
164	IPI00993122	F.SIELTHSDVKGS(+79.97)QW.I	Y	7.17	1.8	556.2549	3	45.922	3846	2	462	475	Y
175	IPI00890560	F.LRKLSNISIPMSQKLRLECKFT(+79.97)GDRKLFVTW.Y	Y	17.25	1.6	632.1782	6	21.351	1727	1	4488	4518	Y
175	IPI00890560	Y.T(+79.97)ITAKNDGGEVKKSVIVEVLDVPGPVGVPF.T	Y	15.74	2.4	524.9505	6	18.766	1487	1	12305	12334	Y
175	IPI00890560	F.LRKLSNIS(+79.97)IPMSQKLRLECKFTGDRKLFVTW.Y	Y	9.99	2.4	758.413	5	49.273	4124	1	4488	4518	Y
175	IPI00890560	F.SIELTHSDVKGS(+79.97)QW.I	Y	7.17	1.8	556.2549	3	45.922	3846	2	2035	2048	Y

APPENDIX H
PEAKS DATABASE SEARCH RESULTS FOR TRYPSIN

Database search summary report (generated by Peaks DB software)

1. Notes

2. Result Statistics

Figure 1: The false discovery rate (FDR) curve. X-axis is the number of peptide-spectrum matches (PSM) being kept and the y-axis is the FDR.

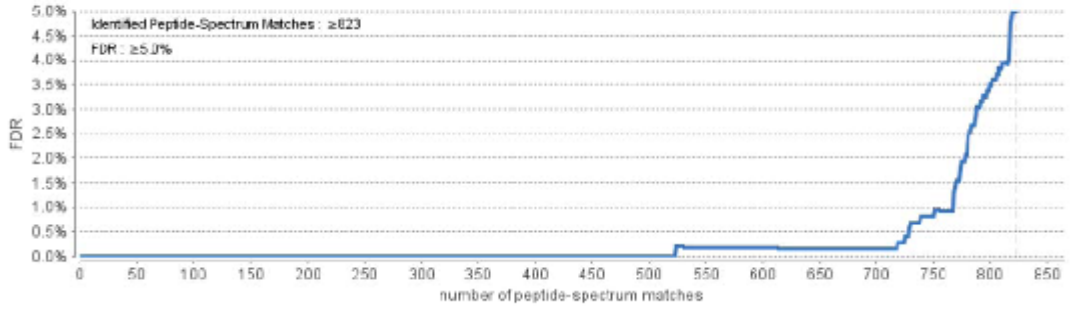

Figure 2: The distribution of PEAKS peptide score (-10lgP): **(a)** histogram of score; **(b)** The plot of precursor mass error vs. score.

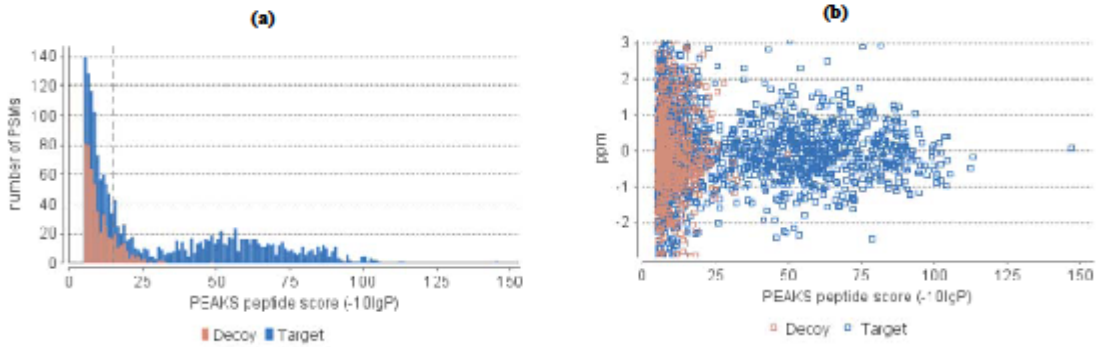

Table 1. Statistics of data.

# of MS Scans	816
# of MS/MS Scans	3782

Table 2. Result filtration parameters.

Peptide -10lgP	≥15	De Novo TLC	≥3
Protein -10lgP	≥20	De Novo ALC	≥50%
Proteins Unique Peptides	≥0		

Table 3. Statistics of filtered result.

Peptide-Spectrum Matches	872
Peptide Sequences	203
Protein Groups	44
Proteins	70
Proteins (#Unique Peptides)	9 (>2); 7 (=2); 45 (=1);
FDR (Peptide-Spectrum Matches)	10.7%
FDR (Peptide Sequences)	30.5%
De Novo Only	1297

Table 4. PTM Profile.

T(+79.97)	3
M(+15.99)	35
S(+79.97)	6

3. Experiment Control

Figure 3: The precursor mass error (observed m/z - theoretical m/z) distribution of the PSMs in filtered result. **(a)** Each bar indicates the number of PSMs (y-axis) with a certain precursor error (x-axis); **(b)** Each data point represents a PSM. x-axis is the theoretical m/z and y-axis is the precursor mass error

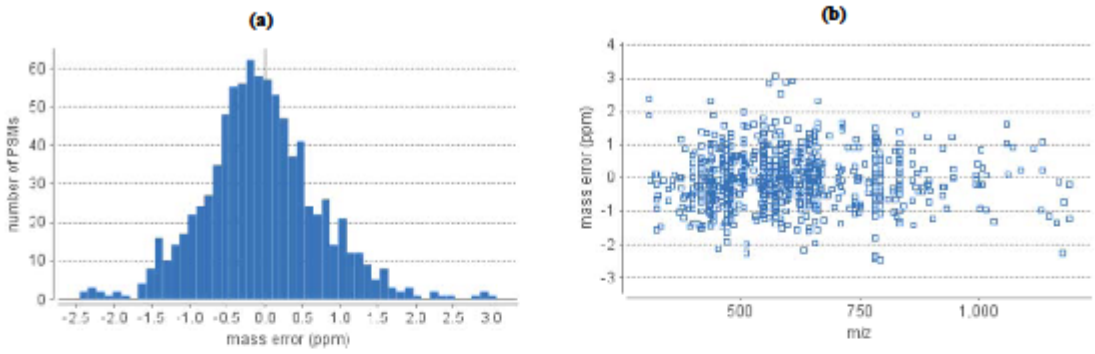

Table 5. number of peptides by number of missed cleavages

Missed Cleavages	0	1	2	3
Peptides	116	60	22	5

4. Other Information

Table 6. Search parameters.

Search Engine Name: PEAKS 5.3
Parent Mass Error Tolerance: 3.0 ppm
Fragment Mass Error Tolerance: 0.5 Da
Precursor Mass Search Type: monoisotopic
Enzyme: Trypsin
Max Missed Cleavages: 3
Variable Modifications:
  Oxidation M: 15.99
  Phosphorylation-STY: 79.97
Max variable PTM per peptide: 3
Database: IPI_danre.v3.82
Taxon: All
Searched Entry: 41893
Decoy Performed: true

Table 7. Instrument parameters.

Fractions: TR.RAW
Ion Source: ESI(nano-spray)
Fragmentation Mode: CID, CAD, IRMPD (y and b ions)
MS Scan Mode: FT-ICR/Orbitrap
MS/MS Scan Mode: Linear Ion Trap

Protein results for trypsin digested myosin – generated by PEAKS DB software

Protein Group	Protein ID	Accession	-10lgP	Coverage (%)	#Peptides	#Unique	Mass	Best Unique Peptide	Description
1	6	IPI00500057	504.48	28	74	1	222199.0312	1101	Tax_Id=7955 Gene_Symbol=LOC100149148 myosin heavy chain, fast skeletal muscle
2	3	IPI00503572	503.32	27	74	0	222147.9531		Tax_Id=7955 Gene_Symbol=myhz1.1 myosin, heavy polypeptide 1.1, skeletal muscle
2	2	IPI00773363	503.32	27	74	0	222157.875		Tax_Id=7955 Gene_Symbol=myhz1.2 Novel myosin family protein
4	1	IPI00933204	503.03	26	73	4	221878.8125	1083	Tax_Id=7955 Gene_Symbol=myhz2 Myosin, heavy polypeptide 2, fast muscle specific
3	4	IPI00858466	501.96	27	72	0	222215.1094		Tax_Id=7955 Gene_Symbol=myhz1.3 Uncharacterized protein
5	8	IPI00961738	469.78	23	59	1	221423.5469	1297	Tax_Id=7955 Gene_Symbol=wu:fd14a01 myosin heavy chain, fast skeletal muscle
6	13	IPI00484075	439.19	16	43	0	222841.5781		Tax_Id=7955 Gene_Symbol=myhb Uncharacterized protein
11	31	IPI00882712	316.03	9	20	0	223229.7812		Tax_Id=7955 Gene_Symbol=vmhc Ventricular myosin heavy chain
7	14	IPI00934366	315.33	10	22	0	223043.4375		Tax_Id=7955 Gene_Symbol=smyhc1 Uncharacterized protein
9	38	IPI00496068	310.4	10	21	0	223285.625		Tax_Id=7955 Gene_Symbol=smyhc2 Slow myosin heavy chain 2
8	11	IPI00490216	310.19	11	21	3	222803.3594	1036	Tax_Id=7955 Gene_Symbol=myh6 Myosin, heavy polypeptide 6, cardiac muscle, alpha
10	30	IPI00616127	302.55	7	17	0	224164		Tax_Id=7955 Gene_Symbol=vmhcl Uncharacterized protein
15	20	IPI00504207	302.03	47	18	18	41972.9648	1174	Tax_Id=7955 Gene_Symbol=actc1b Skeletal alpha1 actin
15	21	IPI00507230	302.03	47	18	18	41974.9375	1174	Tax_Id=7955 Gene_Symbol=hm:zewp0073;actc1a Actin, alpha, cardiac muscle like
15	26	IPI00509458	302.03	47	18	18	42004.9648	1174	Tax_Id=7955 Gene_Symbol=zgc:86709 Zgc:86709 protein
15	22	IPI00551966	302.03	47	18	18	41983.0039	1174	Tax_Id=7955 Gene_Symbol=actc1b Actin, alpha 1, skeletal muscle
15	28	IPI00570197	302.03	47	18	18	42018.9922	1174	Tax_Id=7955 Gene_Symbol=acta1a Actin, alpha 1a, skeletal muscle
15	23	IPI00628880	302.03	47	18	18	41974.9375	1174	Tax_Id=7955 Gene_Symbol=acta1b Actin, alpha 1b, skeletal muscle
12	18	IPI00501288	292.79	6	15	1	226660.125	1709	Tax_Id=7955 Gene_Symbol=myh7;myh7bb Uncharacterized protein
14	29	IPI00800858	259.61	4	11	0	225510.3594		Tax_Id=7955 Gene_Symbol=myh7b myosin-7
19	112	IPI00508152	205.67	35	8	1	32722.6777	1497	Tax_Id=7955 Gene_Symbol=tpma Tropomyosin alpha-1 chain
20	111	IPI00506010	190.33	30	8	1	32889.8633	1071	Tax_Id=7955 Gene_Symbol=tpm3 Zgc:77592
13	63	IPI00488248	182.47	24	4	4	16767.8711	2783	Tax_Id=7955 Gene_Symbol=mylz3 Myosin, light polypeptide 3, skeletal muscle
21	45	IPI00488085	179.53	19	5	1	18865.3379	1737	Tax_Id=7955 Gene_Symbol=mylz2 Myosin, light polypeptide 2, skeletal muscle
22	51	IPI00919778	171.6	21	5	1	15343.418	1288	Tax_Id=7955 Gene_Symbol=zgc:103639 Uncharacterized protein
22	52	IPI00496651	171.6	17	5	1	19122.625	1288	Tax_Id=7955 Gene_Symbol=zgc:103639 Zgc:103639
34	98	IPI00508395	125.22	7	2	2	42851.7188	1612	Tax_Id=7955 Gene_Symbol=ckmb Ckmb protein

34	99	IPI00482319	125.22	6	2	2	42814.6055	1612	Tax_Id=7955 Gene_Symbol=ckma Muscle-specific creatine kinase
24	5441	IPI00487267	121.43	12	4	1	28731.1191	1537	Tax_Id=7955 Gene_Symbol=zgc:63734 Zgc:63734
27	70	IPI00615483	116.06	0	3	2	3648343.75	1784	Tax_Id=7955 Gene_Symbol=ttna Titin a
27	73	IPI01016913	116.06	0	3	2	2114474.5	1784	Tax_Id=7955 Gene_Symbol=ttna Novel protein similar to human titin
36	5442	IPI00493235	85.15	2	2	2	113581.3984	1767	Tax_Id=7955 Gene_Symbol=atp2a2b Novel protein similar to vertebrate ATPase, Ca++ transporting, cardiac muscle, slow twitch 2
67	5460	IPI00852114	84.38	1	1	1	91669.3984	1964	Tax_Id=7955 Gene_Symbol=zgc:136820;mybpc2a Zgc:136545
67	5461	IPI00786523	84.38	1	1	1	125159.1875	1964	Tax_Id=7955 Gene_Symbol=zgc:136820;mybpc2a Zgc:136820
66	4648	IPI00497753	82.82	4	1	1	35784.0586	1876	Tax_Id=7955 Gene_Symbol=gapdh Glyceraldehyde-3-phosphate dehydrogenase
66	4649	IPI00963432	82.82	2	1	1	65912.6953	1876	Tax_Id=7955 Gene_Symbol=- hypothetical protein LOC326976
54	5449	IPI00900800	82.05	1	1	1	150574.5469	2194	Tax_Id=7955 Gene_Symbol=wu:fi38e05 Uncharacterized protein
54	5450	IPI01004767	82.05	1	1	1	165270.25	2194	Tax_Id=7955 Gene_Symbol=- protein tyrosine phosphatase, receptor type, D-like
37	108	IPI00501538	80.28	7	1	1	21441.8359	1515	Tax_Id=7955 Gene_Symbol=zgc:91930 Zgc:91930
38	5451	IPI00817940	62.77	5	1	1	26424.4316	1187	Tax_Id=7955 Gene_Symbol=tnnt3b Uncharacterized protein
38	5452	IPI00993469	62.77	5	1	1	27109.7266	1187	Tax_Id=7955 Gene_Symbol=tnnt3b Uncharacterized protein
38	5453	IPI00817723	62.77	5	1	1	27293.9219	1187	Tax_Id=7955 Gene_Symbol=tnnt3b Tnnt3b protein
38	5454	IPI00510978	62.77	5	1	1	27830.416	1187	Tax_Id=7955 Gene_Symbol=tnnt3b Fast troponin T isoform b
38	5455	IPI00817598	62.77	5	1	1	27180.9922	1187	Tax_Id=7955 Gene_Symbol=tnnt3b Uncharacterized protein
38	5456	IPI00817728	62.77	4	1	1	29337.8594	1187	Tax_Id=7955 Gene_Symbol=tnnt3b Putative uncharacterized protein
38	5457	IPI00972437	62.77	4	1	1	33442.3477	1187	Tax_Id=7955 Gene_Symbol=tnnt3b Uncharacterized protein
38	5458	IPI00817813	62.77	4	1	1	33598.5273	1187	Tax_Id=7955 Gene_Symbol=tnnt3b Tnnt3b protein
38	5459	IPI00817433	62.77	4	1	1	34885.75	1187	Tax_Id=7955 Gene_Symbol=tnnt3b Uncharacterized protein
28	437	IPI00901053	61.62	1	1	1	179550.7031	1475	Tax_Id=7955 Gene_Symbol=cep152 Uncharacterized protein
30	175	IPI00890560	55.56	0	2	1	3200993.75	1655	Tax_Id=7955 Gene_Symbol=ttnb titin
30	164	IPI00993122	55.56	0	2	1	3026089.5	1655	Tax_Id=7955 Gene_Symbol=- Uncharacterized protein (Fragment)
73	5467	IPI00902219	45.05	0	1	1	174044.0625	1323	Tax_Id=7955 Gene_Symbol=im:7165255 Uncharacterized protein
73	5468	IPI00968820	45.05	0	1	1	204515.9062	1323	Tax_Id=7955 Gene_Symbol=wnk1 Uncharacterized protein
73	5469	IPI00901954	45.05	0	1	1	216468.4531	1323	Tax_Id=7955 Gene_Symbol=- serine/threonine-protein kinase WNK1-like
70	5464	IPI00490239	38.21	2	1	1	33454.8398	1155	Tax_Id=7955 Gene_Symbol=tnnt3a Uncharacterized protein
69	5463	IPI00832038	36.68	2	1	1	63944.7227	1528	Tax_Id=7955 Gene_Symbol=LOC100003595 Novel protein similar to vertebrate adenylate cyclase family
32	1228	IPI00802686	28.89	1	2	2	323595.125	1239	Tax_Id=7955 Gene_Symbol=nipblb Uncharacterized protein
32	5443	IPI00897175	28.89	1	2	2	327605.5938	1239	Tax_Id=7955 Gene_Symbol=nipblb Uncharacterized protein

17	5474	IPI00899172	26.4	3	1	1	1044279	3277	Tax_Id=7955 Gene_Symbol=si:dkey-85a20.4 Uncharacterized protein
17	5475	IPI00961853	26.4	1	1	1	178837.7188	3277	Tax_Id=7955 Gene_Symbol=si:dkey-85a20.4 Uncharacterized protein
25	5477	IPI00501623	26.36	2	1	1	31395.207	1700	Tax_Id=7955 Gene_Symbol=otx5 Orthodenticle homolog 5
26	2304	IPI00487236	25.75	0	1	1	294555.7812	546	Tax_Id=7955 Gene_Symbol=flncb Uncharacterized protein
18	5476	IPI00960403	25.54	1	1	1	133889.7344	3729	Tax_Id=7955 Gene_Symbol=- Gag-protease-integrase-RT-RNaseH polyprotein-like
23	288	IPI00859309	21.19	0	1	1	593962.25	2284	Tax_Id=7955 Gene_Symbol=si:dkey-266j7.1 novel protein similar to H.sapiens PCLO, piccolo
80	5486	IPI00501009	20.85	2	1	1	47410.4648	3921	Tax_Id=7955 Gene_Symbol=- Uncharacterized protein
80	5487	IPI00932925	20.85	2	1	1	47463.5117	3921	Tax_Id=7955 Gene_Symbol=got2b Aspartate aminotransferase
49	5488	IPI00510504	20.51	0	1	1	327396	831	Tax_Id=7955 Gene_Symbol=ash1l Uncharacterized protein
81	5490	IPI00999083	20.19	2	1	1	162139.1562	1353	Tax_Id=7955 Gene_Symbol=- Rho-kinase 2
33	5466	IPI01007404	20.07	2	1	1	153309.625	2440	Tax_Id=7955 Gene_Symbol=- Uncharacterized protein
82	5491	IPI00998552	20.07	2	1	1	59667.7461	2332	Tax_Id=7955 Gene_Symbol=LOC560938 Uncharacterized protein
total 70 proteins									

Peptide results for trypsin digested myosin – generated by PEAKS DB software

Protein ID	Protein Accession	Peptide	isUnique	-10lgP	ppm	m/z	z	RT	Scan	#Spectra	Start	End	hasPTM
6	IPI00500057	K.MEGDLNEMEIQLSHANR.Q	N	146.95	0.1	993.9541	2	20.596	1778	20	1618	1634	N
6	IPI00500057	K.GGSMQTVSSQFR.E	N	112.37	-0.5	642.8033	2	14.967	1225	13	641	652	N
6	IPI00500057	K.KAITDAAMMAEELKK.E	N	105.35	-0.7	825.4331	2	16.959	1425	23	1757	1771	N
6	IPI00500057	K.TPGLMENFLVIHQLR.C	N	104.56	-0.3	884.4821	2	25.096	2188	2	680	694	N
6	IPI00500057	R.LQEAEEQIEAVNSK.C	N	104.32	0.4	794.3969	2	51.019	4288	13	1397	1410	N
6	IPI00500057	K.AITDAAMMAEELKK.E	N	103.63	0.4	761.3865	2	18.57	1586	28	1758	1771	N
6	IPI00500057	K.FTGAVLHHGNMK.F	N	102.41	-0.8	656.3344	2	13.25	1054	2	356	367	N
6	IPI00500057	K.GGSM(+15.99)QTVSSQFR.E	N	100.99	-0.7	650.8007	2	13.526	1078	2	641	652	Y
6	IPI00500057	K.KQADSVAELGEQIDNLQR.V	N	99.26	-0.2	1007.513	2	20.724	1790	4	1195	1212	N
6	IPI00500057	K.SAETEKELANMK.E	Y	98	-0.5	675.8317	2	13.765	1101	2	842	853	N
6	IPI00500057	K.SEYKMEIDDLSSNM(+15.99)EAVAK.A	N	95.57	0.2	1088.493	2	21.67	1880	2	1222	1240	Y
6	IPI00500057	K.AGLLGTLEEMR.D	N	95.04	-0.4	595.3156	2	23.555	2053	35	767	777	N
6	IPI00500057	K.VAEQELVDASER.V	N	94.92	0.5	673.3336	2	15.024	1231	1	1701	1712	N
6	IPI00500057	K.TKLEQQVDDLEGSLEQEKKLR.M	N	94.89	-1.2	829.4404	3	21.306	1847	2	1025	1045	N
6	IPI00500057	R.DLEESTLQHEATAAALR.K	N	94.23	-0.3	927.963	2	19.562	1681	4	1177	1193	N
6	IPI00500057	K.KGGSMQTVSSQFR.E	N	94.18	-0.6	706.8507	2	14.062	1131	3	640	652	N
6	IPI00500057	K.DAQLHLDDAVR.A	N	94.15	0.6	626.818	2	15.259	1255	35	1652	1662	N
6	IPI00500057	K.KMEGDLNEMEIQLSHANR.Q	N	93.3	1	1058.003	2	19.061	1634	8	1617	1634	N
6	IPI00500057	K.KM(+15.99)EGDLNEMEIQLSHANR.Q	N	92.12	-0.3	711.0015	3	17.562	1486	1	1617	1634	Y
6	IPI00500057	K.VQHELEEAEER.A	N	90.69	-0.5	684.8228	2	12.917	1024	2	1899	1909	N
6	IPI00500057	K.TKLEQQVDDLEGSLEQEKK.L	N	90.21	-0.6	739.7126	3	20.785	1796	2	1025	1043	N
6	IPI00500057	K.KKMEGDLNEMEIQLSHANR.Q	N	89.06	0	748.3684	3	17.091	1439	15	1616	1634	N
6	IPI00500057	R.KVAEQELVDASER.V	N	88.91	0.2	737.3809	2	14.239	1149	3	1700	1712	N
6	IPI00500057	K.QADSVAELGEQIDNLQR.V	N	87.89	1.2	943.4673	2	22.248	1933	3	1196	1212	N
6	IPI00500057	K.IEDEQSLGAQLQKK.I	N	87.83	-0.3	793.9225	2	14.913	1220	2	1094	1107	N
6	IPI00500057	K.NLQQEISDLTEQIGETGK.S	N	87.57	-0.9	1001.999	2	27.013	2345	1	1504	1521	N
6	IPI00500057	R.KKQADSVAELGEQIDNLQR.V	N	87.29	0.9	1071.562	2	18.889	1617	7	1194	1212	N
6	IPI00500057	R.RDLEESTLQHEATAAALR.K	N	86.71	0.8	1006.015	2	17.252	1455	4	1176	1193	N

6	IPI00500057	K.VLNASVIPEGQFIDNK.K	N	86.35	0.1	872.4675	2	21.406	1856	1	724	739	N
6	IPI00500057	K.KDIDDLELTLAK.V	N	86.12	1.2	687.3806	2	19.01	1629	2	952	963	N
6	IPI00500057	R.QLEEKEALVSQLTR.G	N	85.82	-1	822.4509	2	17.365	1466	33	1290	1303	N
6	IPI00500057	R.EQFEEEQEAKAELQR.G	N	84.5	-0.9	932.4387	2	16.361	1366	5	1345	1359	N
6	IPI00500057	R.KVQHELEEAEER.A	N	84.44	-1.1	748.8698	2	12.234	969	3	1898	1909	N
6	IPI00500057	K.AITDAAM(+15.99)MAEELKK.E	N	83.25	-0.5	769.3832	2	17.929	1523	2	1758	1771	Y
6	IPI00500057	R.IEELEEEIEAERAAR.A	N	82.3	-0.2	893.9443	2	18.439	1573	2	1115	1129	N
6	IPI00500057	K.AITDAAMM(+15.99)AEELK.K	N	80.4	0.3	705.3364	2	17.921	1522	1	1758	1770	Y
6	IPI00500057	K.MEIDDLSSNM(+15.99)EAVAK.A	N	79.32	0.2	834.8765	2	20.588	1777	20	1226	1240	Y
6	IPI00500057	K.DFETSQLLSK.I	N	79.24	0.3	584.2984	2	18.021	1531	26	1084	1093	N
6	IPI00500057	R.IEELEEEIEAER.A	N	78.43	0	744.8568	2	19.27	1654	1	1115	1126	N
6	IPI00500057	K.IEDEQSLGAQLQK.K	N	77.68	-0.9	729.8746	2	15.833	1311	1	1094	1106	N
6	IPI00500057	K.KAITDAAMM(+15.99)AEELKK.E	N	76.52	1	555.957	3	15.05	1234	1	1757	1771	Y
6	IPI00500057	R.VKELTYQTEEDKK.N	N	74.8	-0.1	537.6138	3	12.375	980	2	1847	1859	N
6	IPI00500057	R.LDEAENLAM(+15.99)K.G	N	74.76	-0.3	575.2762	2	13.758	1100	1	1797	1806	Y
6	IPI00500057	R.ENLGKLMTNLR.S	N	74.7	1	644.8564	2	18.112	1541	1	653	663	N
6	IPI00500057	R.TLEDQLSEIK.S	N	73.95	0	588.3113	2	19.446	1670	5	1251	1260	N
6	IPI00500057	K.KAITDAAM(+15.99)MAEELKK.E	N	73.76	-0.2	555.9564	3	16.714	1401	1	1757	1771	Y
6	IPI00500057	R.EQFEEEQEAK.A	N	73.74	0	633.7778	2	12.289	973	1	1345	1354	N
6	IPI00500057	K.ELTYQTEEDKK.N	N	73.25	-0.4	692.3353	2	12.299	974	1	1849	1859	N
6	IPI00500057	K.DIDDLELTLAK.V	N	73.16	-0.6	623.3318	2	22.33	1941	1	953	963	N
6	IPI00500057	K.AGLLGTLEEM(+15.99)R.D	N	73.06	0.8	603.3138	2	19.327	1659	2	767	777	Y
6	IPI00500057	K.KDFETSQLLSK.I	N	72.88	-0.1	648.3456	2	15.278	1258	1	1083	1093	N
6	IPI00500057	R.DLEESTLQHEATAAALRK.K	N	72.77	0.4	661.6765	3	18.027	1532	1	1177	1194	N
6	IPI00500057	K.KMEGDLNEM(+15.99)EIQLSHANR.Q	N	72.57	-1.4	711.0007	3	19.127	1640	2	1617	1634	Y
6	IPI00500057	K.TKLEQQVDDLEGSLEQEK.K	N	72.48	-0.9	697.014	3	21.992	1910	1	1025	1042	N
6	IPI00500057	K.MEGDLNEM(+15.99)EIQLSHANR.Q	N	70.89	0.5	668.3037	3	16.541	1385	1	1618	1634	Y
6	IPI00500057	K.KKDFETSQLLSK.I	N	69.93	0.3	712.3934	2	14.246	1150	2	1082	1093	N
6	IPI00500057	R.LDEAENLAMK.G	N	69.57	1.5	567.2798	2	14.792	1207	3	1797	1806	N
6	IPI00500057	K.LYDQHLGK.C	N	69.42	-1.4	487.258	2	11.849	937	3	556	563	N
6	IPI00500057	K.IEDEQSLGAQLQKKIKELQAR.I	N	68.98	-0.1	607.0906	4	22.519	1959	2	1094	1114	N

6	IPI00500057	K.EKSEYKMEIDDLSSNM(+15.99)EAVAK.A	N	68.83	0.5	811.7106	3	21.05	1821	1	1220	1240	Y
6	IPI00500057	K.M(+15.99)EIDDLSSNM(+15.99)EAVAK.A	N	66.32	-0.9	842.8731	2	18.456	1575	1	1226	1240	Y
6	IPI00500057	K.VLNASVIPEGQFIDNKK.A	N	64.59	-0.8	624.6785	3	19.57	1682	1	724	740	N
6	IPI00500057	K.YETDAIQR.T	N	63.72	-0.8	498.2428	2	12.604	999	1	1375	1382	N
6	IPI00500057	K.AITDAAMM(+15.99)AEELKK.E	N	63.56	-0.2	769.3835	2	16.173	1347	3	1758	1771	Y
6	IPI00500057	R.NFDKVLAEWK.Q	N	61.76	-0.3	417.2239	3	20.741	1792	2	1448	1457	N
6	IPI00500057	K.DLQHRLDEAENLAMK.G	N	60.68	1.2	891.9449	2	20.094	1730	3	1792	1806	N
6	IPI00500057	R.HDCDLLR.E	N	60.31	-0.4	436.208	2	13.626	1087	1	1338	1344	N
6	IPI00500057	K.EALVSQLTR.G	N	56.97	-0.9	508.7899	2	47.214	3983	7	1295	1303	N
6	IPI00500057	R.ILYADFK.Q	N	56.89	0.2	435.2421	2	16.885	1417	10	713	719	N
6	IPI00500057	K.KGGSM(+15.99)QTVSSQFR.E	N	56.47	-0.5	476.9013	3	12.661	1003	2	640	652	Y
6	IPI00500057	R.LQDLVDKLQLK.V	N	54.78	-0.3	656.8951	2	19.19	1646	54	1864	1874	N
6	IPI00500057	R.SLSTELFK.M	N	52.49	0.6	462.7557	2	35.763	3049	41	1476	1483	N
6	IPI00500057	R.ADLSRELEEISER.L	N	50.52	1.5	516.2625	3	20.916	1808	1	1137	1149	N
6	IPI00500057	K.LEQQVDDLEGSLEQEKK.L	N	48.54	0.6	663.3325	3	18.209	1550	1	1027	1043	N
6	IPI00500057	K.AGLLGTLEEMRDEK.L	N	47.23	0.5	521.2681	3	22.569	1963	2	767	780	N
6	IPI00500057	K.MEIDDLSSNM(+15.99)EAVAKAK.A	N	43.95	-0.1	623.2973	3	20.181	1739	1	1226	1242	Y
6	IPI00500057	R.VQLELNQVKGEIDR.K	N	43.71	-0.4	820.9515	2	18.653	1595	4	1561	1574	N
6	IPI00500057	K.AITDAAMMAEELK.K	N	43.28	-0.4	465.228	3	21.127	1829	1	1758	1770	N
6	IPI00500057	K.DLQHRLDEAENLAM(+15.99)K.G	N	41.09	-0.6	600.2962	3	20.172	1738	1	1792	1806	Y
6	IPI00500057	R.VQLELNQVKGEIDRK.L	N	40.47	0.3	884.9996	2	17.296	1459	3	1561	1575	N
6	IPI00500057	K.CASLEK.T	N	39.15	0.1	325.6625	2	3.599	287	3	1411	1416	N
6	IPI00500057	K.LRMDLER.A	N	38.21	-0.1	311.5042	3	14.197	1145	1	1044	1050	N
6	IPI00500057	K.NLEITVK.D	N	37.86	-0.2	408.7448	2	14.765	1205	1	1785	1791	N
6	IPI00500057	K.LMTNLR.S	N	35.48	0	374.2127	2	13.689	1093	1	658	663	N
6	IPI00500057	R.LQDLVDK.L	N	32.39	-1.5	415.7339	2	13.587	1084	1	1864	1870	N
6	IPI00500057	K.KKGGSMQTVSSQFR.E	N	31.75	-0.6	385.9527	4	13.516	1077	1	639	652	N
6	IPI00500057	R.SFMNVK.H	N	31.11	0.1	363.1862	2	14.189	1144	1	820	825	N
6	IPI00500057	K.LM(+15.99)TNLR.S	N	29.79	-0.6	382.2099	2	11.371	898	2	658	663	Y
6	IPI00500057	K.IQLEAK.L	N	28.41	-0.7	351.213	2	11.787	932	1	913	918	N
6	IPI00500057	K.FTGAVLHHGNM(+15.99)K.F	N	22.15	-1.5	332.6693	4	13.307	1059	1	356	367	Y

6	IPI00500057	K.IEDEQSLGAQLQKKIK.E	N	14.55	-0.3	457.7597	4	16.792	1409	1	1094	1109	N
6	IPI00500057	R.ESIYT(+79.97)IQYNIRSFM(+15.99)NVK.H	N	7.27	-0.8	551.2625	4	3.664	292	1	809	825	Y
3	IPI00503572	K.MEGDLNEMEIQLSHANR.Q	N	146.95	0.1	993.9541	2	20.596	1778	20	1620	1636	N
3	IPI00503572	K.GGSMQTVSSQFR.E	N	112.37	-0.5	642.8033	2	14.967	1225	13	643	654	N
3	IPI00503572	K.KAITDAAMMAEELKK.E	N	105.35	-0.7	825.4331	2	16.959	1425	23	1759	1773	N
3	IPI00503572	K.TPGLMENFLVIHQLR.C	N	104.56	-0.3	884.4821	2	25.096	2188	2	682	696	N
3	IPI00503572	R.LQEAEEQIEAVNSK.C	N	104.32	0.4	794.3969	2	51.019	4288	13	1399	1412	N
3	IPI00503572	K.AITDAAMMAEELKK.E	N	103.63	0.4	761.3865	2	18.57	1586	28	1760	1773	N
3	IPI00503572	K.FTGAVLHHGNMK.F	N	102.41	-0.8	656.3344	2	13.25	1054	2	356	367	N
3	IPI00503572	K.GGSM(+15.99)QTVSSQFR.E	N	100.99	-0.7	650.8007	2	13.526	1078	2	643	654	Y
3	IPI00503572	K.KQADSVAELGEQIDNLQR.V	N	99.26	-0.2	1007.513	2	20.724	1790	4	1197	1214	N
3	IPI00503572	K.SEYKMEIDDLSSNM(+15.99)EAVAK.A	N	95.57	0.2	1088.493	2	21.67	1880	2	1224	1242	Y
3	IPI00503572	K.AGLLGTLEEMR.D	N	95.04	-0.4	595.3156	2	23.555	2053	35	769	779	N
3	IPI00503572	K.VAEQELVDASER.V	N	94.92	0.5	673.3336	2	15.024	1231	1	1703	1714	N
3	IPI00503572	K.TKLEQQVDDLEGSLEQEKKLR.M	N	94.89	-1.2	829.4404	3	21.306	1847	2	1027	1047	N
3	IPI00503572	R.DLEESTLQHEATAAALR.K	N	94.23	-0.3	927.963	2	19.562	1681	4	1179	1195	N
3	IPI00503572	K.KGGSMQTVSSQFR.E	N	94.18	-0.6	706.8507	2	14.062	1131	3	642	654	N
3	IPI00503572	K.DAQLHLDDAVR.G	N	94.15	0.6	626.818	2	15.259	1255	35	1654	1664	N
3	IPI00503572	K.KMEGDLNEMEIQLSHANR.Q	N	93.3	1	1058.003	2	19.061	1634	8	1619	1636	N
3	IPI00503572	K.KM(+15.99)EGDLNEMEIQLSHANR.Q	N	92.12	-0.3	711.0015	3	17.562	1486	1	1619	1636	Y
3	IPI00503572	K.VQHELEEAEER.A	N	90.69	-0.5	684.8228	2	12.917	1024	2	1901	1911	N
3	IPI00503572	K.TKLEQQVDDLEGSLEQEKK.L	N	90.21	-0.6	739.7126	3	20.785	1796	2	1027	1045	N
3	IPI00503572	K.KKMEGDLNEMEIQLSHANR.Q	N	89.06	0	748.3684	3	17.091	1439	15	1618	1636	N
3	IPI00503572	R.KVAEQELVDASER.V	N	88.91	0.2	737.3809	2	14.239	1149	3	1702	1714	N
3	IPI00503572	K.QADSVAELGEQIDNLQR.V	N	87.89	1.2	943.4673	2	22.248	1933	3	1198	1214	N
3	IPI00503572	K.IEDEQSLGAQLQKK.I	N	87.83	-0.3	793.9225	2	14.913	1220	2	1096	1109	N
3	IPI00503572	K.NLQQEISDLTEQLGETGK.S	N	87.57	-0.9	1001.999	2	27.013	2345	1	1506	1523	N
3	IPI00503572	R.KKQADSVAELGEQIDNLQR.V	N	87.29	0.9	1071.562	2	18.889	1617	7	1196	1214	N
3	IPI00503572	R.RDLEESTLQHEATAAALR.K	N	86.71	0.8	1006.015	2	17.252	1455	4	1178	1195	N
3	IPI00503572	K.VLNASVIPEGQFIDNK.K	N	86.35	0.1	872.4675	2	21.406	1856	1	726	741	N
3	IPI00503572	K.KDIDDLELTLAK.V	N	86.12	1.2	687.3806	2	19.01	1629	2	954	965	N

3	IPI00503572	R.QLEEKEALVSQLTR.G	N	85.82	-1	822.4509	2	17.365	1466	33	1292	1305	N
3	IPI00503572	R.EQFEEEQEAKAELQR.G	N	84.5	-0.9	932.4387	2	16.361	1366	5	1347	1361	N
3	IPI00503572	R.KVQHELEEAEER.A	N	84.44	-1.1	748.8698	2	12.234	969	3	1900	1911	N
3	IPI00503572	K.AITDAAM(+15.99)MAEELKK.E	N	83.25	-0.5	769.3832	2	17.929	1523	2	1760	1773	Y
3	IPI00503572	R.IEELEEEIEAERAAR.A	N	82.3	-0.2	893.9443	2	18.439	1573	2	1117	1131	N
3	IPI00503572	K.AITDAAMM(+15.99)AEELK.K	N	80.4	0.3	705.3364	2	17.921	1522	1	1760	1772	Y
3	IPI00503572	K.MEIDDLSSNM(+15.99)EAVAK.A	N	79.32	0.2	834.8765	2	20.588	1777	20	1228	1242	Y
3	IPI00503572	K.DFETSQLLSK.I	N	79.24	0.3	584.2984	2	18.021	1531	26	1086	1095	N
3	IPI00503572	R.IEELEEEIEAER.A	N	78.43	0	744.8568	2	19.27	1654	1	1117	1128	N
3	IPI00503572	K.IEDEQSLGAQLQK.K	N	77.68	-0.9	729.8746	2	15.833	1311	1	1096	1108	N
3	IPI00503572	K.KAITDAAMM(+15.99)AEELKK.E	N	76.52	1	555.957	3	15.05	1234	1	1759	1773	Y
3	IPI00503572	R.VKELTYQTEEDKK.N	N	74.8	-0.1	537.6138	3	12.375	980	2	1849	1861	N
3	IPI00503572	R.LDEAENLAM(+15.99)K.G	N	74.76	-0.3	575.2762	2	13.758	1100	1	1799	1808	Y
3	IPI00503572	R.ENLGKLMTNLR.S	N	74.7	1	644.8564	2	18.112	1541	1	655	665	N
3	IPI00503572	R.TLEDQLSEIK.S	N	73.95	0	588.3113	2	19.446	1670	5	1253	1262	N
3	IPI00503572	K.KAITDAAM(+15.99)MAEELKK.E	N	73.76	-0.2	555.9564	3	16.714	1401	1	1759	1773	Y
3	IPI00503572	R.EQFEEEQEAK.A	N	73.74	0	633.7778	2	12.289	973	1	1347	1356	N
3	IPI00503572	K.ELTYQTEEDKK.N	N	73.25	-0.4	692.3353	2	12.299	974	1	1851	1861	N
3	IPI00503572	K.DIDDLELTLAK.V	N	73.16	-0.6	623.3318	2	22.33	1941	1	955	965	N
3	IPI00503572	K.AGLLGTLEEM(+15.99)R.D	N	73.06	0.8	603.3138	2	19.327	1659	2	769	779	Y
3	IPI00503572	K.KDFETSQLLSK.I	N	72.88	-0.1	648.3456	2	15.278	1258	1	1085	1095	N
3	IPI00503572	R.DLEESTLQHEATAAALRK.K	N	72.77	0.4	661.6765	3	18.027	1532	1	1179	1196	N
3	IPI00503572	K.KMEGDLNEM(+15.99)EIQLSHANR.Q	N	72.57	-1.4	711.0007	3	19.127	1640	2	1619	1636	Y
3	IPI00503572	K.TKLEQQVDDLEGSLEQEK.K	N	72.48	-0.9	697.014	3	21.992	1910	1	1027	1044	N
3	IPI00503572	K.MEGDLNEM(+15.99)EIQLSHANR.Q	N	70.89	0.5	668.3037	3	16.541	1385	1	1620	1636	Y
3	IPI00503572	K.KKDFETSQLLSK.I	N	69.93	0.3	712.3934	2	14.246	1150	2	1084	1095	N
3	IPI00503572	R.LDEAENLAMK.G	N	69.57	1.5	567.2798	2	14.792	1207	3	1799	1808	N
3	IPI00503572	K.LYDQHLGK.C	N	69.42	-1.4	487.258	2	11.849	937	3	556	563	N
3	IPI00503572	K.IEDEQSLGAQLQKKIKELQAR.I	N	68.98	-0.1	607.0906	4	22.519	1959	2	1096	1116	N
3	IPI00503572	K.EKSEYKMEIDDLSSNM(+15.99)EAVAK.A	N	68.83	0.5	811.7106	3	21.05	1821	1	1222	1242	Y
3	IPI00503572	K.M(+15.99)EIDDLSSNM(+15.99)EAVAK.A	N	66.32	-0.9	842.8731	2	18.456	1575	1	1228	1242	Y

3	IPI00503572	K.VLNASVIPEGQFIDNKK.A	N	64.59	-0.8	624.6785	3	19.57	1682	1	726	742	N
3	IPI00503572	K.YETDAIQR.T	N	63.72	-0.8	498.2428	2	12.604	999	1	1377	1384	N
3	IPI00503572	K.AITDAAMM(+15.99)AEELKK.E	N	63.56	-0.2	769.3835	2	16.173	1347	3	1760	1773	Y
3	IPI00503572	K.NLTEEM(+15.99)AAQDESIGKLTK.E	N	61.88	0.4	997.4914	2	19.31	1657	2	979	996	Y
3	IPI00503572	R.NFDKVLAEWK.Q	N	61.76	-0.3	417.2239	3	20.741	1792	2	1450	1459	N
3	IPI00503572	K.NLTEEM(+15.99)AAQDESIGK.L	N	60.96	0.8	826.3782	2	16.157	1345	2	979	993	Y
3	IPI00503572	K.DLQHRLDEAENLAMK.G	N	60.68	1.2	891.9449	2	20.094	1730	3	1794	1808	N
3	IPI00503572	R.HDCDLLR.E	N	60.31	-0.4	436.208	2	13.626	1087	1	1340	1346	N
3	IPI00503572	K.EALVSQLTR.G	N	56.97	-0.9	508.7899	2	47.214	3983	7	1297	1305	N
3	IPI00503572	R.ILYADFK.Q	N	56.89	0.2	435.2421	2	16.885	1417	10	715	721	N
3	IPI00503572	K.KGGSM(+15.99)QTVSSQFR.E	N	56.47	-0.5	476.9013	3	12.661	1003	2	642	654	Y
3	IPI00503572	R.LQDLVDKLQLK.V	N	54.78	-0.3	656.8951	2	19.19	1646	54	1866	1876	N
3	IPI00503572	R.SLSTELFK.M	N	52.49	0.6	462.7557	2	35.763	3049	41	1478	1485	N
3	IPI00503572	R.ADLSRELEEISER.L	N	50.52	1.5	516.2625	3	20.916	1808	1	1139	1151	N
3	IPI00503572	K.LEQQVDDLEGSLEQEKK.L	N	48.54	0.6	663.3325	3	18.209	1550	1	1029	1045	N
3	IPI00503572	K.AGLLGTLEEMRDEK.L	N	47.23	0.5	521.2681	3	22.569	1963	2	769	782	N
3	IPI00503572	K.MEIDDLSSNM(+15.99)EAVAKAK.A	N	43.95	-0.1	623.2973	3	20.181	1739	1	1228	1244	Y
3	IPI00503572	K.AITDAAMMAEELK.K	N	43.28	-0.4	465.228	3	21.127	1829	1	1760	1772	N
3	IPI00503572	K.DLQHRLDEAENLAM(+15.99)K.G	N	41.09	-0.6	600.2962	3	20.172	1738	1	1794	1808	Y
3	IPI00503572	K.KNLEVTVK.D	N	39.8	0.5	465.7848	2	11.806	934	1	1786	1793	N
3	IPI00503572	K.CASLEK.T	N	39.15	0.1	325.6625	2	3.599	287	3	1413	1418	N
3	IPI00503572	K.LRMDLER.A	N	38.21	-0.1	311.5042	3	14.197	1145	1	1046	1052	N
3	IPI00503572	K.NLEVTVK.D	N	36.87	-0.3	401.7369	2	13.821	1107	1	1787	1793	N
3	IPI00503572	K.LMTNLR.S	N	35.48	0	374.2127	2	13.689	1093	1	660	665	N
3	IPI00503572	R.LQDLVDK.L	N	32.39	-1.5	415.7339	2	13.587	1084	1	1866	1872	N
3	IPI00503572	K.KKGGSMQTVSSQFR.E	N	31.75	-0.6	385.9527	4	13.516	1077	1	641	654	N
3	IPI00503572	R.SFMNVK.H	N	31.11	0.1	363.1862	2	14.189	1144	1	822	827	N
3	IPI00503572	K.LM(+15.99)TNLR.S	N	29.79	-0.6	382.2099	2	11.371	898	2	660	665	Y
3	IPI00503572	K.IQLEAK.L	N	28.41	-0.7	351.213	2	11.787	932	1	915	920	N
3	IPI00503572	K.FTGAVLHHGNM(+15.99)K.F	N	22.15	-1.5	332.6693	4	13.307	1059	1	356	367	Y
3	IPI00503572	K.IEDEQSLGAQLQKKIK.E	N	14.55	-0.3	457.7597	4	16.792	1409	1	1096	1111	N

2	IPI00773363	K.MEGDLNEMEIQLSHANR.Q	N	146.95	0.1	993.9541	2	20.596	1778	20	1620	1636	N
2	IPI00773363	K.GGSMQTVSSQFR.E	N	112.37	-0.5	642.8033	2	14.967	1225	13	643	654	N
2	IPI00773363	K.KAITDAAMMAEELKK.E	N	105.35	-0.7	825.4331	2	16.959	1425	23	1759	1773	N
2	IPI00773363	K.TPGLMENFLVIHQLR.C	N	104.56	-0.3	884.4821	2	25.096	2188	2	682	696	N
2	IPI00773363	R.LQEAEEQIEAVNSK.C	N	104.32	0.4	794.3969	2	51.019	4288	13	1399	1412	N
2	IPI00773363	K.AITDAAMMAEELKK.E	N	103.63	0.4	761.3865	2	18.57	1586	28	1760	1773	N
2	IPI00773363	K.FTGAVLHHGNMK.F	N	102.41	-0.8	656.3344	2	13.25	1054	2	356	367	N
2	IPI00773363	K.GGSM(+15.99)QTVSSQFR.E	N	100.99	-0.7	650.8007	2	13.526	1078	2	643	654	Y
2	IPI00773363	K.KQADSVAELGEQIDNLQR.V	N	99.26	-0.2	1007.513	2	20.724	1790	4	1197	1214	N
2	IPI00773363	K.SEYKMEIDDLSSNM(+15.99)EAVAK.A	N	95.57	0.2	1088.493	2	21.67	1880	2	1224	1242	Y
2	IPI00773363	K.AGLLGTLEEMR.D	N	95.04	-0.4	595.3156	2	23.555	2053	35	769	779	N
2	IPI00773363	K.VAEQELVDASER.V	N	94.92	0.5	673.3336	2	15.024	1231	1	1703	1714	N
2	IPI00773363	K.TKLEQQVDDLEGSLEQEKKLR.M	N	94.89	-1.2	829.4404	3	21.306	1847	2	1027	1047	N
2	IPI00773363	R.DLEESTLQHEATAAALR.K	N	94.23	-0.3	927.963	2	19.562	1681	4	1179	1195	N
2	IPI00773363	K.KGGSMQTVSSQFR.E	N	94.18	-0.6	706.8507	2	14.062	1131	3	642	654	N
2	IPI00773363	K.DAQLHLDDAVR.G	N	94.15	0.6	626.818	2	15.259	1255	35	1654	1664	N
2	IPI00773363	K.KMEGDLNEMEIQLSHANR.Q	N	93.3	1	1058.003	2	19.061	1634	8	1619	1636	N
2	IPI00773363	K.KM(+15.99)EGDLNEMEIQLSHANR.Q	N	92.12	-0.3	711.0015	3	17.562	1486	1	1619	1636	Y
2	IPI00773363	K.VQHELEEAEER.A	N	90.69	-0.5	684.8228	2	12.917	1024	2	1901	1911	N
2	IPI00773363	K.TKLEQQVDDLEGSLEQEKK.L	N	90.21	-0.6	739.7126	3	20.785	1796	2	1027	1045	N
2	IPI00773363	K.KKMEGDLNEMEIQLSHANR.Q	N	89.06	0	748.3684	3	17.091	1439	15	1618	1636	N
2	IPI00773363	R.KVAEQELVDASER.V	N	88.91	0.2	737.3809	2	14.239	1149	3	1702	1714	N
2	IPI00773363	K.QADSVAELGEQIDNLQR.V	N	87.89	1.2	943.4673	2	22.248	1933	3	1198	1214	N
2	IPI00773363	K.IEDEQSLGAQLQKK.I	N	87.83	-0.3	793.9225	2	14.913	1220	2	1096	1109	N
2	IPI00773363	K.NLQQEISDLTEQIGETGK.S	N	87.57	-0.9	1001.999	2	27.013	2345	1	1506	1523	N
2	IPI00773363	R.KKQADSVAELGEQIDNLQR.V	N	87.29	0.9	1071.562	2	18.889	1617	7	1196	1214	N
2	IPI00773363	R.RDLEESTLQHEATAAALR.K	N	86.71	0.8	1006.015	2	17.252	1455	4	1178	1195	N
2	IPI00773363	K.VLNASVIPEGQFIDNK.K	N	86.35	0.1	872.4675	2	21.406	1856	1	726	741	N
2	IPI00773363	K.KDIDDLELTLAK.V	N	86.12	1.2	687.3806	2	19.01	1629	2	954	965	N
2	IPI00773363	R.QLEEKEALVSQLTR.G	N	85.82	-1	822.4509	2	17.365	1466	33	1292	1305	N
2	IPI00773363	R.EQFEEEQEAKAELQR.G	N	84.5	-0.9	932.4387	2	16.361	1366	5	1347	1361	N

2	IPI00773363	R.KVQHELEEAEER.A	N	84.44	-1.1	748.8698	2	12.234	969	3	1900	1911	N
2	IPI00773363	K.AITDAAM(+15.99)MAEELKK.E	N	83.25	-0.5	769.3832	2	17.929	1523	2	1760	1773	Y
2	IPI00773363	R.IEELEEEIEAERAAR.A	N	82.3	-0.2	893.9443	2	18.439	1573	2	1117	1131	N
2	IPI00773363	K.AITDAAMM(+15.99)AEELK.K	N	80.4	0.3	705.3364	2	17.921	1522	1	1760	1772	Y
2	IPI00773363	K.MEIDDLSSNM(+15.99)EAVAK.A	N	79.32	0.2	834.8765	2	20.588	1777	20	1228	1242	Y
2	IPI00773363	K.DFETSQLLSK.I	N	79.24	0.3	584.2984	2	18.021	1531	26	1086	1095	N
2	IPI00773363	R.IEELEEEIEAER.A	N	78.43	0	744.8568	2	19.27	1654	1	1117	1128	N
2	IPI00773363	K.IEDEQSLGAQLQK.K	N	77.68	-0.9	729.8746	2	15.833	1311	1	1096	1108	N
2	IPI00773363	K.KAITDAAMM(+15.99)AEELKK.E	N	76.52	1	555.957	3	15.05	1234	1	1759	1773	Y
2	IPI00773363	R.VKELTYQTEEDKK.N	N	74.8	-0.1	537.6138	3	12.375	980	2	1849	1861	N
2	IPI00773363	R.LDEAENLAM(+15.99)K.G	N	74.76	-0.3	575.2762	2	13.758	1100	1	1799	1808	Y
2	IPI00773363	R.ENLGKLMTNLR.S	N	74.7	1	644.8564	2	18.112	1541	1	655	665	N
2	IPI00773363	R.TLEDQLSEIK.S	N	73.95	0	588.3113	2	19.446	1670	5	1253	1262	N
2	IPI00773363	K.KAITDAAM(+15.99)MAEELKK.E	N	73.76	-0.2	555.9564	3	16.714	1401	1	1759	1773	Y
2	IPI00773363	R.EQFEEEQEAK.A	N	73.74	0	633.7778	2	12.289	973	1	1347	1356	N
2	IPI00773363	K.ELTYQTEEDKK.N	N	73.25	-0.4	692.3353	2	12.299	974	1	1851	1861	N
2	IPI00773363	K.DIDDLELTLAK.V	N	73.16	-0.6	623.3318	2	22.33	1941	1	955	965	N
2	IPI00773363	K.AGLLGTLEEM(+15.99)R.D	N	73.06	0.8	603.3138	2	19.327	1659	2	769	779	Y
2	IPI00773363	K.KDFETSQLLSK.I	N	72.88	-0.1	648.3456	2	15.278	1258	1	1085	1095	N
2	IPI00773363	R.DLEESTLQHEATAAALRK.K	N	72.77	0.4	661.6765	3	18.027	1532	1	1179	1196	N
2	IPI00773363	K.KMEGDLNEM(+15.99)EIQLSHANR.Q	N	72.57	-1.4	711.0007	3	19.127	1640	2	1619	1636	Y
2	IPI00773363	K.TKLEQQVDDLEGSLEQEK.K	N	72.48	-0.9	697.014	3	21.992	1910	1	1027	1044	N
2	IPI00773363	K.MEGDLNEM(+15.99)EIQLSHANR.Q	N	70.89	0.5	668.3037	3	16.541	1385	1	1620	1636	Y
2	IPI00773363	K.KKDFETSQLLSK.I	N	69.93	0.3	712.3934	2	14.246	1150	2	1084	1095	N
2	IPI00773363	R.LDEAENLAMK.G	N	69.57	1.5	567.2798	2	14.792	1207	3	1799	1808	N
2	IPI00773363	K.LYDQHLGK.C	N	69.42	-1.4	487.258	2	11.849	937	3	556	563	N
2	IPI00773363	K.IEDEQSLGAQLQKKIKELQAR.I	N	68.98	-0.1	607.0906	4	22.519	1959	2	1096	1116	N
2	IPI00773363	K.EKSEYKMEIDDLSSNM(+15.99)EAVAK.A	N	68.83	0.5	811.7106	3	21.05	1821	1	1222	1242	Y
2	IPI00773363	K.M(+15.99)EIDDLSSNM(+15.99)EAVAK.A	N	66.32	-0.9	842.8731	2	18.456	1575	1	1228	1242	Y
2	IPI00773363	K.VLNASVIPEGQFIDNKK.A	N	64.59	-0.8	624.6785	3	19.57	1682	1	726	742	N
2	IPI00773363	K.YETDAIQR.T	N	63.72	-0.8	498.2428	2	12.604	999	1	1377	1384	N

2	IPI00773363	K.AITDAAMM(+15.99)AEELKK.E	N	63.56	-0.2	769.3835	2	16.173	1347	3	1760	1773	Y
2	IPI00773363	K.NLTEEM(+15.99)AAQDESIGKLTK.E	N	61.88	0.4	997.4914	2	19.31	1657	2	979	996	Y
2	IPI00773363	R.NFDKVLAEWK.Q	N	61.76	-0.3	417.2239	3	20.741	1792	2	1450	1459	N
2	IPI00773363	K.NLTEEM(+15.99)AAQDESIGK.L	N	60.96	0.8	826.3782	2	16.157	1345	2	979	993	Y
2	IPI00773363	K.DLQHRLDEAENLAMK.G	N	60.68	1.2	891.9449	2	20.094	1730	3	1794	1808	N
2	IPI00773363	R.HDCDLLR.E	N	60.31	-0.4	436.208	2	13.626	1087	1	1340	1346	N
2	IPI00773363	K.EALVSQLTR.G	N	56.97	-0.9	508.7899	2	47.214	3983	7	1297	1305	N
2	IPI00773363	R.ILYADFK.Q	N	56.89	0.2	435.2421	2	16.885	1417	10	715	721	N
2	IPI00773363	K.KGGSM(+15.99)QTVSSQFR.E	N	56.47	-0.5	476.9013	3	12.661	1003	2	642	654	Y
2	IPI00773363	R.LQDLVDKLQLK.V	N	54.78	-0.3	656.8951	2	19.19	1646	54	1866	1876	N
2	IPI00773363	R.SLSTELFK.M	N	52.49	0.6	462.7557	2	35.763	3049	41	1478	1485	N
2	IPI00773363	R.ADLSRELEEISER.L	N	50.52	1.5	516.2625	3	20.916	1808	1	1139	1151	N
2	IPI00773363	K.LEQQVDDLEGSLEQEKK.L	N	48.54	0.6	663.3325	3	18.209	1550	1	1029	1045	N
2	IPI00773363	K.AGLLGTLEEMRDEK.L	N	47.23	0.5	521.2681	3	22.569	1963	2	769	782	N
2	IPI00773363	K.MEIDDLSSNM(+15.99)EAVAKAK.A	N	43.95	-0.1	623.2973	3	20.181	1739	1	1228	1244	Y
2	IPI00773363	K.AITDAAMMAEELK.K	N	43.28	-0.4	465.228	3	21.127	1829	1	1760	1772	N
2	IPI00773363	K.DLQHRLDEAENLAM(+15.99)K.G	N	41.09	-0.6	600.2962	3	20.172	1738	1	1794	1808	Y
2	IPI00773363	K.KNLEVTVK.D	N	39.8	0.5	465.7848	2	11.806	934	1	1786	1793	N
2	IPI00773363	K.CASLEK.T	N	39.15	0.1	325.6625	2	3.599	287	3	1413	1418	N
2	IPI00773363	K.LRMDLER.A	N	38.21	-0.1	311.5042	3	14.197	1145	1	1046	1052	N
2	IPI00773363	K.NLEVTVK.D	N	36.87	-0.3	401.7369	2	13.821	1107	1	1787	1793	N
2	IPI00773363	K.LMTNLR.S	N	35.48	0	374.2127	2	13.689	1093	1	660	665	N
2	IPI00773363	R.LQDLVDK.L	N	32.39	-1.5	415.7339	2	13.587	1084	1	1866	1872	N
2	IPI00773363	K.KKGGSMQTVSSQFR.E	N	31.75	-0.6	385.9527	4	13.516	1077	1	641	654	N
2	IPI00773363	R.SFMNVK.H	N	31.11	0.1	363.1862	2	14.189	1144	1	822	827	N
2	IPI00773363	K.LM(+15.99)TNLR.S	N	29.79	-0.6	382.2099	2	11.371	898	2	660	665	Y
2	IPI00773363	K.IQLEAK.L	N	28.41	-0.7	351.213	2	11.787	932	1	915	920	N
2	IPI00773363	K.FTGAVLHHGNM(+15.99)K.F	N	22.15	-1.5	332.6693	4	13.307	1059	1	356	367	Y
2	IPI00773363	K.IEDEQSLGAQLQKKIK.E	N	14.55	-0.3	457.7597	4	16.792	1409	1	1096	1111	N
1	IPI00933204	K.MEGDLNEMEIQLSHANR.Q	N	146.95	0.1	993.9541	2	20.596	1778	20	1620	1636	N
1	IPI00933204	K.GGSMQTVSSQFR.E	N	112.37	-0.5	642.8033	2	14.967	1225	13	643	654	N

1	IPI00933204	K.KAITDAAMMAEELKK.E	N	105.35	-0.7	825.4331	2	16.959	1425	23	1759	1773	N
1	IPI00933204	K.TPGLMENFLVIHQLR.C	N	104.56	-0.3	884.4821	2	25.096	2188	2	682	696	N
1	IPI00933204	R.LQEAEEQIEAVNSK.C	N	104.32	0.4	794.3969	2	51.019	4288	13	1399	1412	N
1	IPI00933204	K.AITDAAMMAEELKK.E	N	103.63	0.4	761.3865	2	18.57	1586	28	1760	1773	N
1	IPI00933204	K.FTGAVLHHGNMK.F	N	102.41	-0.8	656.3344	2	13.25	1054	2	356	367	N
1	IPI00933204	K.GGSM(+15.99)QTVSSQFR.E	N	100.99	-0.7	650.8007	2	13.526	1078	2	643	654	Y
1	IPI00933204	K.KQADSVAELGEQIDNLQR.V	N	99.26	-0.2	1007.513	2	20.724	1790	4	1197	1214	N
1	IPI00933204	K.LAEKDEEMEQIKR.N	Y	97.46	-0.7	809.9083	2	13.578	1083	3	1578	1590	N
1	IPI00933204	R.KLAEKDEEMEQIKR.N	Y	96.43	-0.4	873.9559	2	13.064	1037	3	1577	1590	N
1	IPI00933204	K.SEYKMEIDDLSSNM(+15.99)EAVAK.A	N	95.57	0.2	1088.493	2	21.67	1880	2	1224	1242	Y
1	IPI00933204	K.AGLLGTLEEMR.D	N	95.04	-0.4	595.3156	2	23.555	2053	35	769	779	N
1	IPI00933204	K.VAEQELVDASER.V	N	94.92	0.5	673.3336	2	15.024	1231	1	1703	1714	N
1	IPI00933204	K.TKLEQQVDDLEGSLEQEKKLR.M	N	94.89	-1.2	829.4404	3	21.306	1847	2	1027	1047	N
1	IPI00933204	R.DLEESTLQHEATAAALR.K	N	94.23	-0.3	927.963	2	19.562	1681	4	1179	1195	N
1	IPI00933204	K.KGGSMQTVSSQFR.E	N	94.18	-0.6	706.8507	2	14.062	1131	3	642	654	N
1	IPI00933204	K.DAQLHLDDAVR.G	N	94.15	0.6	626.818	2	15.259	1255	35	1654	1664	N
1	IPI00933204	K.KMEGDLNEMEIQLSHANR.Q	N	93.3	1	1058.003	2	19.061	1634	8	1619	1636	N
1	IPI00933204	K.KM(+15.99)EGDLNEMEIQLSHANR.Q	N	92.12	-0.3	711.0015	3	17.562	1486	1	1619	1636	Y
1	IPI00933204	K.VQHELEEAEER.A	N	90.69	-0.5	684.8228	2	12.917	1024	2	1901	1911	N
1	IPI00933204	K.TKLEQQVDDLEGSLEQEKK.L	N	90.21	-0.6	739.7126	3	20.785	1796	2	1027	1045	N
1	IPI00933204	K.KKMEGDLNEMEIQLSHANR.Q	N	89.06	0	748.3684	3	17.091	1439	15	1618	1636	N
1	IPI00933204	R.KVAEQELVDASER.V	N	88.91	0.2	737.3809	2	14.239	1149	3	1702	1714	N
1	IPI00933204	K.QADSVAELGEQIDNLQR.V	N	87.89	1.2	943.4673	2	22.248	1933	3	1198	1214	N
1	IPI00933204	K.IEDEQSLGAQLQKK.I	N	87.83	-0.3	793.9225	2	14.913	1220	2	1096	1109	N
1	IPI00933204	K.NLQQEISDLTEQLGETGK.S	N	87.57	-0.9	1001.999	2	27.013	2345	1	1506	1523	N
1	IPI00933204	R.KKQADSVAELGEQIDNLQR.V	N	87.29	0.9	1071.562	2	18.889	1617	7	1196	1214	N
1	IPI00933204	R.RDLEESTLQHEATAAALR.K	N	86.71	0.8	1006.015	2	17.252	1455	4	1178	1195	N
1	IPI00933204	K.VLNASVIPEGQFIDNK.K	N	86.35	0.1	872.4675	2	21.406	1856	1	726	741	N
1	IPI00933204	K.KDIDDLELTLAK.V	N	86.12	1.2	687.3806	2	19.01	1629	2	954	965	N
1	IPI00933204	R.QLEEKEALVSQLTR.G	N	85.82	-1	822.4509	2	17.365	1466	33	1292	1305	N
1	IPI00933204	R.EQFEEEQEAKAELQR.G	N	84.5	-0.9	932.4387	2	16.361	1366	5	1347	1361	N

1	IPI00933204	R.KVQHELEEAEER.A	N	84.44	-1.1	748.8698	2	12.234	969	3	1900	1911	N
1	IPI00933204	K.AITDAAM(+15.99)MAEELKK.E	N	83.25	-0.5	769.3832	2	17.929	1523	2	1760	1773	Y
1	IPI00933204	R.IEELEEEIEAERAAR.A	N	82.3	-0.2	893.9443	2	18.439	1573	2	1117	1131	N
1	IPI00933204	K.AITDAAMM(+15.99)AEELK.K	N	80.4	0.3	705.3364	2	17.921	1522	1	1760	1772	Y
1	IPI00933204	K.MEIDDLSSNM(+15.99)EAVAK.A	N	79.32	0.2	834.8765	2	20.588	1777	20	1228	1242	Y
1	IPI00933204	R.IEELEEEIEAER.A	N	78.43	0	744.8568	2	19.27	1654	1	1117	1128	N
1	IPI00933204	K.IEDEQSLGAQLQK.K	N	77.68	-0.9	729.8746	2	15.833	1311	1	1096	1108	N
1	IPI00933204	K.KAITDAAMM(+15.99)AEELKK.E	N	76.52	1	555.957	3	15.05	1234	1	1759	1773	Y
1	IPI00933204	R.VKELTYQTEEDKK.N	N	74.8	-0.1	537.6138	3	12.375	980	2	1849	1861	N
1	IPI00933204	R.LDEAENLAM(+15.99)K.G	N	74.76	-0.3	575.2762	2	13.758	1100	1	1799	1808	Y
1	IPI00933204	R.ENLGKLMTNLR.S	N	74.7	1	644.8564	2	18.112	1541	1	655	665	N
1	IPI00933204	K.KAITDAAM(+15.99)MAEELKK.E	N	73.76	-0.2	555.9564	3	16.714	1401	1	1759	1773	Y
1	IPI00933204	R.EQFEEEQEAK.A	N	73.74	0	633.7778	2	12.289	973	1	1347	1356	N
1	IPI00933204	K.ELTYQTEEDKK.N	N	73.25	-0.4	692.3353	2	12.299	974	1	1851	1861	N
1	IPI00933204	K.DIDDLELTLAK.V	N	73.16	-0.6	623.3318	2	22.33	1941	1	955	965	N
1	IPI00933204	K.AGLLGTLEEM(+15.99)R.D	N	73.06	0.8	603.3138	2	19.327	1659	2	769	779	Y
1	IPI00933204	R.DLEESTLQHEATAAALRK.K	N	72.77	0.4	661.6765	3	18.027	1532	1	1179	1196	N
1	IPI00933204	K.KMEGDLNEM(+15.99)EIQLSHANR.Q	N	72.57	-1.4	711.0007	3	19.127	1640	2	1619	1636	Y
1	IPI00933204	K.TKLEQQVDDLEGSLEQEK.K	N	72.48	-0.9	697.014	3	21.992	1910	1	1027	1044	N
1	IPI00933204	K.MEGDLNEM(+15.99)EIQLSHANR.Q	N	70.89	0.5	668.3037	3	16.541	1385	1	1620	1636	Y
1	IPI00933204	R.LDEAENLAMK.G	N	69.57	1.5	567.2798	2	14.792	1207	3	1799	1808	N
1	IPI00933204	K.LYDQHLGK.C	N	69.42	-1.4	487.258	2	11.849	937	3	556	563	N
1	IPI00933204	K.LAEKDEEMEQIK.R	Y	69.39	-1.1	488.2408	3	13.888	1114	1	1578	1589	N
1	IPI00933204	K.IEDEQSLGAQLQKKIKELQAR.I	N	68.98	-0.1	607.0906	4	22.519	1959	2	1096	1116	N
1	IPI00933204	K.EKSEYKMEIDDLSSNM(+15.99)EAVAK.A	N	68.83	0.5	811.7106	3	21.05	1821	1	1222	1242	Y
1	IPI00933204	K.M(+15.99)EIDDLSSNM(+15.99)EAVAK.A	N	66.32	-0.9	842.8731	2	18.456	1575	1	1228	1242	Y
1	IPI00933204	K.VLNASVIPEGQFIDNKK.A	N	64.59	-0.8	624.6785	3	19.57	1682	1	726	742	N
1	IPI00933204	K.YETDAIQR.T	N	63.72	-0.8	498.2428	2	12.604	999	1	1377	1384	N
1	IPI00933204	K.AITDAAMM(+15.99)AEELKK.E	N	63.56	-0.2	769.3835	2	16.173	1347	3	1760	1773	Y
1	IPI00933204	R.NFDKVLAEWK.Q	N	61.76	-0.3	417.2239	3	20.741	1792	2	1450	1459	N
1	IPI00933204	K.DLQHRLDEAENLAMK.G	N	60.68	1.2	891.9449	2	20.094	1730	3	1794	1808	N

1	IPI00933204	R.HDCDLLR.E	N	60.31	-0.4	436.208	2	13.626	1087	1	1340	1346	N
1	IPI00933204	K.EALVSQLTR.G	N	56.97	-0.9	508.7899	2	47.214	3983	7	1297	1305	N
1	IPI00933204	K.KGGSM(+15.99)QTVSSQFR.E	N	56.47	-0.5	476.9013	3	12.661	1003	2	642	654	Y
1	IPI00933204	R.KLAEKDEEM(+15.99)EQIKR.N	Y	55.6	-0.7	588.3045	3	13.048	1035	3	1577	1590	Y
1	IPI00933204	R.LQDLVDKLQLK.V	N	54.78	-0.3	656.8951	2	19.19	1646	54	1866	1876	N
1	IPI00933204	R.SLSTELFK.M	N	52.49	0.6	462.7557	2	35.763	3049	41	1478	1485	N
1	IPI00933204	R.ADLSRELEEISER.L	N	50.52	1.5	516.2625	3	20.916	1808	1	1139	1151	N
1	IPI00933204	K.LAEKDEEM(+15.99)EQIKR.N	Y	50.21	-0.8	545.6062	3	13.569	1082	2	1578	1590	Y
1	IPI00933204	K.LEQQVDDLEGSLEQEKK.L	N	48.54	0.6	663.3325	3	18.209	1550	1	1029	1045	N
1	IPI00933204	K.AGLLGTLEEMRDEK.L	N	47.23	0.5	521.2681	3	22.569	1963	2	769	782	N
1	IPI00933204	K.MEIDDLSSNM(+15.99)EAVAKAK.A	N	43.95	-0.1	623.2973	3	20.181	1739	1	1228	1244	Y
1	IPI00933204	R.VQLELNQVKGEIDR.K	N	43.71	-0.4	820.9515	2	18.653	1595	4	1563	1576	N
1	IPI00933204	K.AITDAAMMAEELK.K	N	43.28	-0.4	465.228	3	21.127	1829	1	1760	1772	N
1	IPI00933204	K.DLQHRLDEAENLAM(+15.99)K.G	N	41.09	-0.6	600.2962	3	20.172	1738	1	1794	1808	Y
1	IPI00933204	R.VQLELNQVKGEIDRK.L	N	40.47	0.3	884.9996	2	17.296	1459	3	1563	1577	N
1	IPI00933204	K.KNLEVTVK.D	N	39.8	0.5	465.7848	2	11.806	934	1	1786	1793	N
1	IPI00933204	K.CASLEK.T	N	39.15	0.1	325.6625	2	3.599	287	3	1413	1418	N
1	IPI00933204	K.LRMDLER.A	N	38.21	-0.1	311.5042	3	14.197	1145	1	1046	1052	N
1	IPI00933204	K.NLEVTVK.D	N	36.87	-0.3	401.7369	2	13.821	1107	1	1787	1793	N
1	IPI00933204	K.LMTNLR.S	N	35.48	0	374.2127	2	13.689	1093	1	660	665	N
1	IPI00933204	R.LQDLVDK.L	N	32.39	-1.5	415.7339	2	13.587	1084	1	1866	1872	N
1	IPI00933204	K.KKGGSMQTVSSQFR.E	N	31.75	-0.6	385.9527	4	13.516	1077	1	641	654	N
1	IPI00933204	R.SFMNVK.H	N	31.11	0.1	363.1862	2	14.189	1144	1	822	827	N
1	IPI00933204	K.DEEMEQIKR.N	Y	30.75	-0.9	393.1884	3	12.671	1004	1	1582	1590	N
1	IPI00933204	K.LM(+15.99)TNLR.S	N	29.79	-0.6	382.2099	2	11.371	898	2	660	665	Y
1	IPI00933204	K.IQLEAK.L	N	28.41	-0.7	351.213	2	11.787	932	1	915	920	N
1	IPI00933204	K.FTGAVLHHGNM(+15.99)K.F	N	22.15	-1.5	332.6693	4	13.307	1059	1	356	367	Y
1	IPI00933204	K.IEDEQSLGAQLQKKIK.E	N	14.55	-0.3	457.7597	4	16.792	1409	1	1096	1111	N
1	IPI00933204	R.ESIYT(+79.97)IQYNIRSFM(+15.99)NVK.H	N	7.27	-0.8	551.2625	4	3.664	292	1	811	827	Y
4	IPI00858466	K.MEGDLNEMEIQLSHANR.Q	N	146.95	0.1	993.9541	2	20.596	1778	20	1620	1636	N
4	IPI00858466	K.GGSMQTVSSQFR.E	N	112.37	-0.5	642.8033	2	14.967	1225	13	643	654	N

4	IPI00858466	K.KAITDAAMMAEELKK.E	N	105.35	-0.7	825.4331	2	16.959	1425	23	1759	1773	N
4	IPI00858466	K.TPGLMENFLVIHQLR.C	N	104.56	-0.3	884.4821	2	25.096	2188	2	682	696	N
4	IPI00858466	R.LQEAEEQIEAVNSK.C	N	104.32	0.4	794.3969	2	51.019	4288	13	1399	1412	N
4	IPI00858466	K.AITDAAMMAEELKK.E	N	103.63	0.4	761.3865	2	18.57	1586	28	1760	1773	N
4	IPI00858466	K.FTGAVLHHGNMK.F	N	102.41	-0.8	656.3344	2	13.25	1054	2	356	367	N
4	IPI00858466	K.GGSM(+15.99)QTVSSQFR.E	N	100.99	-0.7	650.8007	2	13.526	1078	2	643	654	Y
4	IPI00858466	K.KQADSVAELGEQIDNLQR.V	N	99.26	-0.2	1007.513	2	20.724	1790	4	1197	1214	N
4	IPI00858466	K.SEYKMEIDDLSSNM(+15.99)EAVAK.A	N	95.57	0.2	1088.493	2	21.67	1880	2	1224	1242	Y
4	IPI00858466	K.AGLLGTLEEMR.D	N	95.04	-0.4	595.3156	2	23.555	2053	35	769	779	N
4	IPI00858466	K.VAEQELVDASER.V	N	94.92	0.5	673.3336	2	15.024	1231	1	1703	1714	N
4	IPI00858466	K.TKLEQQVDDLEGSLEQEKKLR.M	N	94.89	-1.2	829.4404	3	21.306	1847	2	1027	1047	N
4	IPI00858466	R.DLEESTLQHEATAAALR.K	N	94.23	-0.3	927.963	2	19.562	1681	4	1179	1195	N
4	IPI00858466	K.KGGSMQTVSSQFR.E	N	94.18	-0.6	706.8507	2	14.062	1131	3	642	654	N
4	IPI00858466	K.DAQLHLDDAVR.G	N	94.15	0.6	626.818	2	15.259	1255	35	1654	1664	N
4	IPI00858466	K.KMEGDLNEMEIQLSHANR.Q	N	93.3	1	1058.003	2	19.061	1634	8	1619	1636	N
4	IPI00858466	K.KM(+15.99)EGDLNEMEIQLSHANR.Q	N	92.12	-0.3	711.0015	3	17.562	1486	1	1619	1636	Y
4	IPI00858466	K.VQHELEEAEER.A	N	90.69	-0.5	684.8228	2	12.917	1024	2	1901	1911	N
4	IPI00858466	K.TKLEQQVDDLEGSLEQEKK.L	N	90.21	-0.6	739.7126	3	20.785	1796	2	1027	1045	N
4	IPI00858466	K.KKMEGDLNEMEIQLSHANR.Q	N	89.06	0	748.3684	3	17.091	1439	15	1618	1636	N
4	IPI00858466	R.KVAEQELVDASER.V	N	88.91	0.2	737.3809	2	14.239	1149	3	1702	1714	N
4	IPI00858466	K.QADSVAELGEQIDNLQR.V	N	87.89	1.2	943.4673	2	22.248	1933	3	1198	1214	N
4	IPI00858466	K.IEDEQSLGAQLQKK.I	N	87.83	-0.3	793.9225	2	14.913	1220	2	1096	1109	N
4	IPI00858466	K.NLQQEISDLTEQLGETGK.S	N	87.57	-0.9	1001.999	2	27.013	2345	1	1506	1523	N
4	IPI00858466	R.KKQADSVAELGEQIDNLQR.V	N	87.29	0.9	1071.562	2	18.889	1617	7	1196	1214	N
4	IPI00858466	R.RDLEESTLQHEATAAALR.K	N	86.71	0.8	1006.015	2	17.252	1455	4	1178	1195	N
4	IPI00858466	K.VLNASVIPEGQFIDNK.K	N	86.35	0.1	872.4675	2	21.406	1856	1	726	741	N
4	IPI00858466	K.KDIDDLELTLAK.V	N	86.12	1.2	687.3806	2	19.01	1629	2	954	965	N
4	IPI00858466	R.QLEEKEALVSQLTR.G	N	85.82	-1	822.4509	2	17.365	1466	33	1292	1305	N
4	IPI00858466	R.EQFEEEQEAKAELQR.G	N	84.5	-0.9	932.4387	2	16.361	1366	5	1347	1361	N
4	IPI00858466	R.KVQHELEEAEER.A	N	84.44	-1.1	748.8698	2	12.234	969	3	1900	1911	N
4	IPI00858466	K.AITDAAM(+15.99)MAEELKK.E	N	83.25	-0.5	769.3832	2	17.929	1523	2	1760	1773	Y

4	IPI00858466	R.IEELEEEIEAERAAR.A	N	82.3	-0.2	893.9443	2	18.439	1573	2	1117	1131	N
4	IPI00858466	K.AITDAAMM(+15.99)AEELK.K	N	80.4	0.3	705.3364	2	17.921	1522	1	1760	1772	Y
4	IPI00858466	K.MEIDDLSSNM(+15.99)EAVAK.A	N	79.32	0.2	834.8765	2	20.588	1777	20	1228	1242	Y
4	IPI00858466	K.DFETSQLLSK.I	N	79.24	0.3	584.2984	2	18.021	1531	26	1086	1095	N
4	IPI00858466	R.IEELEEEIEAER.A	N	78.43	0	744.8568	2	19.27	1654	1	1117	1128	N
4	IPI00858466	K.IEDEQSLGAQLQK.K	N	77.68	-0.9	729.8746	2	15.833	1311	1	1096	1108	N
4	IPI00858466	K.KAITDAAMM(+15.99)AEELKK.E	N	76.52	1	555.957	3	15.05	1234	1	1759	1773	Y
4	IPI00858466	R.VKELTYQTEEDKK.N	N	74.8	-0.1	537.6138	3	12.375	980	2	1849	1861	N
4	IPI00858466	R.LDEAENLAM(+15.99)K.G	N	74.76	-0.3	575.2762	2	13.758	1100	1	1799	1808	Y
4	IPI00858466	R.ENLGKLMTNLR.S	N	74.7	1	644.8564	2	18.112	1541	1	655	665	N
4	IPI00858466	R.TLEDQLSEIK.S	N	73.95	0	588.3113	2	19.446	1670	5	1253	1262	N
4	IPI00858466	K.KAITDAAM(+15.99)MAEELKK.E	N	73.76	-0.2	555.9564	3	16.714	1401	1	1759	1773	Y
4	IPI00858466	R.EQFEEEQEAK.A	N	73.74	0	633.7778	2	12.289	973	1	1347	1356	N
4	IPI00858466	K.ELTYQTEEDKK.N	N	73.25	-0.4	692.3353	2	12.299	974	1	1851	1861	N
4	IPI00858466	K.DIDDLELTLAK.V	N	73.16	-0.6	623.3318	2	22.33	1941	1	955	965	N
4	IPI00858466	K.AGLLGTLEEM(+15.99)R.D	N	73.06	0.8	603.3138	2	19.327	1659	2	769	779	Y
4	IPI00858466	K.KDFETSQLLSK.I	N	72.88	-0.1	648.3456	2	15.278	1258	1	1085	1095	N
4	IPI00858466	R.DLEESTLQHEATAAALRK.K	N	72.77	0.4	661.6765	3	18.027	1532	1	1179	1196	N
4	IPI00858466	K.KMEGDLNEM(+15.99)EIQLSHANR.Q	N	72.57	-1.4	711.0007	3	19.127	1640	2	1619	1636	Y
4	IPI00858466	K.TKLEQQVDDLEGSLEQEK.K	N	72.48	-0.9	697.014	3	21.992	1910	1	1027	1044	N
4	IPI00858466	K.MEGDLNEM(+15.99)EIQLSHANR.Q	N	70.89	0.5	668.3037	3	16.541	1385	1	1620	1636	Y
4	IPI00858466	K.KKDFETSQLLSK.I	N	69.93	0.3	712.3934	2	14.246	1150	2	1084	1095	N
4	IPI00858466	R.LDEAENLAMK.G	N	69.57	1.5	567.2798	2	14.792	1207	3	1799	1808	N
4	IPI00858466	K.LYDQHLGK.C	N	69.42	-1.4	487.258	2	11.849	937	3	556	563	N
4	IPI00858466	K.IEDEQSLGAQLQKKIKELQAR.I	N	68.98	-0.1	607.0906	4	22.519	1959	2	1096	1116	N
4	IPI00858466	K.EKSEYKMEIDDLSSNM(+15.99)EAVAK.A	N	68.83	0.5	811.7106	3	21.05	1821	1	1222	1242	Y
4	IPI00858466	K.M(+15.99)EIDDLSSNM(+15.99)EAVAK.A	N	66.32	-0.9	842.8731	2	18.456	1575	1	1228	1242	Y
4	IPI00858466	K.VLNASVIPEGQFIDNKK.A	N	64.59	-0.8	624.6785	3	19.57	1682	1	726	742	N
4	IPI00858466	K.YETDAIQR.T	N	63.72	-0.8	498.2428	2	12.604	999	1	1377	1384	N
4	IPI00858466	K.AITDAAMM(+15.99)AEELKK.E	N	63.56	-0.2	769.3835	2	16.173	1347	3	1760	1773	Y
4	IPI00858466	K.NLTEEM(+15.99)AAQDESIGKLTK.E	N	61.88	0.4	997.4914	2	19.31	1657	2	979	996	Y

4	IPI00858466	R.NFDKVLAEWK.Q	N	61.76	-0.3	417.2239	3	20.741	1792	2	1450	1459	N
4	IPI00858466	K.NLTEEM(+15.99)AAQDESIGK.L	N	60.96	0.8	826.3782	2	16.157	1345	2	979	993	Y
4	IPI00858466	K.DLQHRLDEAENLAMK.G	N	60.68	1.2	891.9449	2	20.094	1730	3	1794	1808	N
4	IPI00858466	R.HDCDLLR.E	N	60.31	-0.4	436.208	2	13.626	1087	1	1340	1346	N
4	IPI00858466	K.EALVSQLTR.G	N	56.97	-0.9	508.7899	2	47.214	3983	7	1297	1305	N
4	IPI00858466	K.KGGSM(+15.99)QTVSSQFR.E	N	56.47	-0.5	476.9013	3	12.661	1003	2	642	654	Y
4	IPI00858466	R.LQDLVDKLQLK.V	N	54.78	-0.3	656.8951	2	19.19	1646	54	1866	1876	N
4	IPI00858466	R.SLSTELFK.M	N	52.49	0.6	462.7557	2	35.763	3049	41	1478	1485	N
4	IPI00858466	R.ADLSRELEEISER.L	N	50.52	1.5	516.2625	3	20.916	1808	1	1139	1151	N
4	IPI00858466	K.LEQQVDDLEGSLEQEKK.L	N	48.54	0.6	663.3325	3	18.209	1550	1	1029	1045	N
4	IPI00858466	K.AGLLGTLEEMRDEK.L	N	47.23	0.5	521.2681	3	22.569	1963	2	769	782	N
4	IPI00858466	K.MEIDDLSSNM(+15.99)EAVAKAK.A	N	43.95	-0.1	623.2973	3	20.181	1739	1	1228	1244	Y
4	IPI00858466	K.AITDAAMMAEELK.K	N	43.28	-0.4	465.228	3	21.127	1829	1	1760	1772	N
4	IPI00858466	K.DLQHRLDEAENLAM(+15.99)K.G	N	41.09	-0.6	600.2962	3	20.172	1738	1	1794	1808	Y
4	IPI00858466	K.CASLEK.T	N	39.15	0.1	325.6625	2	3.599	287	3	1413	1418	N
4	IPI00858466	K.LRMDLER.A	N	38.21	-0.1	311.5042	3	14.197	1145	1	1046	1052	N
4	IPI00858466	K.NLEITVK.D	N	37.86	-0.2	408.7448	2	14.765	1205	1	1787	1793	N
4	IPI00858466	K.LMTNLR.S	N	35.48	0	374.2127	2	13.689	1093	1	660	665	N
4	IPI00858466	R.LQDLVDK.L	N	32.39	-1.5	415.7339	2	13.587	1084	1	1866	1872	N
4	IPI00858466	K.KKGGSMQTVSSQFR.E	N	31.75	-0.6	385.9527	4	13.516	1077	1	641	654	N
4	IPI00858466	R.SFMNVK.H	N	31.11	0.1	363.1862	2	14.189	1144	1	822	827	N
4	IPI00858466	K.LM(+15.99)TNLR.S	N	29.79	-0.6	382.2099	2	11.371	898	2	660	665	Y
4	IPI00858466	K.IQLEAK.L	N	28.41	-0.7	351.213	2	11.787	932	1	915	920	N
4	IPI00858466	K.FTGAVLHHGNM(+15.99)K.F	N	22.15	-1.5	332.6693	4	13.307	1059	1	356	367	Y
4	IPI00858466	K.IEDEQSLGAQLQKKIK.E	N	14.55	-0.3	457.7597	4	16.792	1409	1	1096	1111	N
4	IPI00858466	R.ESIYT(+79.97)IQYNIRSFM(+15.99)NVK.H	N	7.27	-0.8	551.2625	4	3.664	292	1	811	827	Y
8	IPI00961738	K.MEGDLNEMEIQLSHANR.Q	N	146.95	0.1	993.9541	2	20.596	1778	20	1618	1634	N
8	IPI00961738	K.KAITDAAMMAEELKK.E	N	105.35	-0.7	825.4331	2	16.959	1425	23	1757	1771	N
8	IPI00961738	K.TPGLMENFLVIHQLR.C	N	104.56	-0.3	884.4821	2	25.096	2188	2	680	694	N
8	IPI00961738	K.AITDAAMMAEELKK.E	N	103.63	0.4	761.3865	2	18.57	1586	28	1758	1771	N
8	IPI00961738	K.KQADSVAELGEQIDNLQR.V	N	99.26	-0.2	1007.513	2	20.724	1790	4	1195	1212	N

8	IPI00961738	K.SEYKMEIDDLSSNM(+15.99)EAVAK.A	N	95.57	0.2	1088.493	2	21.67	1880	2	1222	1240	Y
8	IPI00961738	K.AGLLGTLEEMR.D	N	95.04	-0.4	595.3156	2	23.555	2053	35	767	777	N
8	IPI00961738	K.VAEQELVDASER.V	N	94.92	0.5	673.3336	2	15.024	1231	1	1701	1712	N
8	IPI00961738	R.DLEESTLQHEATAAALR.K	N	94.23	-0.3	927.963	2	19.562	1681	4	1177	1193	N
8	IPI00961738	K.KMEGDLNEMEIQLSHANR.Q	N	93.3	1	1058.003	2	19.061	1634	8	1617	1634	N
8	IPI00961738	K.KM(+15.99)EGDLNEMEIQLSHANR.Q	N	92.12	-0.3	711.0015	3	17.562	1486	1	1617	1634	Y
8	IPI00961738	K.KKMEGDLNEMEIQLSHANR.Q	N	89.06	0	748.3684	3	17.091	1439	15	1616	1634	N
8	IPI00961738	R.KVAEQELVDASER.V	N	88.91	0.2	737.3809	2	14.239	1149	3	1700	1712	N
8	IPI00961738	K.QADSVAELGEQIDNLQR.V	N	87.89	1.2	943.4673	2	22.248	1933	3	1196	1212	N
8	IPI00961738	K.IEDEQSLGAQLQKK.I	N	87.83	-0.3	793.9225	2	14.913	1220	2	1094	1107	N
8	IPI00961738	K.NLQQEISDLTEQLGETGK.S	N	87.57	-0.9	1001.999	2	27.013	2345	1	1504	1521	N
8	IPI00961738	R.KKQADSVAELGEQIDNLQR.V	N	87.29	0.9	1071.562	2	18.889	1617	7	1194	1212	N
8	IPI00961738	R.RDLEESTLQHEATAAALR.K	N	86.71	0.8	1006.015	2	17.252	1455	4	1176	1193	N
8	IPI00961738	K.VLNASVIPEGQFIDNK.K	N	86.35	0.1	872.4675	2	21.406	1856	1	724	739	N
8	IPI00961738	K.KDIDDLELTLAK.V	N	86.12	1.2	687.3806	2	19.01	1629	2	952	963	N
8	IPI00961738	R.QLEEKEALVSQLTR.G	N	85.82	-1	822.4509	2	17.365	1466	33	1290	1303	N
8	IPI00961738	K.NKDPLNDSVVQLYQK.S	N	84.7	-0.4	880.9621	2	18.172	1547	2	599	613	N
8	IPI00961738	R.EQFEEEQEAKAELQR.G	N	84.5	-0.9	932.4387	2	16.361	1366	5	1345	1359	N
8	IPI00961738	K.AITDAAM(+15.99)MAEELKK.E	N	83.25	-0.5	769.3832	2	17.929	1523	2	1758	1771	Y
8	IPI00961738	R.IEELEEEIEAERAAR.A	N	82.3	-0.2	893.9443	2	18.439	1573	2	1115	1129	N
8	IPI00961738	K.AITDAAMM(+15.99)AEELK.K	N	80.4	0.3	705.3364	2	17.921	1522	1	1758	1770	Y
8	IPI00961738	K.MEIDDLSSNM(+15.99)EAVAK.A	N	79.32	0.2	834.8765	2	20.588	1777	20	1226	1240	Y
8	IPI00961738	R.IEELEEEIEAER.A	N	78.43	0	744.8568	2	19.27	1654	1	1115	1126	N
8	IPI00961738	K.IEDEQSLGAQLQK.K	N	77.68	-0.9	729.8746	2	15.833	1311	1	1094	1106	N
8	IPI00961738	K.KAITDAAMM(+15.99)AEELKK.E	N	76.52	1	555.957	3	15.05	1234	1	1757	1771	Y
8	IPI00961738	R.VKELTYQTEEDKK.N	N	74.8	-0.1	537.6138	3	12.375	980	2	1847	1859	N
8	IPI00961738	R.LDEAENLAM(+15.99)K.G	N	74.76	-0.3	575.2762	2	13.758	1100	1	1797	1806	Y
8	IPI00961738	R.ENLGKLMTNLR.S	N	74.7	1	644.8564	2	18.112	1541	1	653	663	N
8	IPI00961738	R.TLEDQLSEIK.T	N	73.95	0	588.3113	2	19.446	1670	5	1251	1260	N
8	IPI00961738	K.KAITDAAM(+15.99)MAEELKK.E	N	73.76	-0.2	555.9564	3	16.714	1401	1	1757	1771	Y
8	IPI00961738	R.EQFEEEQEAK.A	N	73.74	0	633.7778	2	12.289	973	1	1345	1354	N

8	IPI00961738	K.ELTYQTEEDKK.N	N	73.25	-0.4	692.3353	2	12.299	974	1	1849	1859	N
8	IPI00961738	K.DIDDLELTLAK.V	N	73.16	-0.6	623.3318	2	22.33	1941	1	953	963	N
8	IPI00961738	K.AGLLGTLEEM(+15.99)R.D	N	73.06	0.8	603.3138	2	19.327	1659	2	767	777	Y
8	IPI00961738	R.DLEESTLQHEATAAALRK.K	N	72.77	0.4	661.6765	3	18.027	1532	1	1177	1194	N
8	IPI00961738	K.KMEGDLNEM(+15.99)EIQLSHANR.Q	N	72.57	-1.4	711.0007	3	19.127	1640	2	1617	1634	Y
8	IPI00961738	K.MEGDLNEM(+15.99)EIQLSHANR.Q	N	70.89	0.5	668.3037	3	16.541	1385	1	1618	1634	Y
8	IPI00961738	R.LDEAENLAMK.G	N	69.57	1.5	567.2798	2	14.792	1207	3	1797	1806	N
8	IPI00961738	K.IEDEQSLGAQLQKKIKELQAR.I	N	68.98	-0.1	607.0906	4	22.519	1959	2	1094	1114	N
8	IPI00961738	K.EKSEYKMEIDDLSSNM(+15.99)EAVAK.A	N	68.83	0.5	811.7106	3	21.05	1821	1	1220	1240	Y
8	IPI00961738	R.VLDAM(+15.99)QSTLDSEVR.S	Y	68.74	0.8	790.3858	2	15.7	1297	2	1593	1606	Y
8	IPI00961738	K.M(+15.99)EIDDLSSNM(+15.99)EAVAK.A	N	66.32	-0.9	842.8731	2	18.456	1575	1	1226	1240	Y
8	IPI00961738	R.VLDAMQSTLDSEVR.S	Y	64.79	-0.6	782.3873	2	26.395	2294	41	1593	1606	N
8	IPI00961738	K.VLNASVIPEGQFIDNKK.A	N	64.59	-0.8	624.6785	3	19.57	1682	1	724	740	N
8	IPI00961738	K.YETDAIQR.T	N	63.72	-0.8	498.2428	2	12.604	999	1	1375	1382	N
8	IPI00961738	K.AITDAAMM(+15.99)AEELKK.E	N	63.56	-0.2	769.3835	2	16.173	1347	3	1758	1771	Y
8	IPI00961738	R.NFDKVLAEWK.Q	N	61.76	-0.3	417.2239	3	20.741	1792	2	1448	1457	N
8	IPI00961738	K.DLQHRLDEAENLAMK.G	N	60.68	1.2	891.9449	2	20.094	1730	3	1792	1806	N
8	IPI00961738	R.HDCDLLR.E	N	60.31	-0.4	436.208	2	13.626	1087	1	1338	1344	N
8	IPI00961738	K.MVSLLQEK.N	N	59.52	-1.1	474.2646	2	26.71	2320	23	877	884	N
8	IPI00961738	K.EALVSQLTR.G	N	56.97	-0.9	508.7899	2	47.214	3983	7	1295	1303	N
8	IPI00961738	R.LQDLVDKLQLK.V	N	54.78	-0.3	656.8951	2	19.19	1646	54	1864	1874	N
8	IPI00961738	R.SLSTEIFK.M	N	52.49	0.6	462.7557	2	35.763	3049	41	1476	1483	N
8	IPI00961738	R.ADLSRELEEISER.L	N	50.52	1.5	516.2625	3	20.916	1808	1	1137	1149	N
8	IPI00961738	K.LEQQVDDLEGSLEQEKK.L	N	48.54	0.6	663.3325	3	18.209	1550	1	1027	1043	N
8	IPI00961738	K.AGLLGTLEEMRDEK.L	N	47.23	0.5	521.2681	3	22.569	1963	2	767	780	N
8	IPI00961738	K.MEIDDLSSNM(+15.99)EAVAKAK.A	N	43.95	-0.1	623.2973	3	20.181	1739	1	1226	1242	Y
8	IPI00961738	K.AITDAAMMAEELK.K	N	43.28	-0.4	465.228	3	21.127	1829	1	1758	1770	N
8	IPI00961738	K.DLQHRLDEAENLAM(+15.99)K.G	N	41.09	-0.6	600.2962	3	20.172	1738	1	1792	1806	Y
8	IPI00961738	K.KNLEVTVK.D	N	39.8	0.5	465.7848	2	11.806	934	1	1784	1791	N
8	IPI00961738	K.CASLEK.T	N	39.15	0.1	325.6625	2	3.599	287	3	1411	1416	N
8	IPI00961738	K.LRMDLER.A	N	38.21	-0.1	311.5042	3	14.197	1145	1	1044	1050	N

8	IPI00961738	K.NLEVTVK.D	N	36.87	-0.3	401.7369	2	13.821	1107	1	1785	1791	N
8	IPI00961738	K.LMTNLR.S	N	35.48	0	374.2127	2	13.689	1093	1	658	663	N
8	IPI00961738	R.LQDLVDK.L	N	32.39	-1.5	415.7339	2	13.587	1084	1	1864	1870	N
8	IPI00961738	R.SFMNVK.H	N	31.11	0.1	363.1862	2	14.189	1144	1	820	825	N
8	IPI00961738	K.LM(+15.99)TNLR.S	N	29.79	-0.6	382.2099	2	11.371	898	2	658	663	Y
8	IPI00961738	K.IQLEAK.L	N	28.41	-0.7	351.213	2	11.787	932	1	913	918	N
8	IPI00961738	K.IEDEQSLGAQLQKKIK.E	N	14.55	-0.3	457.7597	4	16.792	1409	1	1094	1109	N
8	IPI00961738	R.VLDAMQSTLDSEVRSR.N	Y	10.2	0.9	602.9725	3	20.558	1775	1	1593	1608	N
13	IPI00484075	K.MEGDLNEMEIQLSHANR.Q	N	146.95	0.1	993.9541	2	20.596	1778	20	1622	1638	N
13	IPI00484075	K.KAITDAAMMAEELKK.E	N	105.35	-0.7	825.4331	2	16.959	1425	23	1761	1775	N
13	IPI00484075	K.TPGLMENFLVIHQLR.C	N	104.56	-0.3	884.4821	2	25.096	2188	2	682	696	N
13	IPI00484075	K.AITDAAMMAEELKK.E	N	103.63	0.4	761.3865	2	18.57	1586	28	1762	1775	N
13	IPI00484075	K.KQADSVAELGEQIDNLQR.V	N	99.26	-0.2	1007.513	2	20.724	1790	4	1197	1214	N
13	IPI00484075	K.AGLLGTLEEMR.D	N	95.04	-0.4	595.3156	2	23.555	2053	35	769	779	N
13	IPI00484075	K.VAEQELVDASER.V	N	94.92	0.5	673.3336	2	15.024	1231	1	1705	1716	N
13	IPI00484075	R.DLEESTLQHEATAAALR.K	N	94.23	-0.3	927.963	2	19.562	1681	4	1179	1195	N
13	IPI00484075	K.KMEGDLNEMEIQLSHANR.Q	N	93.3	1	1058.003	2	19.061	1634	8	1621	1638	N
13	IPI00484075	K.KM(+15.99)EGDLNEMEIQLSHANR.Q	N	92.12	-0.3	711.0015	3	17.562	1486	1	1621	1638	Y
13	IPI00484075	K.KKMEGDLNEMEIQLSHANR.Q	N	89.06	0	748.3684	3	17.091	1439	15	1620	1638	N
13	IPI00484075	R.KVAEQELVDASER.V	N	88.91	0.2	737.3809	2	14.239	1149	3	1704	1716	N
13	IPI00484075	K.QADSVAELGEQIDNLQR.V	N	87.89	1.2	943.4673	2	22.248	1933	3	1198	1214	N
13	IPI00484075	R.KKQADSVAELGEQIDNLQR.V	N	87.29	0.9	1071.562	2	18.889	1617	7	1196	1214	N
13	IPI00484075	R.RDLEESTLQHEATAAALR.K	N	86.71	0.8	1006.015	2	17.252	1455	4	1178	1195	N
13	IPI00484075	K.VLNASVIPEGQFIDNK.K	N	86.35	0.1	872.4675	2	21.406	1856	1	726	741	N
13	IPI00484075	K.KDIDDLELTLAK.V	N	86.12	1.2	687.3806	2	19.01	1629	2	954	965	N
13	IPI00484075	K.NKDPLNDSVVQLYQK.S	N	84.7	-0.4	880.9621	2	18.172	1547	2	599	613	N
13	IPI00484075	K.AITDAAM(+15.99)MAEELKK.E	N	83.25	-0.5	769.3832	2	17.929	1523	2	1762	1775	Y
13	IPI00484075	R.IEELEEEIEAERAAR.A	N	82.3	-0.2	893.9443	2	18.439	1573	2	1117	1131	N
13	IPI00484075	K.AITDAAMM(+15.99)AEELK.K	N	80.4	0.3	705.3364	2	17.921	1522	1	1762	1774	Y
13	IPI00484075	R.IEELEEEIEAER.A	N	78.43	0	744.8568	2	19.27	1654	1	1117	1128	N
13	IPI00484075	K.KAITDAAMM(+15.99)AEELKK.E	N	76.52	1	555.957	3	15.05	1234	1	1761	1775	Y

13	IPI00484075	R.VKELTYQTEEDKK.N	N	74.8	-0.1	537.6138	3	12.375	980	2	1851	1863	N
13	IPI00484075	R.ENLGKLMTNLR.S	N	74.7	1	644.8564	2	18.112	1541	1	655	665	N
13	IPI00484075	K.KAITDAAM(+15.99)MAEELKK.E	N	73.76	-0.2	555.9564	3	16.714	1401	1	1761	1775	Y
13	IPI00484075	K.ELTYQTEEDKK.N	N	73.25	-0.4	692.3353	2	12.299	974	1	1853	1863	N
13	IPI00484075	K.DIDDLELTLAK.V	N	73.16	-0.6	623.3318	2	22.33	1941	1	955	965	N
13	IPI00484075	K.AGLLGTLEEM(+15.99)R.D	N	73.06	0.8	603.3138	2	19.327	1659	2	769	779	Y
13	IPI00484075	R.DLEESTLQHEATAAALRK.K	N	72.77	0.4	661.6765	3	18.027	1532	1	1179	1196	N
13	IPI00484075	K.KMEGDLNEM(+15.99)EIQLSHANR.Q	N	72.57	-1.4	711.0007	3	19.127	1640	2	1621	1638	Y
13	IPI00484075	K.MEGDLNEM(+15.99)EIQLSHANR.Q	N	70.89	0.5	668.3037	3	16.541	1385	1	1622	1638	Y
13	IPI00484075	K.VLNASVIPEGQFIDNKK.A	N	64.59	-0.8	624.6785	3	19.57	1682	1	726	742	N
13	IPI00484075	K.YETDAIQR.T	N	63.72	-0.8	498.2428	2	12.604	999	1	1377	1384	N
13	IPI00484075	K.AITDAAMM(+15.99)AEELKK.E	N	63.56	-0.2	769.3835	2	16.173	1347	3	1762	1775	Y
13	IPI00484075	R.NFDKVLAEWK.Q	N	61.76	-0.3	417.2239	3	20.741	1792	2	1450	1459	N
13	IPI00484075	R.HDCDLLR.E	N	60.31	-0.4	436.208	2	13.626	1087	1	1340	1346	N
13	IPI00484075	R.LQDLVDKLQLK.V	N	54.78	-0.3	656.8951	2	19.19	1646	54	1868	1878	N
13	IPI00484075	R.SLSTELFK.M	N	52.49	0.6	462.7557	2	35.763	3049	41	1478	1485	N
13	IPI00484075	K.LEQQVDDLEGSLEQEKK.L	N	48.54	0.6	663.3325	3	18.209	1550	1	1029	1045	N
13	IPI00484075	K.AGLLGTLEEMRDEK.L	N	47.23	0.5	521.2681	3	22.569	1963	2	769	782	N
13	IPI00484075	R.VQLELNQVKGEIDR.K	N	43.71	-0.4	820.9515	2	18.653	1595	4	1565	1578	N
13	IPI00484075	K.AITDAAMMAEELK.K	N	43.28	-0.4	465.228	3	21.127	1829	1	1762	1774	N
13	IPI00484075	R.VQLELNQVKGEIDRK.L	N	40.47	0.3	884.9996	2	17.296	1459	3	1565	1579	N
13	IPI00484075	K.KNLEVTVK.D	N	39.8	0.5	465.7848	2	11.806	934	1	1788	1795	N
13	IPI00484075	K.CASLEK.T	N	39.15	0.1	325.6625	2	3.599	287	3	1413	1418	N
13	IPI00484075	K.LRMDLER.A	N	38.21	-0.1	311.5042	3	14.197	1145	1	1046	1052	N
13	IPI00484075	K.NLEVTVK.D	N	36.87	-0.3	401.7369	2	13.821	1107	1	1789	1795	N
13	IPI00484075	K.LMTNLR.S	N	35.48	0	374.2127	2	13.689	1093	1	660	665	N
13	IPI00484075	R.LQDLVDK.L	N	32.39	-1.5	415.7339	2	13.587	1084	1	1868	1874	N
13	IPI00484075	R.SFMNVK.H	N	31.11	0.1	363.1862	2	14.189	1144	1	822	827	N
13	IPI00484075	K.LM(+15.99)TNLR.S	N	29.79	-0.6	382.2099	2	11.371	898	2	660	665	Y
13	IPI00484075	K.IQLEAK.L	N	28.41	-0.7	351.213	2	11.787	932	1	915	920	N
31	IPI00882712	K.KAITDAAMMAEELKK.E	N	105.35	-0.7	825.4331	2	16.959	1425	23	1759	1773	N

31	IPI00882712	K.AITDAAMMAEELKK.E	N	103.63	0.4	761.3865	2	18.57	1586	28	1760	1773	N
31	IPI00882712	K.KQADSVAELGEQIDNLQR.V	N	99.26	-0.2	1007.513	2	20.724	1790	4	1197	1214	N
31	IPI00882712	K.QADSVAELGEQIDNLQR.V	N	87.89	1.2	943.4673	2	22.248	1933	3	1198	1214	N
31	IPI00882712	R.KKQADSVAELGEQIDNLQR.V	N	87.29	0.9	1071.562	2	18.889	1617	7	1196	1214	N
31	IPI00882712	K.KDIDDLELTLAK.V	N	86.12	1.2	687.3806	2	19.01	1629	2	954	965	N
31	IPI00882712	K.AITDAAM(+15.99)MAEELKK.E	N	83.25	-0.5	769.3832	2	17.929	1523	2	1760	1773	Y
31	IPI00882712	R.IEELEEELEAERAAR.A	N	82.3	-0.2	893.9443	2	18.439	1573	2	1117	1131	N
31	IPI00882712	K.AGLLGQLEEMR.D	N	81.62	2.9	608.8231	2	23.178	2017	1	769	779	N
31	IPI00882712	K.AITDAAMM(+15.99)AEELK.K	N	80.4	0.3	705.3364	2	17.921	1522	1	1760	1772	Y
31	IPI00882712	R.IEELEEELEAER.A	N	78.43	0	744.8568	2	19.27	1654	1	1117	1128	N
31	IPI00882712	K.KAITDAAMM(+15.99)AEELKK.E	N	76.52	1	555.957	3	15.05	1234	1	1759	1773	Y
31	IPI00882712	K.KAITDAAM(+15.99)MAEELKK.E	N	73.76	-0.2	555.9564	3	16.714	1401	1	1759	1773	Y
31	IPI00882712	K.DIDDLELTLAK.V	N	73.16	-0.6	623.3318	2	22.33	1941	1	955	965	N
31	IPI00882712	K.YETDAIQR.T	N	63.72	-0.8	498.2428	2	12.604	999	1	1377	1384	N
31	IPI00882712	K.AITDAAMM(+15.99)AEELKK.E	N	63.56	-0.2	769.3835	2	16.173	1347	3	1760	1773	Y
31	IPI00882712	K.MVSLLQEK.N	N	59.52	-1.1	474.2646	2	26.71	2320	23	879	886	N
31	IPI00882712	R.LQDLVDKLQLK.V	N	54.78	-0.3	656.8951	2	19.19	1646	54	1866	1876	N
31	IPI00882712	K.LEQQVDDLEGSLEQEKK.L	N	48.54	0.6	663.3325	3	18.209	1550	1	1029	1045	N
31	IPI00882712	K.AITDAAMMAEELK.K	N	43.28	-0.4	465.228	3	21.127	1829	1	1760	1772	N
31	IPI00882712	K.LRMDLER.A	N	38.21	-0.1	311.5042	3	14.197	1145	1	1046	1052	N
31	IPI00882712	K.LMTNLR.S	N	35.48	0	374.2127	2	13.689	1093	1	660	665	N
31	IPI00882712	K.KALQEAHQQTLDDLQSEEDKVNTLTK.A	N	35.43	-0.1	746.3807	4	19.372	1663	2	999	1024	N
31	IPI00882712	R.LQDLVDK.L	N	32.39	-1.5	415.7339	2	13.587	1084	1	1866	1872	N
31	IPI00882712	K.LM(+15.99)TNLR.S	N	29.79	-0.6	382.2099	2	11.371	898	2	660	665	Y
31	IPI00882712	K.IQLEAK.A	N	28.41	-0.7	351.213	2	11.787	932	1	915	920	N
31	IPI00882712	K.ALQEAHQQTLDDLQSEEDKVNTLTKAK.A	N	14.47	0.3	764.1403	4	20.368	1757	1	1000	1026	N
31	IPI00882712	K.ALQEAHQQTLDDLQSEEDKVNTLTK.A	N	12.54	2.2	952.1425	3	20.534	1772	1	1000	1024	N
31	IPI00882712	R.ERLEAQT(+79.97)RPFDMKK.E	N	8.18	0.4	457.975	4	17.493	1479	1	22	35	Y
14	IPI00934366	K.KAITDAAMMAEELKK.E	N	105.35	-0.7	825.4331	2	16.959	1425	23	1760	1774	N
14	IPI00934366	K.AITDAAMMAEELKK.E	N	103.63	0.4	761.3865	2	18.57	1586	28	1761	1774	N
14	IPI00934366	K.AGLLGTLEEMR.D	N	95.04	-0.4	595.3156	2	23.555	2053	35	770	780	N

14	IPI00934366	K.KDIDDLELTLAK.V	N	86.12	1.2	687.3806	2	19.01	1629	2	955	966	N
14	IPI00934366	R.EQFEEEQEAKAELQR.S	N	84.5	-0.9	932.4387	2	16.361	1366	5	1348	1362	N
14	IPI00934366	K.AITDAAM(+15.99)MAEELKK.E	N	83.25	-0.5	769.3832	2	17.929	1523	2	1761	1774	Y
14	IPI00934366	R.IEELEEELEAERAAR.A	N	82.3	-0.2	893.9443	2	18.439	1573	2	1118	1132	N
14	IPI00934366	K.AITDAAMM(+15.99)AEELK.K	N	80.4	0.3	705.3364	2	17.921	1522	1	1761	1773	Y
14	IPI00934366	R.IEELEEELEAER.A	N	78.43	0	744.8568	2	19.27	1654	1	1118	1129	N
14	IPI00934366	K.KAITDAAMM(+15.99)AEELKK.E	N	76.52	1	555.957	3	15.05	1234	1	1760	1774	Y
14	IPI00934366	K.KAITDAAM(+15.99)MAEELKK.E	N	73.76	-0.2	555.9564	3	16.714	1401	1	1760	1774	Y
14	IPI00934366	R.EQFEEEQEAK.A	N	73.74	0	633.7778	2	12.289	973	1	1348	1357	N
14	IPI00934366	K.DIDDLELTLAK.V	N	73.16	-0.6	623.3318	2	22.33	1941	1	956	966	N
14	IPI00934366	K.AGLLGTLEEM(+15.99)R.D	N	73.06	0.8	603.3138	2	19.327	1659	2	770	780	Y
14	IPI00934366	K.YETDAIQR.T	N	63.72	-0.8	498.2428	2	12.604	999	1	1378	1385	N
14	IPI00934366	K.AITDAAMM(+15.99)AEELKK.E	N	63.56	-0.2	769.3835	2	16.173	1347	3	1761	1774	Y
14	IPI00934366	R.NFDKVLAEWK.Q	N	61.76	-0.3	417.2239	3	20.741	1792	2	1451	1460	N
14	IPI00934366	K.MVSLLQEK.N	N	59.52	-1.1	474.2646	2	26.71	2320	23	880	887	N
14	IPI00934366	R.LQDLVDKLQLK.V	N	54.78	-0.3	656.8951	2	19.19	1646	54	1867	1877	N
14	IPI00934366	R.SLSTELFK.L	N	52.49	0.6	462.7557	2	35.763	3049	41	1479	1486	N
14	IPI00934366	R.ADLSRELEEISER.L	N	50.52	1.5	516.2625	3	20.916	1808	1	1140	1152	N
14	IPI00934366	K.LEQQVDDLEGSLEQEKK.L	N	48.54	0.6	663.3325	3	18.209	1550	1	1030	1046	N
14	IPI00934366	K.AITDAAMMAEELK.K	N	43.28	-0.4	465.228	3	21.127	1829	1	1761	1773	N
14	IPI00934366	K.LRMDLER.A	N	38.21	-0.1	311.5042	3	14.197	1145	1	1047	1053	N
14	IPI00934366	K.LMTNLR.S	N	35.48	0	374.2127	2	13.689	1093	1	661	666	N
14	IPI00934366	K.KALQEAHQQTLDDLQSEEDKVNTLTK.A	N	35.43	-0.1	746.3807	4	19.372	1663	2	1000	1025	N
14	IPI00934366	R.LQDLVDK.L	N	32.39	-1.5	415.7339	2	13.587	1084	1	1867	1873	N
14	IPI00934366	K.LM(+15.99)TNLR.S	N	29.79	-0.6	382.2099	2	11.371	898	2	661	666	Y
14	IPI00934366	K.IQLEAK.A	N	28.41	-0.7	351.213	2	11.787	932	1	916	921	N
14	IPI00934366	K.ALQEAHQQTLDDLQSEEDKVNTLTKAK.A	N	14.47	0.3	764.1403	4	20.368	1757	1	1001	1027	N
14	IPI00934366	K.ALQEAHQQTLDDLQSEEDKVNTLTK.A	N	12.54	2.2	952.1425	3	20.534	1772	1	1001	1025	N
38	IPI00496068	K.KAITDAAMMAEELKK.E	N	105.35	-0.7	825.4331	2	16.959	1425	23	1760	1774	N
38	IPI00496068	K.AITDAAMMAEELKK.E	N	103.63	0.4	761.3865	2	18.57	1586	28	1761	1774	N
38	IPI00496068	K.AGLLGTLEEMR.D	N	95.04	-0.4	595.3156	2	23.555	2053	35	770	780	N

38	IPI00496068	K.KDIDDLELTLAK.V	N	86.12	1.2	687.3806	2	19.01	1629	2	955	966	N
38	IPI00496068	K.AITDAAM(+15.99)MAEELKK.E	N	83.25	-0.5	769.3832	2	17.929	1523	2	1761	1774	Y
38	IPI00496068	R.IEELEEELEAERAAR.A	N	82.3	-0.2	893.9443	2	18.439	1573	2	1118	1132	N
38	IPI00496068	K.AITDAAMM(+15.99)AEELK.K	N	80.4	0.3	705.3364	2	17.921	1522	1	1761	1773	Y
38	IPI00496068	R.IEELEEELEAER.A	N	78.43	0	744.8568	2	19.27	1654	1	1118	1129	N
38	IPI00496068	K.KAITDAAMM(+15.99)AEELKK.E	N	76.52	1	555.957	3	15.05	1234	1	1760	1774	Y
38	IPI00496068	K.LSSADIETYLLEK.S	N	75.72	-1.1	741.3895	2	23.885	2083	1	258	270	N
38	IPI00496068	K.KAITDAAM(+15.99)MAEELKK.E	N	73.76	-0.2	555.9564	3	16.714	1401	1	1760	1774	Y
38	IPI00496068	K.DIDDLELTLAK.V	N	73.16	-0.6	623.3318	2	22.33	1941	1	956	966	N
38	IPI00496068	K.AGLLGTLEEM(+15.99)R.D	N	73.06	0.8	603.3138	2	19.327	1659	2	770	780	Y
38	IPI00496068	K.YETDAIQR.T	N	63.72	-0.8	498.2428	2	12.604	999	1	1378	1385	N
38	IPI00496068	K.AITDAAMM(+15.99)AEELKK.E	N	63.56	-0.2	769.3835	2	16.173	1347	3	1761	1774	Y
38	IPI00496068	R.NFDKVLAEWK.Q	N	61.76	-0.3	417.2239	3	20.741	1792	2	1451	1460	N
38	IPI00496068	K.MVSLLQEK.N	N	59.52	-1.1	474.2646	2	26.71	2320	23	880	887	N
38	IPI00496068	R.LQDLVDKLQLK.V	N	54.78	-0.3	656.8951	2	19.19	1646	54	1867	1877	N
38	IPI00496068	R.SLSTELFK.L	N	52.49	0.6	462.7557	2	35.763	3049	41	1479	1486	N
38	IPI00496068	R.ADLSRELEEISER.L	N	50.52	1.5	516.2625	3	20.916	1808	1	1140	1152	N
38	IPI00496068	K.LEQQVDDLEGSLEQEKK.I	N	48.54	0.6	663.3325	3	18.209	1550	1	1030	1046	N
38	IPI00496068	K.LSSADIETYLLEKSR.V	N	46.7	0.5	575.6406	3	23.063	2008	1	258	272	N
38	IPI00496068	K.AITDAAMMAEELK.K	N	43.28	-0.4	465.228	3	21.127	1829	1	1761	1773	N
38	IPI00496068	K.IRMDLER.A	N	38.21	-0.1	311.5042	3	14.197	1145	1	1047	1053	N
38	IPI00496068	K.LMTNLR.S	N	35.48	0	374.2127	2	13.689	1093	1	661	666	N
38	IPI00496068	K.KALQEAHQQTLDDLQSEEDKVNTLTK.A	N	35.43	-0.1	746.3807	4	19.372	1663	2	1000	1025	N
38	IPI00496068	R.LQDLVDK.L	N	32.39	-1.5	415.7339	2	13.587	1084	1	1867	1873	N
38	IPI00496068	K.LM(+15.99)TNLR.S	N	29.79	-0.6	382.2099	2	11.371	898	2	661	666	Y
38	IPI00496068	K.ALQEAHQQTLDDLQSEEDKVNTLTKAK.A	N	14.47	0.3	764.1403	4	20.368	1757	1	1001	1027	N
38	IPI00496068	K.ALQEAHQQTLDDLQSEEDKVNTLTK.A	N	12.54	2.2	952.1425	3	20.534	1772	1	1001	1025	N
38	IPI00496068	K.ERLEAQT(+79.97)RPFDMKK.E	N	8.18	0.4	457.975	4	17.493	1479	1	22	35	Y
11	IPI00490216	K.KAITDAAMMAEELKK.E	N	105.35	-0.7	825.4331	2	16.959	1425	23	1757	1771	N
11	IPI00490216	K.AITDAAMMAEELKK.E	N	103.63	0.4	761.3865	2	18.57	1586	28	1758	1771	N
11	IPI00490216	K.AGLLGTLEEMR.D	N	95.04	-0.4	595.3156	2	23.555	2053	35	767	777	N

11	IPI00490216	K.KDIDDLELTLAK.V	N	86.12	1.2	687.3806	2	19.01	1629	2	952	963	N
11	IPI00490216	R.EQFEEEQEAKAELQR.A	N	84.5	-0.9	932.4387	2	16.361	1366	5	1345	1359	N
11	IPI00490216	K.AITDAAM(+15.99)MAEELKK.E	N	83.25	-0.5	769.3832	2	17.929	1523	2	1758	1771	Y
11	IPI00490216	K.AITDAAMM(+15.99)AEELK.K	N	80.4	0.3	705.3364	2	17.921	1522	1	1758	1770	Y
11	IPI00490216	K.KAITDAAMM(+15.99)AEELKK.E	N	76.52	1	555.957	3	15.05	1234	1	1757	1771	Y
11	IPI00490216	K.LSSADIETYLLEK.S	N	75.72	-1.1	741.3895	2	23.885	2083	1	257	269	N
11	IPI00490216	K.KAITDAAM(+15.99)MAEELKK.E	N	73.76	-0.2	555.9564	3	16.714	1401	1	1757	1771	Y
11	IPI00490216	R.EQFEEEQEAK.A	N	73.74	0	633.7778	2	12.289	973	1	1345	1354	N
11	IPI00490216	K.DIDDLELTLAK.V	N	73.16	-0.6	623.3318	2	22.33	1941	1	953	963	N
11	IPI00490216	K.AGLLGTLEEM(+15.99)R.D	N	73.06	0.8	603.3138	2	19.327	1659	2	767	777	Y
11	IPI00490216	R.VKVGNEYVTK.G	Y	66.66	-0.9	379.5482	3	13.057	1036	1	403	412	N
11	IPI00490216	K.VGNEYVTK.G	Y	64.36	-0.1	455.2374	2	6.542	523	4	405	412	N
11	IPI00490216	K.AITDAAMM(+15.99)AEELKK.E	N	63.56	-0.2	769.3835	2	16.173	1347	3	1758	1771	Y
11	IPI00490216	R.HDCDLLR.E	N	60.31	-0.4	436.208	2	13.626	1087	1	1338	1344	N
11	IPI00490216	K.MVSLLQEK.N	N	59.52	-1.1	474.2646	2	26.71	2320	23	877	884	N
11	IPI00490216	R.LQDLVDKLQLK.V	N	54.78	-0.3	656.8951	2	19.19	1646	54	1864	1874	N
11	IPI00490216	R.SLSTELFK.L	N	52.49	0.6	462.7557	2	35.763	3049	41	1476	1483	N
11	IPI00490216	K.LEQQVDDLEGSLEQEKK.V	N	48.54	0.6	663.3325	3	18.209	1550	1	1027	1043	N
11	IPI00490216	K.LSSADIETYLLEKSR.V	N	46.7	0.5	575.6406	3	23.063	2008	1	257	271	N
11	IPI00490216	K.AITDAAMMAEELK.K	N	43.28	-0.4	465.228	3	21.127	1829	1	1758	1770	N
11	IPI00490216	K.KALQEAHQQTLDDLQSEEDKVNTLTK.A	N	35.43	-0.1	746.3807	4	19.372	1663	2	997	1022	N
11	IPI00490216	R.LQDLVDK.L	N	32.39	-1.5	415.7339	2	13.587	1084	1	1864	1870	N
11	IPI00490216	K.IQLEAK.V	N	28.41	-0.7	351.213	2	11.787	932	1	913	918	N
11	IPI00490216	R.KLQHELEEAEERADIAESQVNKLR.A	Y	19.69	-0.4	567.8975	5	20.67	1785	2	1898	1921	N
11	IPI00490216	K.ALQEAHQQTLDDLQSEEDKVNTLTKAK.V	N	14.47	0.3	764.1403	4	20.368	1757	1	998	1024	N
11	IPI00490216	K.ALQEAHQQTLDDLQSEEDKVNTLTK.A	N	12.54	2.2	952.1425	3	20.534	1772	1	998	1022	N
11	IPI00490216	R.ARYETDGIQRTEELEDAK.K	Y	7.05	2.2	531.7617	4	37.165	3161	1	1373	1390	N
30	IPI00616127	K.KAITDAAMMAEELKK.E	N	105.35	-0.7	825.4331	2	16.959	1425	23	1764	1778	N
30	IPI00616127	K.AITDAAMMAEELKK.E	N	103.63	0.4	761.3865	2	18.57	1586	28	1765	1778	N
30	IPI00616127	K.KQADSVAELGEQIDNLQR.V	N	99.26	-0.2	1007.513	2	20.724	1790	4	1202	1219	N
30	IPI00616127	K.QADSVAELGEQIDNLQR.V	N	87.89	1.2	943.4673	2	22.248	1933	3	1203	1219	N

30	IPI00616127	R.KKQADSVAELGEQIDNLQR.V	N	87.29	0.9	1071.562	2	18.889	1617	7	1201	1219	N
30	IPI00616127	K.KDIDDLELTLAK.V	N	86.12	1.2	687.3806	2	19.01	1629	2	959	970	N
30	IPI00616127	K.AITDAAM(+15.99)MAEELKK.E	N	83.25	-0.5	769.3832	2	17.929	1523	2	1765	1778	Y
30	IPI00616127	K.AGLLGQLEEMR.D	N	81.62	2.9	608.8231	2	23.178	2017	1	771	781	N
30	IPI00616127	K.AITDAAMM(+15.99)AEELK.K	N	80.4	0.3	705.3364	2	17.921	1522	1	1765	1777	Y
30	IPI00616127	K.KAITDAAMM(+15.99)AEELKK.E	N	76.52	1	555.957	3	15.05	1234	1	1764	1778	Y
30	IPI00616127	K.KAITDAAM(+15.99)MAEELKK.E	N	73.76	-0.2	555.9564	3	16.714	1401	1	1764	1778	Y
30	IPI00616127	K.DIDDLELTLAK.V	N	73.16	-0.6	623.3318	2	22.33	1941	1	960	970	N
30	IPI00616127	K.YETDAIQR.T	N	63.72	-0.8	498.2428	2	12.604	999	1	1382	1389	N
30	IPI00616127	K.AITDAAMM(+15.99)AEELKK.E	N	63.56	-0.2	769.3835	2	16.173	1347	3	1765	1778	Y
30	IPI00616127	R.LQDLVDKLQLK.V	N	54.78	-0.3	656.8951	2	19.19	1646	54	1871	1881	N
30	IPI00616127	R.SLSTELFK.L	N	52.49	0.6	462.7557	2	35.763	3049	41	1483	1490	N
30	IPI00616127	K.LEQQVDDLEGSLEQEKK.I	N	48.54	0.6	663.3325	3	18.209	1550	1	1034	1050	N
30	IPI00616127	K.AITDAAMMAEELK.K	N	43.28	-0.4	465.228	3	21.127	1829	1	1765	1777	N
30	IPI00616127	K.IRMDLER.A	N	38.21	-0.1	311.5042	3	14.197	1145	1	1051	1057	N
30	IPI00616127	K.LMTNLR.S	N	35.48	0	374.2127	2	13.689	1093	1	662	667	N
30	IPI00616127	K.KALQEAHQQTLDDLQSEEDKVNTLTK.A	N	35.43	-0.1	746.3807	4	19.372	1663	2	1004	1029	N
30	IPI00616127	R.LQDLVDK.L	N	32.39	-1.5	415.7339	2	13.587	1084	1	1871	1877	N
30	IPI00616127	K.LM(+15.99)TNLR.S	N	29.79	-0.6	382.2099	2	11.371	898	2	662	667	Y
30	IPI00616127	K.ALQEAHQQTLDDLQSEEDKVNTLTKAK.V	N	14.47	0.3	764.1403	4	20.368	1757	1	1005	1031	N
30	IPI00616127	K.ALQEAHQQTLDDLQSEEDKVNTLTK.A	N	12.54	2.2	952.1425	3	20.534	1772	1	1005	1029	N
20	IPI00504207	R.HQGVMVGMGQKDSYVGDEAQSKR.G	Y	103.92	-1	627.549	4	14.468	1174	1	42	64	N
20	IPI00504207	R.KDLYANNVLSGGTTMYPGIADR.M	Y	100.76	-0.7	1178.583	2	21.288	1845	2	293	314	N
20	IPI00504207	K.SYELPDGQVITIGNER.F	Y	100.71	-0.1	895.9495	2	22.503	1957	2	241	256	N
20	IPI00504207	R.HQGVMVGMGQK.D	Y	91.85	-1.2	586.2885	2	13.11	1041	1	42	52	N
20	IPI00504207	R.VAPEEHPTLLTEAPLNPK.A	Y	90.71	0	652.686	3	18.147	1544	1	98	115	N
20	IPI00504207	K.EITALAPSTMK.I	Y	86.06	0	581.3128	2	15.944	1322	3	318	328	N
20	IPI00504207	K.DLYANNVLSGGTTMYPGIADR.M	Y	84.13	0.9	1114.537	2	23.043	2006	2	294	314	N
20	IPI00504207	K.EITALAPSTM(+15.99)K.I	Y	78.98	0.2	589.3104	2	14.312	1157	1	318	328	Y
20	IPI00504207	K.AGFAGDDAPR.A	Y	76.81	0.7	488.7281	2	12.815	1015	2	21	30	N
20	IPI00504207	R.AVFPSIVGRPR.H	Y	74.08	1.7	599.8574	2	16.645	1394	18	31	41	N

20	IPI00504207	K.IWHHTFYNELR.V	Y	69.78	-0.1	505.9212	3	15.964	1325	1	87	97	N
20	IPI00504207	R.DLTDYLMK.I	Y	67.37	-0.1	499.7467	2	21.275	1843	2	186	193	N
20	IPI00504207	R.GYSFVTTAER.E	Y	59.04	-1	1130.547	1	15.907	1319	1	199	208	N
20	IPI00504207	R.HQGVM(+15.99)VGMGQK.D	Y	52.64	-1.5	396.5262	3	13.117	1042	1	42	52	Y
20	IPI00504207	K.IIAPPER.K	Y	39.34	-0.5	398.2395	2	13.228	1051	1	331	337	N
20	IPI00504207	K.DSYVGDEAQSKR.G	Y	38.38	-0.7	452.2123	3	3.858	308	1	53	64	N
20	IPI00504207	R.GILTLK.Y	Y	30	0.1	322.7207	2	15.272	1257	1	65	70	N
20	IPI00504207	K.QEYDEAGPSIVHRK.C	Y	17.8	-0.2	543.6056	3	13.72	1097	2	362	375	N
20	IPI00504207	R.LDLAGRDLTDYLMK.I	Y	17.51	0	541.9518	3	23.525	2051	1	180	193	N
20	IPI00504207	R.GYSFVTTAEREIVR.D	Y	16.72	-0.3	543.2859	3	22.009	1912	1	199	212	N
21	IPI00507230	R.HQGVMVGMGQKDSYVGDEAQSKR.G	Y	103.92	-1	627.549	4	14.468	1174	1	42	64	N
21	IPI00507230	R.KDLYANNVLSGGTTMYPGIADR.M	Y	100.76	-0.7	1178.583	2	21.288	1845	2	293	314	N
21	IPI00507230	K.SYELPDGQVITIGNER.F	Y	100.71	-0.1	895.9495	2	22.503	1957	2	241	256	N
21	IPI00507230	R.HQGVMVGMGQK.D	Y	91.85	-1.2	586.2885	2	13.11	1041	1	42	52	N
21	IPI00507230	R.VAPEEHPTLLTEAPLNPK.A	Y	90.71	0	652.686	3	18.147	1544	1	98	115	N
21	IPI00507230	K.EITALAPSTMK.I	Y	86.06	0	581.3128	2	15.944	1322	3	318	328	N
21	IPI00507230	K.DLYANNVLSGGTTMYPGIADR.M	Y	84.13	0.9	1114.537	2	23.043	2006	2	294	314	N
21	IPI00507230	K.EITALAPSTM(+15.99)K.I	Y	78.98	0.2	589.3104	2	14.312	1157	1	318	328	Y
21	IPI00507230	K.AGFAGDDAPR.A	Y	76.81	0.7	488.7281	2	12.815	1015	2	21	30	N
21	IPI00507230	R.AVFPSIVGRPR.H	Y	74.08	1.7	599.8574	2	16.645	1394	18	31	41	N
21	IPI00507230	K.IWHHTFYNELR.V	Y	69.78	-0.1	505.9212	3	15.964	1325	1	87	97	N
21	IPI00507230	R.DLTDYLMK.I	Y	67.37	-0.1	499.7467	2	21.275	1843	2	186	193	N
21	IPI00507230	R.GYSFVTTAER.E	Y	59.04	-1	1130.547	1	15.907	1319	1	199	208	N
21	IPI00507230	R.HQGVM(+15.99)VGMGQK.D	Y	52.64	-1.5	396.5262	3	13.117	1042	1	42	52	Y
21	IPI00507230	K.IIAPPER.K	Y	39.34	-0.5	398.2395	2	13.228	1051	1	331	337	N
21	IPI00507230	K.DSYVGDEAQSKR.G	Y	38.38	-0.7	452.2123	3	3.858	308	1	53	64	N
21	IPI00507230	R.GILTLK.Y	Y	30	0.1	322.7207	2	15.272	1257	1	65	70	N
21	IPI00507230	K.QEYDEAGPSIVHRK.C	Y	17.8	-0.2	543.6056	3	13.72	1097	2	362	375	N
21	IPI00507230	R.LDLAGRDLTDYLMK.I	Y	17.51	0	541.9518	3	23.525	2051	1	180	193	N
21	IPI00507230	R.GYSFVTTAEREIVR.D	Y	16.72	-0.3	543.2859	3	22.009	1912	1	199	212	N
26	IPI00509458	R.HQGVMVGMGQKDSYVGDEAQSKR.G	Y	103.92	-1	627.549	4	14.468	1174	1	42	64	N

26	IPI00509458	R.KDLYANNVLSGGTTMYPGIADR.M	Y	100.76	-0.7	1178.583	2	21.288	1845	2	293	314	N
26	IPI00509458	K.SYELPDGQVITIGNER.F	Y	100.71	-0.1	895.9495	2	22.503	1957	2	241	256	N
26	IPI00509458	R.HQGVMVGMGQK.D	Y	91.85	-1.2	586.2885	2	13.11	1041	1	42	52	N
26	IPI00509458	R.VAPEEHPTLLTEAPLNPK.A	Y	90.71	0	652.686	3	18.147	1544	1	98	115	N
26	IPI00509458	K.EITALAPSTMK.I	Y	86.06	0	581.3128	2	15.944	1322	3	318	328	N
26	IPI00509458	K.DLYANNVLSGGTTMYPGIADR.M	Y	84.13	0.9	1114.537	2	23.043	2006	2	294	314	N
26	IPI00509458	K.EITALAPSTM(+15.99)K.I	Y	78.98	0.2	589.3104	2	14.312	1157	1	318	328	Y
26	IPI00509458	K.AGFAGDDAPR.A	Y	76.81	0.7	488.7281	2	12.815	1015	2	21	30	N
26	IPI00509458	R.AVFPSIVGRPR.H	Y	74.08	1.7	599.8574	2	16.645	1394	18	31	41	N
26	IPI00509458	K.IWHHTFYNELR.V	Y	69.78	-0.1	505.9212	3	15.964	1325	1	87	97	N
26	IPI00509458	R.DLTDYLMK.I	Y	67.37	-0.1	499.7467	2	21.275	1843	2	186	193	N
26	IPI00509458	R.GYSFVTTAER.E	Y	59.04	-1	1130.547	1	15.907	1319	1	199	208	N
26	IPI00509458	R.HQGVM(+15.99)VGMGQK.D	Y	52.64	-1.5	396.5262	3	13.117	1042	1	42	52	Y
26	IPI00509458	K.IIAPPER.K	Y	39.34	-0.5	398.2395	2	13.228	1051	1	331	337	N
26	IPI00509458	K.DSYVGDEAQSKR.G	Y	38.38	-0.7	452.2123	3	3.858	308	1	53	64	N
26	IPI00509458	R.GILTLK.Y	Y	30	0.1	322.7207	2	15.272	1257	1	65	70	N
26	IPI00509458	K.QEYDEAGPSIVHRK.C	Y	17.8	-0.2	543.6056	3	13.72	1097	2	362	375	N
26	IPI00509458	R.LDLAGRDLTDYLMK.I	Y	17.51	0	541.9518	3	23.525	2051	1	180	193	N
26	IPI00509458	R.GYSFVTTAEREIVR.D	Y	16.72	-0.3	543.2859	3	22.009	1912	1	199	212	N
22	IPI00551966	R.HQGVMVGMGQKDSYVGDEAQSKR.G	Y	103.92	-1	627.549	4	14.468	1174	1	42	64	N
22	IPI00551966	R.KDLYANNVLSGGTTMYPGIADR.M	Y	100.76	-0.7	1178.583	2	21.288	1845	2	293	314	N
22	IPI00551966	K.SYELPDGQVITIGNER.F	Y	100.71	-0.1	895.9495	2	22.503	1957	2	241	256	N
22	IPI00551966	R.HQGVMVGMGQK.D	Y	91.85	-1.2	586.2885	2	13.11	1041	1	42	52	N
22	IPI00551966	R.VAPEEHPTLLTEAPLNPK.A	Y	90.71	0	652.686	3	18.147	1544	1	98	115	N
22	IPI00551966	K.EITALAPSTMK.I	Y	86.06	0	581.3128	2	15.944	1322	3	318	328	N
22	IPI00551966	K.DLYANNVLSGGTTMYPGIADR.M	Y	84.13	0.9	1114.537	2	23.043	2006	2	294	314	N
22	IPI00551966	K.EITALAPSTM(+15.99)K.I	Y	78.98	0.2	589.3104	2	14.312	1157	1	318	328	Y
22	IPI00551966	K.AGFAGDDAPR.A	Y	76.81	0.7	488.7281	2	12.815	1015	2	21	30	N
22	IPI00551966	R.AVFPSIVGRPR.H	Y	74.08	1.7	599.8574	2	16.645	1394	18	31	41	N
22	IPI00551966	K.IWHHTFYNELR.V	Y	69.78	-0.1	505.9212	3	15.964	1325	1	87	97	N
22	IPI00551966	R.DLTDYLMK.I	Y	67.37	-0.1	499.7467	2	21.275	1843	2	186	193	N

22	IPI00551966	R.GYSFVTTAER.E	Y	59.04	-1	1130.547	1	15.907	1319	1	199	208	N
22	IPI00551966	R.HQGVM(+15.99)VGMGQK.D	Y	52.64	-1.5	396.5262	3	13.117	1042	1	42	52	Y
22	IPI00551966	K.IIAPPER.K	Y	39.34	-0.5	398.2395	2	13.228	1051	1	331	337	N
22	IPI00551966	K.DSYVGDEAQSKR.G	Y	38.38	-0.7	452.2123	3	3.858	308	1	53	64	N
22	IPI00551966	R.GILTLK.Y	Y	30	0.1	322.7207	2	15.272	1257	1	65	70	N
22	IPI00551966	K.QEYDEAGPSIVHRK.C	Y	17.8	-0.2	543.6056	3	13.72	1097	2	362	375	N
22	IPI00551966	R.LDLAGRDLTDYLMK.I	Y	17.51	0	541.9518	3	23.525	2051	1	180	193	N
22	IPI00551966	R.GYSFVTTAEREIVR.D	Y	16.72	-0.3	543.2859	3	22.009	1912	1	199	212	N
28	IPI00570197	R.HQGVMVGMGQKDSYVGDEAQSKR.G	Y	103.92	-1	627.549	4	14.468	1174	1	42	64	N
28	IPI00570197	R.KDLYANNVLSGGTTMYPGIADR.M	Y	100.76	-0.7	1178.583	2	21.288	1845	2	293	314	N
28	IPI00570197	K.SYELPDGQVITIGNER.F	Y	100.71	-0.1	895.9495	2	22.503	1957	2	241	256	N
28	IPI00570197	R.HQGVMVGMGQK.D	Y	91.85	-1.2	586.2885	2	13.11	1041	1	42	52	N
28	IPI00570197	R.VAPEEHPTLLTEAPLNPK.A	Y	90.71	0	652.686	3	18.147	1544	1	98	115	N
28	IPI00570197	K.EITALAPSTMK.I	Y	86.06	0	581.3128	2	15.944	1322	3	318	328	N
28	IPI00570197	K.DLYANNVLSGGTTMYPGIADR.M	Y	84.13	0.9	1114.537	2	23.043	2006	2	294	314	N
28	IPI00570197	K.EITALAPSTM(+15.99)K.I	Y	78.98	0.2	589.3104	2	14.312	1157	1	318	328	Y
28	IPI00570197	K.AGFAGDDAPR.A	Y	76.81	0.7	488.7281	2	12.815	1015	2	21	30	N
28	IPI00570197	R.AVFPSIVGRPR.H	Y	74.08	1.7	599.8574	2	16.645	1394	18	31	41	N
28	IPI00570197	K.IWHHTFYNELR.V	Y	69.78	-0.1	505.9212	3	15.964	1325	1	87	97	N
28	IPI00570197	R.DLTDYLMK.I	Y	67.37	-0.1	499.7467	2	21.275	1843	2	186	193	N
28	IPI00570197	R.GYSFVTTAER.E	Y	59.04	-1	1130.547	1	15.907	1319	1	199	208	N
28	IPI00570197	R.HQGVM(+15.99)VGMGQK.D	Y	52.64	-1.5	396.5262	3	13.117	1042	1	42	52	Y
28	IPI00570197	K.IIAPPER.K	Y	39.34	-0.5	398.2395	2	13.228	1051	1	331	337	N
28	IPI00570197	K.DSYVGDEAQSKR.G	Y	38.38	-0.7	452.2123	3	3.858	308	1	53	64	N
28	IPI00570197	R.GILTLK.Y	Y	30	0.1	322.7207	2	15.272	1257	1	65	70	N
28	IPI00570197	K.QEYDEAGPSIVHRK.C	Y	17.8	-0.2	543.6056	3	13.72	1097	2	362	375	N
28	IPI00570197	R.LDLAGRDLTDYLMK.I	Y	17.51	0	541.9518	3	23.525	2051	1	180	193	N
28	IPI00570197	R.GYSFVTTAEREIVR.D	Y	16.72	-0.3	543.2859	3	22.009	1912	1	199	212	N
23	IPI00628880	R.HQGVMVGMGQKDSYVGDEAQSKR.G	Y	103.92	-1	627.549	4	14.468	1174	1	42	64	N
23	IPI00628880	R.KDLYANNVLSGGTTMYPGIADR.M	Y	100.76	-0.7	1178.583	2	21.288	1845	2	293	314	N
23	IPI00628880	K.SYELPDGQVITIGNER.F	Y	100.71	-0.1	895.9495	2	22.503	1957	2	241	256	N

23	IPI00628880	R.HQGVMVGMGQK.D	Y	91.85	-1.2	586.2885	2	13.11	1041	1	42	52	N
23	IPI00628880	R.VAPEEHPTLLTEAPLNPK.A	Y	90.71	0	652.686	3	18.147	1544	1	98	115	N
23	IPI00628880	K.EITALAPSTMK.I	Y	86.06	0	581.3128	2	15.944	1322	3	318	328	N
23	IPI00628880	K.DLYANNVLSGGTTMYPGIADR.M	Y	84.13	0.9	1114.537	2	23.043	2006	2	294	314	N
23	IPI00628880	K.EITALAPSTM(+15.99)K.I	Y	78.98	0.2	589.3104	2	14.312	1157	1	318	328	Y
23	IPI00628880	K.AGFAGDDAPR.A	Y	76.81	0.7	488.7281	2	12.815	1015	2	21	30	N
23	IPI00628880	R.AVFPSIVGRPR.H	Y	74.08	1.7	599.8574	2	16.645	1394	18	31	41	N
23	IPI00628880	K.IWHHTFYNELR.V	Y	69.78	-0.1	505.9212	3	15.964	1325	1	87	97	N
23	IPI00628880	R.DLTDYLMK.I	Y	67.37	-0.1	499.7467	2	21.275	1843	2	186	193	N
23	IPI00628880	R.GYSFVTTAER.E	Y	59.04	-1	1130.547	1	15.907	1319	1	199	208	N
23	IPI00628880	R.HQGVM(+15.99)VGMGQK.D	Y	52.64	-1.5	396.5262	3	13.117	1042	1	42	52	Y
23	IPI00628880	K.IIAPPER.K	Y	39.34	-0.5	398.2395	2	13.228	1051	1	331	337	N
23	IPI00628880	K.DSYVGDEAQSKR.G	Y	38.38	-0.7	452.2123	3	3.858	308	1	53	64	N
23	IPI00628880	R.GILTLK.Y	Y	30	0.1	322.7207	2	15.272	1257	1	65	70	N
23	IPI00628880	K.QEYDEAGPSIVHRK.C	Y	17.8	-0.2	543.6056	3	13.72	1097	2	362	375	N
23	IPI00628880	R.LDLAGRDLTDYLMK.I	Y	17.51	0	541.9518	3	23.525	2051	1	180	193	N
23	IPI00628880	R.GYSFVTTAEREIVR.D	Y	16.72	-0.3	543.2859	3	22.009	1912	1	199	212	N
18	IPI00501288	K.KAITDAAMMAEELKK.E	N	105.35	-0.7	825.4331	2	16.959	1425	23	1766	1780	N
18	IPI00501288	K.AITDAAMMAEELKK.E	N	103.63	0.4	761.3865	2	18.57	1586	28	1767	1780	N
18	IPI00501288	K.AITDAAMMAEELKKEQDTSSHLER.M	Y	91.67	-1.2	902.101	3	19.858	1709	3	1767	1790	N
18	IPI00501288	K.KDLDDLEITLAK.V	N	86.12	1.2	687.3806	2	19.01	1629	2	961	972	N
18	IPI00501288	K.AITDAAM(+15.99)MAEELKK.E	N	83.25	-0.5	769.3832	2	17.929	1523	2	1767	1780	Y
18	IPI00501288	R.IEELEEELEAERAAR.S	N	82.3	-0.2	893.9443	2	18.439	1573	2	1124	1138	N
18	IPI00501288	K.AITDAAMM(+15.99)AEELK.K	N	80.4	0.3	705.3364	2	17.921	1522	1	1767	1779	Y
18	IPI00501288	R.IEELEEELEAER.A	N	78.43	0	744.8568	2	19.27	1654	1	1124	1135	N
18	IPI00501288	K.KAITDAAMM(+15.99)AEELKK.E	N	76.52	1	555.957	3	15.05	1234	1	1766	1780	Y
18	IPI00501288	K.KAITDAAM(+15.99)MAEELKK.E	N	73.76	-0.2	555.9564	3	16.714	1401	1	1766	1780	Y
18	IPI00501288	R.EQFEEEQEAK.S	N	73.74	0	633.7778	2	12.289	973	1	1354	1363	N
18	IPI00501288	K.DLDDLEITLAK.V	N	73.16	-0.6	623.3318	2	22.33	1941	1	962	972	N
18	IPI00501288	K.YETDAIQR.T	N	63.72	-0.8	498.2428	2	12.604	999	1	1384	1391	N
18	IPI00501288	K.AITDAAMM(+15.99)AEELKK.E	N	63.56	-0.2	769.3835	2	16.173	1347	3	1767	1780	Y

18	IPI00501288	R.HDCDLLR.E	N	60.31	-0.4	436.208	2	13.626	1087	1	1347	1353	N
18	IPI00501288	R.SLSTELFK.L	N	52.49	0.6	462.7557	2	35.763	3049	41	1485	1492	N
18	IPI00501288	K.LEQQVDDLEGSLEQEKK.V	N	48.54	0.6	663.3325	3	18.209	1550	1	1036	1052	N
18	IPI00501288	K.AITDAAMM(+15.99)AEELKKEQDTSSHLER.M	Y	43.81	1.1	544.8637	5	19.334	1660	1	1767	1790	Y
18	IPI00501288	K.AITDAAMMAEELK.K	N	43.28	-0.4	465.228	3	21.127	1829	1	1767	1779	N
18	IPI00501288	K.CASLEK.T	N	39.15	0.1	325.6625	2	3.599	287	3	1420	1425	N
18	IPI00501288	K.LMTNLR.S	N	35.48	0	374.2127	2	13.689	1093	1	667	672	N
18	IPI00501288	K.LM(+15.99)TNLR.S	N	29.79	-0.6	382.2099	2	11.371	898	2	667	672	Y
29	IPI00800858	K.KAITDAAMMAEELKK.E	N	105.35	-0.7	825.4331	2	16.959	1425	23	1758	1772	N
29	IPI00800858	K.AITDAAMMAEELKK.E	N	103.63	0.4	761.3865	2	18.57	1586	28	1759	1772	N
29	IPI00800858	K.KDIDDLEITLAK.V	N	86.12	1.2	687.3806	2	19.01	1629	2	953	964	N
29	IPI00800858	K.AITDAAM(+15.99)MAEELKK.E	N	83.25	-0.5	769.3832	2	17.929	1523	2	1759	1772	Y
29	IPI00800858	K.AGLLGQLEEMR.D	N	81.62	2.9	608.8231	2	23.178	2017	1	768	778	N
29	IPI00800858	K.AITDAAMM(+15.99)AEELK.K	N	80.4	0.3	705.3364	2	17.921	1522	1	1759	1771	Y
29	IPI00800858	K.KAITDAAMM(+15.99)AEELKK.E	N	76.52	1	555.957	3	15.05	1234	1	1758	1772	Y
29	IPI00800858	K.KAITDAAM(+15.99)MAEELKK.E	N	73.76	-0.2	555.9564	3	16.714	1401	1	1758	1772	Y
29	IPI00800858	K.DIDDLEITLAK.V	N	73.16	-0.6	623.3318	2	22.33	1941	1	954	964	N
29	IPI00800858	K.AITDAAMM(+15.99)AEELKK.E	N	63.56	-0.2	769.3835	2	16.173	1347	3	1759	1772	Y
29	IPI00800858	R.HDCDLLR.E	N	60.31	-0.4	436.208	2	13.626	1087	1	1339	1345	N
29	IPI00800858	K.LEQQVDDLEGSLEQEKK.L	N	48.54	0.6	663.3325	3	18.209	1550	1	1028	1044	N
29	IPI00800858	K.AITDAAMMAEELK.K	N	43.28	-0.4	465.228	3	21.127	1829	1	1759	1771	N
29	IPI00800858	K.LRMDLER.S	N	38.21	-0.1	311.5042	3	14.197	1145	1	1045	1051	N
29	IPI00800858	K.LMTNLR.S	N	35.48	0	374.2127	2	13.689	1093	1	659	664	N
29	IPI00800858	K.LM(+15.99)TNLR.S	N	29.79	-0.6	382.2099	2	11.371	898	2	659	664	Y
29	IPI00800858	K.IQLEAK.V	N	28.41	-0.7	351.213	2	11.787	932	1	914	919	N
112	IPI00508152	K.TIDDLEDELYAQKLK.Y	N	99.53	-0.4	897.4616	2	21.679	1881	2	252	266	N
112	IPI00508152	R.SKQLEDDLVALQK.K	Y	77.87	-0.8	743.9086	2	17.666	1497	2	36	48	N
112	IPI00508152	R.IQLVEEELDRAQER.L	N	59.48	-1.4	864.4485	2	18.716	1601	2	92	105	N
112	IPI00508152	K.HIAEEADRKYEEVAR.K	N	56.25	0.3	454.7302	4	13.696	1094	1	153	167	N
112	IPI00508152	K.MELQEIQLK.E	N	55.68	-0.4	566.3073	2	18.934	1621	1	141	149	N
112	IPI00508152	K.LEEAEKAADESERGMK.V	N	54.93	-0.2	598.2841	3	13.642	1089	1	113	128	N

112	IPI00508152	R.RIQLVEEELDRAQER.L	N	49.68	-0.5	628.669	3	17.712	1501	1	91	105	N
112	IPI00508152	K.HIAEEADRKYEEVARK.L	N	47.43	-0.4	486.7536	4	13.596	1085	1	153	168	N
112	IPI00508152	K.KATDAEGDVASLNR.R	N	14.82	-0.6	482.9106	3	14.017	1127	1	77	90	N
111	IPI00506010	K.TIDDLEDELYAQKLK.Y	N	99.53	-0.4	897.4616	2	21.679	1881	2	252	266	N
111	IPI00506010	R.IQLVEEELDRAQER.L	N	59.48	-1.4	864.4485	2	18.716	1601	2	92	105	N
111	IPI00506010	K.HIAEEADRKYEEVAR.K	N	56.25	0.3	454.7302	4	13.696	1094	1	153	167	N
111	IPI00506010	K.MELQEIQLK.E	N	55.68	-0.4	566.3073	2	18.934	1621	1	141	149	N
111	IPI00506010	K.LEEAEKAADESERGMK.V	N	54.93	-0.2	598.2841	3	13.642	1089	1	113	128	N
111	IPI00506010	R.RIQLVEEELDRAQER.L	N	49.68	-0.5	628.669	3	17.712	1501	1	91	105	N
111	IPI00506010	K.HIAEEADRKYEEVARK.L	N	47.43	-0.4	486.7536	4	13.596	1085	1	153	168	N
111	IPI00506010	K.YSQKEDKYEEEIK.I	Y	18.84	-1.4	422.9552	4	13.447	1071	1	214	226	N
63	IPI00488248	K.GTYDDYVEGLR.V	Y	92.5	0	644.2962	2	32.479	2783	24	84	94	N
63	IPI00488248	K.EGNGTVMGAELR.I	Y	89.38	0.5	617.2985	2	14.807	1209	1	99	110	N
63	IPI00488248	R.VFDKEGNGTVMGAELR.I	Y	89.03	0.8	861.9282	2	16.517	1382	38	95	110	N
63	IPI00488248	R.VFDKEGNGTVM(+15.99)GAELR.I	Y	72.86	0	580.2858	3	14.625	1189	1	95	110	Y
63	IPI00488248	R.IVLSTLGEK.M	Y	62.39	0	480.2922	2	36.216	3085	36	111	119	N
45	IPI00488085	K.EAFTIIDQNR.D	N	87.34	0	603.8093	2	17.077	1437	1	33	42	N
45	IPI00488085	R.DVLASMGQLNVK.N	Y	86.8	-1.1	637.8416	2	20.165	1737	4	53	64	N
45	IPI00488085	K.EAFTIIDQNRDGIISKDDLR.D	N	84.35	-0.3	773.7358	3	20.604	1779	2	33	52	N
45	IPI00488085	R.DGIISKDDLR.D	N	65.68	-0.3	377.8715	3	14.639	1191	2	43	52	N
45	IPI00488085	K.EAFTIIDQNRDGIISK.D	N	21.29	-0.1	607.3231	3	19.438	1669	1	33	48	N
51	IPI00919778	K.EAFTIIDQNR.D	N	87.34	0	603.8093	2	17.077	1437	1	12	21	N
51	IPI00919778	K.EAFTIIDQNRDGIISKDDLR.D	N	84.35	-0.3	773.7358	3	20.604	1779	2	12	31	N
51	IPI00919778	R.DGIISKDDLR.D	N	65.68	-0.3	377.8715	3	14.639	1191	2	22	31	N
51	IPI00919778	K.NEELEAMVK.E	Y	63.75	0.8	531.7609	2	15.606	1288	2	44	52	N
51	IPI00919778	K.EAFTIIDQNRDGIISK.D	N	21.29	-0.1	607.3231	3	19.438	1669	1	12	27	N
52	IPI00496651	K.EAFTIIDQNR.D	N	87.34	0	603.8093	2	17.077	1437	1	33	42	N
52	IPI00496651	K.EAFTIIDQNRDGIISKDDLR.D	N	84.35	-0.3	773.7358	3	20.604	1779	2	33	52	N
52	IPI00496651	R.DGIISKDDLR.D	N	65.68	-0.3	377.8715	3	14.639	1191	2	43	52	N
52	IPI00496651	K.NEELEAMVK.E	Y	63.75	0.8	531.7609	2	15.606	1288	2	65	73	N
52	IPI00496651	K.EAFTIIDQNRDGIISK.D	N	21.29	-0.1	607.3231	3	19.438	1669	1	33	48	N

98	IPI00508395	K.GGDDLDPNYVLSSR.V	Y	100.7	-0.9	754.3541	2	18.834	1612	1	116	129	N
98	IPI00508395	K.FEEILTR.L	Y	49.04	0.9	454.2482	2	15.642	1291	1	307	313	N
98	IPI00508395	R.DWPDGR.G	Y	13.09	-1.8	373.1661	2	12.987	1030	1	209	214	N
99	IPI00482319	K.GGDDLDPNYVLSSR.V	Y	100.7	-0.9	754.3541	2	18.834	1612	1	117	130	N
99	IPI00482319	K.FEEILTR.L	Y	49.04	0.9	454.2482	2	15.642	1291	1	308	314	N
5441	IPI00487267	R.AMKDEEKMEIQEIQLK.E	Y	60.71	1.2	655.0014	3	18.079	1537	2	98	113	N
5441	IPI00487267	R.IQLVEEELDRAQER.L	N	59.48	-1.4	864.4485	2	18.716	1601	2	56	69	N
5441	IPI00487267	K.MEIQEIQLK.E	N	55.68	-0.4	566.3073	2	18.934	1621	1	105	113	N
5441	IPI00487267	R.RIQLVEEELDRAQER.L	N	49.68	-0.5	628.669	3	17.712	1501	1	55	69	N
70	IPI00615483	K.VLDTPGAPQNLFVK.D	Y	81.42	-0.8	749.9162	2	20.661	1784	1	23747	23760	N
70	IPI00615483	K.LLPGNEYIFR.V	Y	54.23	0.1	611.335	2	21.104	1826	1	24501	24510	N
70	IPI00615483	R.IFVPIK.G	N	22.57	-0.3	358.7388	2	16.7	1399	1	20432	20437	N
70	IPI00615483	K.LPT(+79.97)SQTTGNLR.I	Y	12.49	-0.4	423.2061	3	10.802	851	1	12252	12262	Y
73	IPI01016913	K.VLDTPGAPQNLFVK.D	Y	81.42	-0.8	749.9162	2	20.661	1784	1	10056	10069	N
73	IPI01016913	K.LLPGNEYIFR.V	Y	54.23	0.1	611.335	2	21.104	1826	1	8646	8655	N
73	IPI01016913	R.IFVPIK.G	N	22.57	-0.3	358.7388	2	16.7	1399	1	6741	6746	N
5442	IPI00493235	R.VDQSILTGESVSVIK.H	Y	77.28	1.1	787.9363	2	20.478	1767	1	169	183	N
5442	IPI00493235	R.SSM(+15.99)GKMFVK.G	Y	15.74	-1.3	1030.505	1	13.872	1112	1	499	507	Y
5460	IPI00852114	K.IAFEYGITDLR.G	Y	84.38	0.6	649.3433	2	22.576	1964	1	199	209	N
5461	IPI00786523	K.IAFEYGITDLR.G	Y	84.38	0.6	649.3433	2	22.576	1964	1	203	213	N
4648	IPI00497753	R.VPTPNVSVVDLTVR.L	Y	82.82	0.9	748.4282	2	21.625	1876	1	233	246	N
4649	IPI00963432	R.VPTPNVSVVDLTVR.L	Y	82.82	0.9	748.4282	2	21.625	1876	1	486	499	N
5449	IPI00900800	R.VMGGLPDVVTIMEK.K	Y	82.05	-0.8	744.893	2	25.168	2194	1	1187	1200	N
5449	IPI00900800	R.VMGGLPDVVTIMEKK.S	Y	5.08	-0.1	539.6298	3	23.854	2081	1	1187	1201	N
5450	IPI01004767	R.VMGGLPDVVTIMEK.K	Y	82.05	-0.8	744.893	2	25.168	2194	1	1316	1329	N
5450	IPI01004767	R.VMGGLPDVVTIMEKK.S	Y	5.08	-0.1	539.6298	3	23.854	2081	1	1316	1330	N
108	IPI00501538	K.YGYTHLSSGDLLR.A	Y	80.28	0.3	741.373	2	17.852	1515	2	32	44	N
5451	IPI00817940	R.KKEEEELIALK.D	Y	62.77	-0.1	665.3848	2	14.595	1187	2	75	85	N
5452	IPI00993469	R.KKEEEELIALK.D	Y	62.77	-0.1	665.3848	2	14.595	1187	2	56	66	N
5453	IPI00817723	R.KKEEEELIALK.D	Y	62.77	-0.1	665.3848	2	14.595	1187	2	58	68	N
5454	IPI00510978	R.KKEEEELIALK.D	Y	62.77	-0.1	665.3848	2	14.595	1187	2	62	72	N

5455	IPI00817598	R.KKEEEELIALK.D	Y	62.77	-0.1	665.3848	2	14.595	1187	2	118	128	N
5456	IPI00817728	R.KKEEEELIALK.D	Y	62.77	-0.1	665.3848	2	14.595	1187	2	75	85	N
5457	IPI00972437	R.KKEEEELIALK.D	Y	62.77	-0.1	665.3848	2	14.595	1187	2	112	122	N
5458	IPI00817813	R.KKEEEELIALK.D	Y	62.77	-0.1	665.3848	2	14.595	1187	2	114	124	N
5459	IPI00817433	R.KKEEEELIALK.D	Y	62.77	-0.1	665.3848	2	14.595	1187	2	124	134	N
437	IPI00901053	K.ALQDELSELK.E	Y	61.62	-0.6	573.3057	2	17.45	1475	3	487	496	N
175	IPI00890560	R.IAGYLIEMQPK.G	Y	44.27	0.2	631.8444	2	19.279	1655	1	19983	19993	N
175	IPI00890560	R.LFVPIK.G	N	22.57	-0.3	358.7388	2	16.7	1399	1	17600	17605	N
175	IPI00890560	R.RVDTAR.L	Y	13.48	2	359.2044	2	4.402	353	1	27300	27305	N
175	IPI00890560	K.EYLSM(+15.99)KIT(+79.97)EEERLK.L	Y	11.17	-0.4	622.2966	3	39.677	3363	2	27726	27739	Y
175	IPI00890560	K.YVIEKKEKVGT(+79.97)R.W	Y	9.21	0.7	510.6081	3	31.263	2685	1	9940	9951	Y
175	IPI00890560	K.NVT(+79.97)GVITENIK.V	Y	7.82	-0.3	634.3181	2	19.643	1689	1	25439	25449	Y
175	IPI00890560	K.QEDHFKTEVPTIAEEPK.V	Y	7.03	-1.5	666.6643	3	27.741	2404	2	596	612	N
164	IPI00993122	R.IAGYLIEMQPK.G	Y	44.27	0.2	631.8444	2	19.279	1655	1	18410	18420	N
164	IPI00993122	R.LFVPIK.G	N	22.57	-0.3	358.7388	2	16.7	1399	1	16027	16032	N
164	IPI00993122	R.RVDTAR.L	Y	13.48	2	359.2044	2	4.402	353	1	25727	25732	N
164	IPI00993122	K.EYLSM(+15.99)KIT(+79.97)EEERLK.L	Y	11.17	-0.4	622.2966	3	39.677	3363	2	26153	26166	Y
164	IPI00993122	K.YVIEKKEKVGT(+79.97)R.W	Y	9.21	0.7	510.6081	3	31.263	2685	1	8367	8378	Y
164	IPI00993122	K.NVT(+79.97)GVITENIK.V	Y	7.82	-0.3	634.3181	2	19.643	1689	1	23866	23876	Y
5467	IPI00902219	K.FDIEIGR.G	Y	45.05	0.5	425.2271	2	15.95	1323	1	204	210	N
5468	IPI00968820	K.FDIEIGR.G	Y	45.05	0.5	425.2271	2	15.95	1323	1	216	222	N
5469	IPI00901954	K.FDIELGR.G	Y	45.05	0.5	425.2271	2	15.95	1323	1	171	177	N
5464	IPI00490239	K.YEVTTLR.R	Y	38.21	-0.1	441.2399	2	14.296	1155	1	256	262	N
5463	IPI00832038	K.VIFVIGGPGSGK.A	Y	36.68	-0.2	565.8319	2	17.982	1528	1	379	390	N
1228	IPI00802686	R.VLGESAIAVR.T	Y	21.3	-0.1	338.8695	3	15.102	1239	2	1796	1805	N
1228	IPI00802686	K.NSNNKDEKRGGENK.N	Y	15.19	-1.2	530.5918	3	30.591	2632	3	933	946	N
5443	IPI00897175	R.VLGESAIAVR.T	Y	21.3	-0.1	338.8695	3	15.102	1239	2	1822	1831	N
5443	IPI00897175	K.NSNNKDEKRGGENK.N	Y	15.19	-1.2	530.5918	3	30.591	2632	3	983	996	N
5474	IPI00899172	R.AVLLTADLQQMK.S	Y	26.4	-0.5	444.2513	3	38.608	3277	32	243	254	N
5474	IPI00899172	R.AVLLTADLQQM(+15.99)K.S	Y	16.52	-0.7	449.5828	3	18.225	1552	2	243	254	Y
5475	IPI00961853	R.AVLLTADLQQMK.S	Y	26.4	-0.5	444.2513	3	38.608	3277	32	627	638	N

5475	IPI00961853	R.AVLLTADLQQM(+15.99)K.S	Y	16.52	-0.7	449.5828	3	18.225	1552	2	627	638	Y
5477	IPI00501623	R.YPDIFMR.E	Y	26.36	-1.4	471.2304	2	19.767	1700	14	62	68	N
2304	IPI00487236	K.VKVSGK.G	Y	25.75	2.4	309.2034	2	6.825	546	13	2058	2063	N
5476	IPI00960403	K.YHFIRDAVSK.G	Y	25.54	-0.2	618.33	2	44.126	3729	16	1124	1133	N
288	IPI00859309	K.ILSQKLMEDK.K	Y	21.19	-0.2	602.8338	2	26.267	2284	28	1232	1241	N
288	IPI00859309	K.ILSQKLM(+15.99)EDK.K	Y	8.66	0.3	610.8315	2	18.319	1561	1	1232	1241	Y
5486	IPI00501009	R.EMLVTNLK.K	Y	20.85	0.1	474.2652	2	46.468	3921	1	354	361	N
5487	IPI00932925	R.EMLVTNLK.K	Y	20.85	0.1	474.2652	2	46.468	3921	1	354	361	N
5488	IPI00510504	K.GAGS(+79.97)GGGAR.R	Y	20.51	0.9	385.1534	2	10.56	831	4	2243	2251	Y
5490	IPI00999083	R.ERNAGSETITDLQGRIYGLEGELK.H	Y	20.19	1.5	663.0934	4	16.233	1353	1	622	645	N
5466	IPI01007404	K.AATQKS(+79.97)PSALHTTPVK.Q	Y	20.07	1.3	429.973	4	28.196	2440	3	1035	1050	Y
5466	IPI01007404	K.GKSAGKAGGVGSATR.E	Y	11.38	2.2	435.2417	3	25.302	2205	1	273	287	N
5491	IPI00998552	K.S(+79.97)LPNLAVSSLR.N	Y	20.07	-1.6	618.82	2	26.856	2332	1	368	378	Y

APPENDIX I
PEAKS DATABASE SEARCH RESULTS FOR ELASTASE

Database search summary report (generated by Peaks DB software)

1. Notes

2. Result Statistics

Figure 1: The false discovery rate (FDR) curve. X-axis is the number of peptide-spectrum matches (PSM) being kept and the y-axis is the FDR.

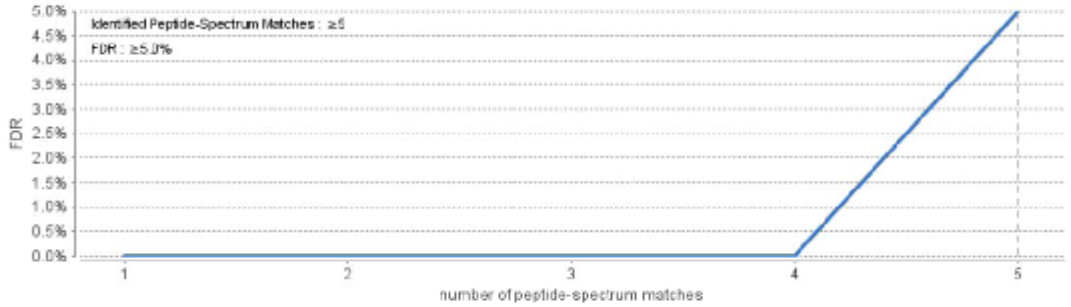

Figure 2: The distribution of PEAKS peptide score (-10lgP): **(a)** histogram of score; **(b)** The plot of precursor mass error vs. score.

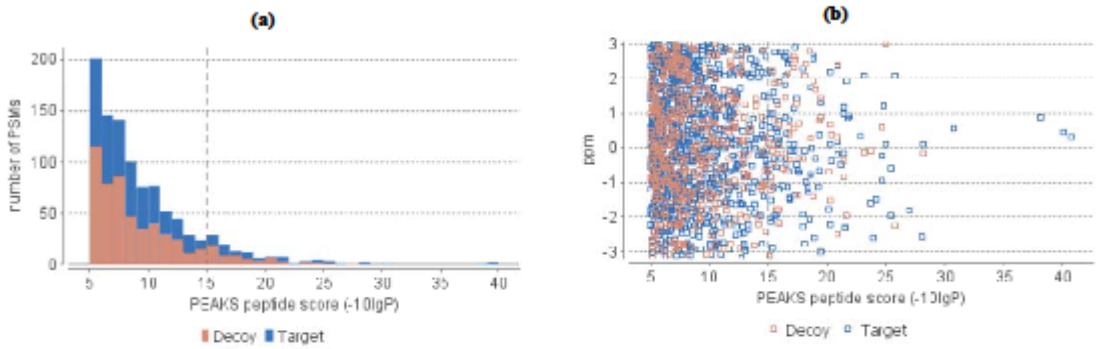

Table 1. Statistics of data.

# of MS Scans	854
# of MS/MS Scans	3505

Table 2. Result filtration parameters.

Peptide -10lgP	≥15	De Novo TLC	≥3
Protein -10lgP	≥20	De Novo ALC	≥50%
Proteins Unique Peptides	≥0		

Table 3. Statistics of filtered result.

Peptide-Spectrum Matches	53
Peptide Sequences	46
Protein Groups	16
Proteins	19
Proteins (#Unique Peptides)	0 (>2); 1 (=2); 18 (=1);
FDR (Peptide-Spectrum Matches)	117.0%
FDR (Peptide Sequences)	119.6%
De Novo Only	1269

Table 4. PTM Profile.

T(+79.97)	9
M(+15.99)	9
Y(+79.97)	8
S(+79.97)	14

3. Experiment Control

Figure 3: The precursor mass error (observed m/z - theoretical m/z) distribution of the PSMs in filtered result. **(a)** Each bar indicates the number of PSMs (y-axis) with a certain precursor error (x-axis); **(b)** Each data point represents a PSM. x-axis is the theoretical m/z and y-axis is the precursor mass error

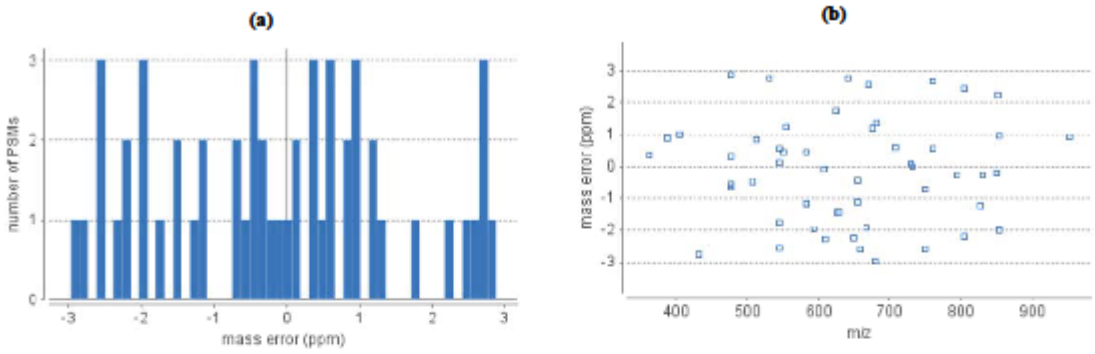

Table 5. number of peptides by number of missed cleavages

Missed Cleavages	0	1	2	3
Peptides	18	12	11	5

4. Other Information

Table 6. Search parameters.

Search Engine Name: PEAKS 5.3
Parent Mass Error Tolerance: 3.0 ppm
Fragment Mass Error Tolerance: 0.5 Da
Precursor Mass Search Type: monoisotopic
Enzyme: Elastase_fish
Max Missed Cleavages: 3
Variable Modifications:
  Oxidation M: 15.99
  Phosphorylation-STY: 79.97
Max variable PTM per peptide: 3
Database: IPI_danre.v3.82
Taxon: All
Searched Entry: 41893
Decoy Performed: true

Table 7. Instrument parameters.

Fractions: EL.RAW
Ion Source: ESI(nano-spray)
Fragmentation Mode: CID, CAD, IRMPD (y and b ions)
MS Scan Mode: FT-ICR/Orbitrap
MS/MS Scan Mode: Linear Ion Trap

Protein results for elastase digested myosin – generated by PEAKS DB software

Protein Group	Protein ID	Accession	-10lgP	Coverage (%)	#Peptides	#Unique	Mass	Best Unique Peptide	Description
3	2807	IPI00499162	40.75	4	1	1	24305.3887	1411	Tax_Id=7955 Gene_Symbol=zgc:153311 Zgc:153311
27	2806	IPI00486512	40.06	1	1	1	180109.9062	4232	Tax_Id=7955 Gene_Symbol=igsf9 Uncharacterized protein
2	2835	IPI00919967	30.77	2	1	1	153236.1406	2872	Tax_Id=7955 Gene_Symbol=insra Tyrosine-protein kinase receptor
28	2838	IPI01007137	25.48	10	1	1	40731.543	3908	Tax_Id=7955 Gene_Symbol=LOC791501 GTPase IMAP family member 4-like
29	2839	IPI00610175	24.8	5	1	1	73875.4609	1672	Tax_Id=7955 Gene_Symbol=kcnc3a Uncharacterized protein
20	2825	IPI00508301	24.65	2	1	1	134940.7188	2036	Tax_Id=7955 Gene_Symbol=si:ch211-199g17.1 Protein FAM83H
4	1239	IPI00897295	24.42	1	2	2	498144.5938	2889	Tax_Id=7955 Gene_Symbol=huwe1 Uncharacterized protein
21	2841	IPI00898531	24.14	6	1	1	55323.8945	3139	Tax_Id=7955 Gene_Symbol=lmbr1 Uncharacterized protein
31	2842	IPI00836127	23.88	2	1	1	147269.875	1984	Tax_Id=7955 Gene_Symbol=atp8b2 Uncharacterized protein
31	2843	IPI01016807	23.88	3	1	1	105114.5938	1984	Tax_Id=7955 Gene_Symbol=LOC100537096 probable phospholipid-transporting ATPase ID-like, partial
100	3252	IPI00961375	22.79	0	1	1	184626.1094	3512	Tax_Id=7955 Gene_Symbol=- calcium channel, voltage-dependent, L type, alpha 1S subunit, a-like, partial
100	3279	IPI00928857	22.79	0	1	1	202427.7656	3512	Tax_Id=7955 Gene_Symbol=cacna1sa Voltage dependent calcium channel alpha-1S subunit isoform alpha-1S-a
34	2848	IPI00914430	21.85	5	1	1	82679.6094	3968	Tax_Id=7955 Gene_Symbol=slc26a3 Anion exchanger SLC26A3
15	2811	IPI00868169	21.75	8	1	1	58593.7812	1412	Tax_Id=7955 Gene_Symbol=ugt1a2;ugt1a1 UDP glucuronosyltransferase 1 family, polypeptide A2 precursor
39	2855	IPI00495163	21.51	0	1	1	528853.75	4236	Tax_Id=7955 Gene_Symbol=herc2 Uncharacterized protein
35	2851	IPI00963281	21.46	2	1	1	181994.4062	1413	Tax_Id=7955 Gene_Symbol=nup214 nuclear pore complex protein Nup214, partial
7	175	IPI00890560	21.16	0	1	1	3200993.75	3219	Tax_Id=7955 Gene_Symbol=ttnb titin
7	164	IPI00993122	21.16	0	1	1	3026089.5	3219	Tax_Id=7955 Gene_Symbol=- Uncharacterized protein (Fragment)
41	2857	IPI00631596	20.21	3	1	1	159963.7969	1741	Tax_Id=7955 Gene_Symbol=LOC100003785 alpha-2-macroglobulin-like
total 19 proteins									

Peptide results for elastase digested myosin – generated by PEAKS DB software

Protein ID	Protein Accession	Peptide	isUnique	-10lgP	ppm	m/z	z	RT	Scan	#Spectra	Start	End	hasPTM
2807	IPI00499162	W.LSRSTELF.A	Y	40.75	0.3	476.7587	2	18.724	1411	4	34	41	N
2806	IPI00486512	Y.SEM(+15.99)SVDGPDF.E	Y	40.06	0.4	550.2162	2	53.33	4232	1	1212	1221	Y
2835	IPI00919967	Y.IADGGCKLRVVHPGNYTVRIRATSLAGNGSW.T	Y	30.77	0.6	545.625	6	36.329	2872	7	883	913	N
2838	IPI01007137	F.RSGRSLSAVTDTSSIEKSVTNGRSVSVIDTPGFF.S	Y	25.48	-2	593.8081	6	49.165	3908	1	134	167	N
2839	IPI00610175	W.SGM(+15.99)LVGALCALAGVLTIAM(+15.99)PVPVIVNNFGMYY.S	Y	24.8	1.2	553.6209	6	21.674	1672	1	430	461	Y
2825	IPI00508301	F.LGELVATF.D	Y	24.65	-0.2	849.4714	1	25.802	2036	1	264	271	N
2825	IPI00508301	F.TDVDIFSDLLEAAARHVPVY.I	Y	5.07	-0.9	558.5385	4	29.525	2332	1	160	179	N
1239	IPI00897295	Y.RLTRQGS(+79.97)DF.D	Y	16.37	0.9	387.1804	3	36.549	2889	2	2077	2085	Y
1239	IPI00897295	Y.SS(+79.97)IEHLTTLLASCDM(+15.99)QVVLSVLNLLYVF.S	Y	16.08	2.8	641.727	5	48.769	3877	1	114	141	Y
2841	IPI00898531	F.TLAVS(+79.97)GGAVLLLPFSIISNEILLSLPKNY.Y	Y	24.14	-1.5	625.348	5	39.689	3139	1	65	93	Y
2841	IPI00898531	F.T(+79.97)LAVSGGAVLLLPFSIISNEILLSLPKNY.Y	Y	13.51	0.5	625.3492	5	32.142	2536	1	65	93	Y
2842	IPI00836127	Y.AFAHQEGFGELITSGKNMRLSSLALATF.A	Y	23.88	-2.6	749.8859	4	25.172	1984	1	1172	1199	N
2843	IPI01016807	Y.AFAHQEGFGELITSGKNMRLSSLALATF.A	Y	23.88	-2.6	749.8859	4	25.172	1984	1	796	823	N
3252	IPI00961375	W.VKSKLF.Y	Y	22.79	0.3	361.2341	2	44.293	3512	1	292	297	N
3279	IPI00928857	W.VKSKLF.Y	Y	22.79	0.3	361.2341	2	44.293	3512	1	439	444	N
2848	IPI00914430	Y.TLVEVFSRITS(+79.97)T(+79.97)NVADLVTSIAIM(+15.99)ALVLIVKEINDRF.K	Y	21.85	0.9	854.2486	5	49.933	3968	1	248	284	Y
2811	IPI00868169	Y.TKVELEAVLAS(+79.97)ELNALLSIDVSTDLAKF.Q	Y	21.75	0.8	512.4399	6	18.731	1412	1	75	102	Y
2811	IPI00868169	Y.EGICNGVPMVMLPLF.G	Y	7.4	1.9	810.4048	2	34.797	2751	1	373	387	N
2855	IPI00495163	F.CKS(+79.97)IDTDDY(+79.97).A	Y	21.51	-2.3	610.1835	2	53.387	4236	1	4786	4794	Y
2851	IPI00963281	F.SKVSSPAAAAAAPVISASPEPPKAAKPSTGETLGSF.S	Y	21.46	1.2	676.7615	5	18.739	1413	1	1042	1077	N
175	IPI00890560	Y.KVTKLLSGDEY(+79.97)IFRVMAVNKYGIGEPLF.S	Y	21.16	-0.5	654.3433	5	40.699	3219	1	20600	20627	Y
175	IPI00890560	Y.ASDEGQY.K	Y	10.91	-1.6	385.153	2	3.639	249	2	1817	1823	N
175	IPI00890560	W.DEPLIDGGSEITGY.I	Y	10.39	-2.2	489.2268	3	32.351	2553	1	15531	15544	N
175	IPI00890560	F.LAKQREIDSIY(+79.97).Y	Y	9.94	2.8	708.3521	2	23.075	1800	1	2980	2990	Y
175	IPI00890560	F.RVVAENRYGKGAPLDSKSIVVQYPY.K	Y	8.21	-0.2	562.7056	5	38.255	3027	1	20217	20241	N
175	IPI00890560	W.TKLNKTLITDT(+79.97)VF.K	Y	7.97	1.3	787.4165	2	39.256	3105	1	20291	20303	Y
175	IPI00890560	W.LHDGKPLAAANRLRM(+15.99)VNEF.G	Y	7.18	2.2	542.7915	4	25.441	2006	1	1044	1062	Y
164	IPI00993122	Y.KVTKLLSGDEY(+79.97)IFRVMAVNKYGIGEPLF.S	Y	21.16	-0.5	654.3433	5	40.699	3219	1	19027	19054	Y

164	IPI00993122	Y.ASDEGQY.K	Y	10.91	-1.6	385.153	2	3.639	249	2	244	250	N
164	IPI00993122	W.DEPLIDGGSEITGY.I	Y	10.39	-2.2	489.2268	3	32.351	2553	1	13958	13971	N
164	IPI00993122	F.LAKQREIDSIY(+79.97).Y	Y	9.94	2.8	708.3521	2	23.075	1800	1	1407	1417	Y
164	IPI00993122	F.RVVAENRYGKGAPLDSKSIVVQYPY.K	Y	8.21	-0.2	562.7056	5	38.255	3027	1	18644	18668	N
164	IPI00993122	W.TKLNKTLITDT(+79.97)VF.K	Y	7.97	1.3	787.4165	2	39.256	3105	1	18718	18730	Y
2857	IPI00631596	F.NGTPVYNKSVYLLEGRSWSSQLLLNLTTDRNGLAVF.S	Y	20.21	-2.2	806.0257	5	22.43	1741	1	370	405	N

APPENDIX J
PEAKS DATABASE SEARCH RESULTS FOR CEM LOW

Database search summary report (generated by Peaks DB software)

1. Notes

2. Result Statistics

Figure 1: The false discovery rate (FDR) curve. X-axis is the number of peptide-spectrum matches (PSM) being kept and the y-axis is the FDR.

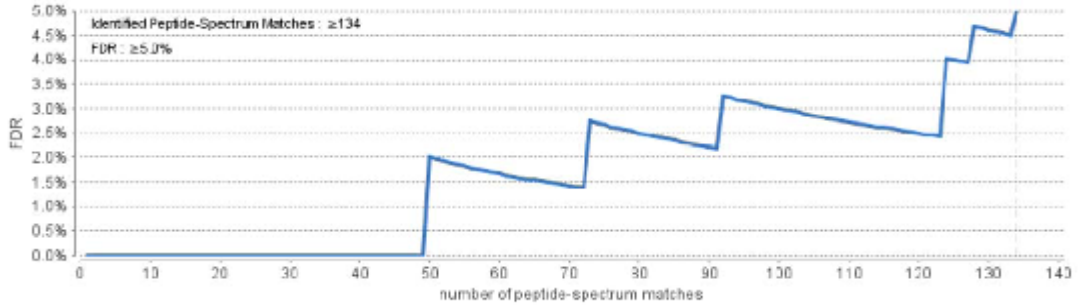

Figure 2: The distribution of PEAKS peptide score (-10lgP): **(a)** histogram of score; **(b)** The plot of precursor mass error vs. score.

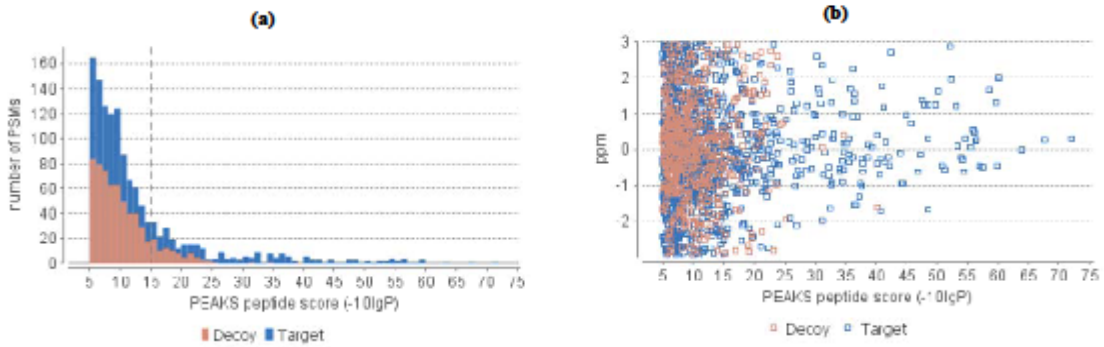

Table 1. Statistics of data.

# of MS Scans	876
# of MS/MS Scans	3549

Table 2. Result filtration parameters.

Peptide -10lgP	≥15	De Novo TLC	≥3
Protein -10lgP	≥20	De Novo ALC	≥50%
Proteins Unique Peptides	≥0		

Table 3. Statistics of filtered result.

Peptide-Spectrum Matches	214
Peptide Sequences	142
Protein Groups	33
Proteins	42
Proteins (#Unique Peptides)	4 (>2); 6 (=2); 26 (=1);
FDR (Peptide-Spectrum Matches)	40.2%
FDR (Peptide Sequences)	38.7%
De Novo Only	1608

Table 4. PTM Profile.

T(+79.97)	4
M(+15.99)	16
Y(+79.97)	2
S(+79.97)	6

3. Experiment Control

Figure 3: The precursor mass error (observed m/z - theoretical m/z) distribution of the PSMs in filtered result. **(a)** Each bar indicates the number of PSMs (y-axis) with a certain precursor error (x-axis); **(b)** Each data point represents a PSM. x-axis is the theoretical m/z and y-axis is the precursor mass error

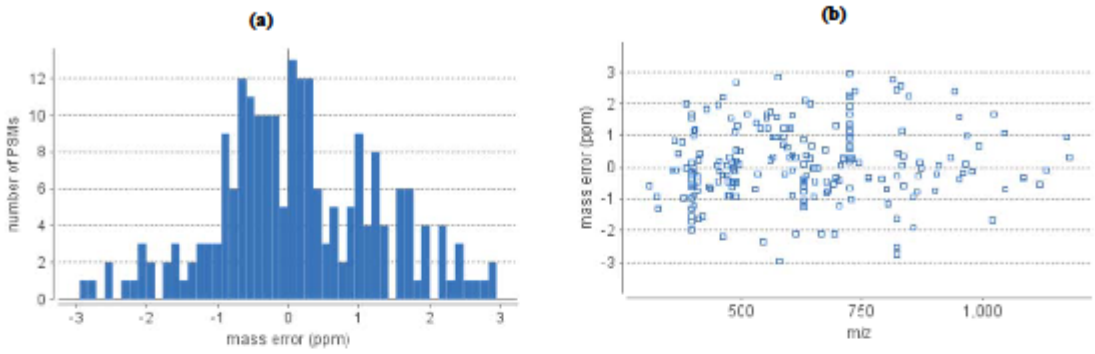

Table 5. number of peptides by number of missed cleavages

Missed Cleavages	0	1	2	3
Peptides	12	37	56	37

4. Other Information

Table 6. Search parameters.

Search Engine Name: PEAKS 5.3
Parent Mass Error Tolerance: 3.0 ppm
Fragment Mass Error Tolerance: 0.5 Da
Precursor Mass Search Type: monoisotopic
Enzyme: CEM_SC
Max Missed Cleavages: 3
Variable Modifications:
  Phosphorylation-STY: 79.97
  Oxidation M: 15.99
Max variable PTM per peptide: 3
Database: IPI_danre.v3.82
Taxon: All
Searched Entry: 41893
Decoy Performed: true

Table 7. Instrument parameters.

Fractions: CEM_LOW.RAW
Ion Source: ESI(nano-spray)
Fragmentation Mode: CID, CAD, IRMPD (y and b ions)
MS Scan Mode: FT-ICR/Orbitrap
MS/MS Scan Mode: Linear Ion Trap

Protein results for CEM low digested myosin – generated by PEAKS DB software

Protein Group	Protein ID	Accession	-10lgP	Coverage (%)	#Peptides	#Unique	Mass	Best Unique Peptide	Description
1	2	IPI00773363	228.08	16	46	0	222157.875		Tax_Id=7955 Gene_Symbol=myhz1.2 Novel myosin family protein
3	4	IPI00858466	227.83	16	45	0	222215.1094		Tax_Id=7955 Gene_Symbol=myhz1.3 Uncharacterized protein
2	6	IPI00500057	226.91	17	46	0	222199.0312		Tax_Id=7955 Gene_Symbol=LOC100149148 myosin heavy chain, fast skeletal muscle
4	1	IPI00933204	224.35	15	43	0	221878.8125		Tax_Id=7955 Gene_Symbol=myhz2 Myosin, heavy polypeptide 2, fast muscle specific
5	8	IPI00961738	197.99	14	38	1	221423.5469	1197	Tax_Id=7955 Gene_Symbol=wu:fd14a01 myosin heavy chain, fast skeletal muscle
6	13	IPI00484075	175.16	10	25	0	222841.5781		Tax_Id=7955 Gene_Symbol=myhb Uncharacterized protein
7	45	IPI00488085	163.3	33	15	2	18865.3379	978	Tax_Id=7955 Gene_Symbol=mylz2 Myosin, light polypeptide 2, skeletal muscle
9	52	IPI00496651	162.09	36	15	2	19122.625	1186	Tax_Id=7955 Gene_Symbol=zgc:103639 Zgc:103639
8	11	IPI00490216	161.15	6	16	1	222803.3594	789	Tax_Id=7955 Gene_Symbol=myh6 Myosin, heavy polypeptide 6, cardiac muscle, alpha
16	20	IPI00504207	160.77	19	9	9	41972.9648	826	Tax_Id=7955 Gene_Symbol=actc1b Skeletal alpha1 actin
16	21	IPI00507230	160.77	19	9	9	41974.9375	826	Tax_Id=7955 Gene_Symbol=hm:zewp0073;actc1a Actin, alpha, cardiac muscle like
16	22	IPI00551966	160.77	19	9	9	41983.0039	826	Tax_Id=7955 Gene_Symbol=actc1b Actin, alpha 1, skeletal muscle
16	23	IPI00628880	160.77	19	9	9	41974.9375	826	Tax_Id=7955 Gene_Symbol=acta1b Actin, alpha 1b, skeletal muscle
11	14	IPI00934366	155.87	6	16	2	223043.4375	844	Tax_Id=7955 Gene_Symbol=smyhc1 Uncharacterized protein
14	18	IPI00501288	137.82	4	9	0	226660.125		Tax_Id=7955 Gene_Symbol=myh7;myh7bb Uncharacterized protein
15	29	IPI00800858	135.36	3	8	2	225510.3594	831	Tax_Id=7955 Gene_Symbol=myh7b myosin-7
13	30	IPI00616127	129.67	4	11	1	224164	3826	Tax_Id=7955 Gene_Symbol=vmhcl Uncharacterized protein
23	106	IPI00923343	54.99	15	2	2	13757.6289	1677	Tax_Id=7955 Gene_Symbol=mylz3 Myosin, light polypeptide 3, skeletal muscle
23	63	IPI00488248	54.99	12	2	2	16767.8711	1677	Tax_Id=7955 Gene_Symbol=mylz3 Myosin, light polypeptide 3, skeletal muscle
65	64	IPI00499941	42.52	4	1	1	20931.7656	1242	Tax_Id=7955 Gene_Symbol=zgc:77231 Zgc:77231
10	6190	IPI00492089	36.47	2	1	1	58051.4805	2345	Tax_Id=7955 Gene_Symbol=syt14b synaptotagmin-14
47	955	IPI00512746	30.81	2	1	1	162126.6719	1211	Tax_Id=7955 Gene_Symbol=atp7a Uncharacterized protein
17	963	IPI00742506	28.49	1	1	1	158533.75	2346	Tax_Id=7955 Gene_Symbol=abcc9 Sulfonylurea receptor subunit 2
17	964	IPI00500513	28.49	1	1	1	175241.0156	2346	Tax_Id=7955 Gene_Symbol=abcc9 ATP-binding cassette, sub-family C (CFTR/MRP), member 9
67	114	IPI00901816	28	1	1	1	153645.0312	1200	Tax_Id=7955 Gene_Symbol=LOC100329883 FYVE and coiled-coil domain-containing protein 1-like
67	115	IPI00933229	28	1	1	1	156622.4375	1200	Tax_Id=7955 Gene_Symbol=LOC100329883 Uncharacterized protein (Fragment)
34	1288	IPI00833554	26.96	2	1	1	128405.4844	626	Tax_Id=7955 Gene_Symbol=LOC100005948 hypothetical protein LOC100005948
46	147	IPI00993424	25.93	1	1	1	176522	648	Tax_Id=7955 Gene_Symbol=zgc:63611 Uncharacterized protein

48	6192	IPI00962988	23.92	1	1	1	189127.5	1775	Tax_Id=7955 Gene_Symbol=kif1ab kinesin family member 1Ab isoform 2
48	982	IPI00962792	23.92	1	1	1	189137.0781	1775	Tax_Id=7955 Gene_Symbol=kif1a kinesin-like protein KIF1A-like
90	6212	IPI00516018	23.19	0	1	1	892770.1875	711	Tax_Id=7955 Gene_Symbol=si:dkey-30j22.1 Novel EGF domain containing protein (Fragment)
90	698	IPI00515924	23.19	0	1	1	934051.375	711	Tax_Id=7955 Gene_Symbol=si:dkey-30j22.2 hypothetical protein LOC565101
39	990	IPI00994665	22.72	2	1	1	84553.4922	2149	Tax_Id=7955 Gene_Symbol=LOC796535 Uncharacterized protein
82	794	IPI00829298	22.7	0	1	1	149104.875	2055	Tax_Id=7955 Gene_Symbol=pds5a Uncharacterized protein
20	1029	IPI00489045	22.41	1	1	1	158960.4844	2956	Tax_Id=7955 Gene_Symbol=grin2ab Uncharacterized protein
76	465	IPI00897430	21.86	0	1	1	191104.3906	967	Tax_Id=7955 Gene_Symbol=LOC100151026 Uncharacterized protein
80	1051	IPI00961772	21.04	1	1	1	45651.3594	2127	Tax_Id=7955 Gene_Symbol=LOC100330782 transmembrane protein 79
75	6197	IPI00484190	20.87	1	1	1	78034.4766	1315	Tax_Id=7955 Gene_Symbol=acox3 Acyl-Coenzyme A oxidase 3, pristanoyl
77	6199	IPI00931483	20.41	0	1	1	187310.5	1747	Tax_Id=7955 Gene_Symbol=- Uncharacterized protein
29	6198	IPI00919826	20.26	2	1	1	34934.3125	2158	Tax_Id=7955 Gene_Symbol=- Uncharacterized protein
51	6194	IPI00899042	20.04	1	1	1	176629.5625	26	Tax_Id=7955 Gene_Symbol=LOC799109 Uncharacterized protein
51	6201	IPI00928833	20.04	2	1	1	49252.9141	26	Tax_Id=7955 Gene_Symbol=LOC799109 Uncharacterized protein
total 42 proteins									

Peptide results for CEM low digested myosin – generated by PEAKS DB software

Protein ID	Protein Accession	Peptide	isUnique	-10lgP	ppm	m/z	z	RT	Scan	#Spectra	Start	End	hasPTM
2	IPI00773363	K.GGSMQTVSSQFR.E	N	67.71	0.3	642.8038	2	15.401	1134	1	643	654	N
2	IPI00773363	K.GGSM(+15.99)QTVSSQFR.E	N	63.76	0	650.8011	2	15.41	1135	1	643	654	Y
2	IPI00773363	L.REQFEEEQEAK.A	N	56.47	0.3	711.8286	2	12.056	825	2	1346	1356	N
2	IPI00773363	R.STHPHFV.R	N	56.21	0.2	412.7062	2	12.081	828	1	666	672	N
2	IPI00773363	K.YETDAIQR.T	N	56.12	0.5	498.2435	2	12.745	886	1	1377	1384	N
2	IPI00773363	R.MEAPPHIF.S	N	55.47	0.1	471.2311	2	18.565	1435	1	150	157	N
2	IPI00773363	L.GLNSADMLK.A	N	54.57	0.3	474.7447	2	15.21	1116	1	393	401	N
2	IPI00773363	R.EQFEEEQEAK.A	N	54.1	-0.3	633.7776	2	12.558	870	1	1347	1356	N
2	IPI00773363	A.LEEAEGTLEHEESK.I	N	54.03	-0.2	534.2493	3	13.656	971	1	1546	1559	N
2	IPI00773363	K.KGGSMQTVSSQF.R	N	53.35	0.1	628.8007	2	15.597	1152	1	642	653	N
2	IPI00773363	R.M(+15.99)EAPPHI.F	N	53.08	1.2	405.6948	2	14.837	1080	1	150	156	Y
2	IPI00773363	F.M(+15.99)LTDRENQSV.L	N	50.22	1.6	604.7834	2	13.544	960	1	167	176	Y
2	IPI00773363	R.TLEDQLSEIK.S	N	49.7	1.2	588.3121	2	18.507	1429	4	1253	1262	N
2	IPI00773363	F.MLTDRENQSV.L	N	48.64	1.2	596.7857	2	13.519	957	1	167	176	N
2	IPI00773363	K.TPGLMENFL.V	N	48.45	-1.7	1021.501	1	25.514	2064	1	682	690	N
2	IPI00773363	R.ENLGKLMTNL.R	N	44.92	1	566.8057	2	21.507	1707	1	655	664	N
2	IPI00773363	K.LYDQHLGK.C	N	44.19	-0.9	325.1746	3	12.41	857	1	556	563	N
2	IPI00773363	F.MLTDRENQSVL.I	N	42.19	-0.5	653.3267	2	16.331	1221	1	167	177	N
2	IPI00773363	K.SAETEKELA.T	N	41.66	0.2	489.243	2	11.271	760	1	844	852	N
2	IPI00773363	K.GGSM(+15.99)QTV.S	N	41.34	-0.4	695.3026	1	11.134	749	1	643	649	Y
2	IPI00773363	A.GLLGTLEEMR.D	N	40.92	1.7	559.7983	2	23.413	1885	1	770	779	N
2	IPI00773363	R.SLSTELFK.M	N	40.83	-0.3	462.7553	2	18.193	1399	1	1478	1485	N
2	IPI00773363	R.MEAPPHI.F	N	40.72	-1.7	397.6962	2	34.622	2803	15	150	156	N
2	IPI00773363	K.DFETSQLL.S	N	40.1	-0.4	952.4618	1	21.779	1735	4	1086	1093	N
2	IPI00773363	V.DASERVGL.L	N	36.18	2.2	846.4334	1	13.895	993	1	1710	1717	N
2	IPI00773363	L.QHRLDEAENL.A	N	35.46	0.3	612.8022	2	13.78	983	1	1796	1805	N
2	IPI00773363	R.LQDLVDK.L	N	33.03	0.4	415.7347	2	13.264	933	2	1866	1872	N
2	IPI00773363	K.MEGDLNEMEI.Q	N	32.94	0.3	1180.487	1	21.265	1684	1	1620	1629	N

2	IPI00773363	A.RHDCDL.L	N	32.55	-1	379.6657	2	7.595	492	1	1339	1344	N
2	IPI00773363	R.LQGEVEDL.M	N	32.25	-0.7	902.4459	1	16.842	1269	1	1423	1430	N
2	IPI00773363	R.TLEDQLSEI.K	N	31.38	-0.7	1047.52	1	21.659	1722	2	1253	1261	N
2	IPI00773363	R.LDEAENL.A	N	29.69	1	402.1931	2	15.129	1108	1	1799	1805	N
2	IPI00773363	L.LHSQNTSL.L	N	29.48	0.1	450.2327	2	11.627	790	1	1718	1725	N
2	IPI00773363	L.DEAENL.A	N	29.44	-0.5	690.2936	1	12.335	850	1	1800	1805	N
2	IPI00773363	L.RRDLEESTL.Q	N	28.64	0.2	559.7938	2	13.414	948	1	1177	1185	N
2	IPI00773363	R.KVAEQEL.V	N	27.77	-0.3	408.7266	2	12.275	845	1	1702	1708	N
2	IPI00773363	K.NLEVTVK.D	N	27.56	-0.7	802.4663	1	13.609	966	9	1787	1793	N
2	IPI00773363	A.ANPLLEA.Y	N	26.73	-1	727.3977	1	17.041	1288	1	227	233	N
2	IPI00773363	R.QLEEKEAL.V	N	26.51	0.1	480.2559	2	13.643	969	2	1292	1299	N
2	IPI00773363	L.DIAGFEI.F	N	26.37	-0.3	764.3822	1	23.78	1918	1	465	471	N
2	IPI00773363	K.NLQQEI.S	N	22.83	0.2	744.3887	1	15.658	1158	1	1506	1511	N
2	IPI00773363	L.RSTHPHFV.R	N	22.18	-1.3	327.5064	3	11.007	739	1	665	672	N
2	IPI00773363	I.SDLTEQI.G	N	21.64	-1.1	805.3928	1	16.48	1236	1	1512	1518	N
2	IPI00773363	A.ITDAAMMA.E	N	20.53	-0.3	823.3686	1	38.929	3154	3	1761	1768	N
2	IPI00773363	K.VQHELEEA.E	N	20.12	1.5	477.7307	2	12.149	834	1	1901	1908	N
2	IPI00773363	A.IDILGF.N	N	17.98	-0.8	677.3862	1	26.223	2122	1	340	345	N
2	IPI00773363	K.AGLLGTL.E	N	17.74	0.7	644.3981	1	21.877	1744	1	769	775	N
2	IPI00773363	K.GGSMQTV.S	N	17.26	-0.7	679.3074	1	11.125	748	1	643	649	N
2	IPI00773363	L.RMDLER.A	N	16.37	-0.4	410.2105	2	11.207	755	1	1047	1052	N
2	IPI00773363	K.NLEVTV.K	N	15.56	0.5	674.3723	1	17.292	1312	1	1787	1792	N
2	IPI00773363	K.ELTYQTEEDKK.N	N	11.13	2	692.3369	2	12.566	871	1	1851	1861	N
4	IPI00858466	K.GGSMQTVSSQFR.E	N	67.71	0.3	642.8038	2	15.401	1134	1	643	654	N
4	IPI00858466	K.GGSM(+15.99)QTVSSQFR.E	N	63.76	0	650.8011	2	15.41	1135	1	643	654	Y
4	IPI00858466	L.REQFEEEQEAK.A	N	56.47	0.3	711.8286	2	12.056	825	2	1346	1356	N
4	IPI00858466	R.STHPHFV.R	N	56.21	0.2	412.7062	2	12.081	828	1	666	672	N
4	IPI00858466	K.YETDAIQR.T	N	56.12	0.5	498.2435	2	12.745	886	1	1377	1384	N
4	IPI00858466	R.MEAPPHIF.S	N	55.47	0.1	471.2311	2	18.565	1435	1	150	157	N
4	IPI00858466	L.GLNSADMLK.A	N	54.57	0.3	474.7447	2	15.21	1116	1	393	401	N
4	IPI00858466	R.EQFEEEQEAK.A	N	54.1	-0.3	633.7776	2	12.558	870	1	1347	1356	N

4	IPI00858466	A.LEEAEGTLEHEESK.I	N	54.03	-0.2	534.2493	3	13.656	971	1	1546	1559	N
4	IPI00858466	K.KGGSMQTVSSQF.R	N	53.35	0.1	628.8007	2	15.597	1152	1	642	653	N
4	IPI00858466	R.M(+15.99)EAPPHI.F	N	53.08	1.2	405.6948	2	14.837	1080	1	150	156	Y
4	IPI00858466	F.M(+15.99)LTDRENQSV.L	N	50.22	1.6	604.7834	2	13.544	960	1	167	176	Y
4	IPI00858466	R.TLEDQLSEIK.S	N	49.7	1.2	588.3121	2	18.507	1429	4	1253	1262	N
4	IPI00858466	F.MLTDRENQSV.L	N	48.64	1.2	596.7857	2	13.519	957	1	167	176	N
4	IPI00858466	K.TPGLMENFL.V	N	48.45	-1.7	1021.501	1	25.514	2064	1	682	690	N
4	IPI00858466	R.ENLGKLMTNL.R	N	44.92	1	566.8057	2	21.507	1707	1	655	664	N
4	IPI00858466	K.LYDQHLGK.C	N	44.19	-0.9	325.1746	3	12.41	857	1	556	563	N
4	IPI00858466	F.MLTDRENQSVL.I	N	42.19	-0.5	653.3267	2	16.331	1221	1	167	177	N
4	IPI00858466	K.SAETEKELA.T	N	41.66	0.2	489.243	2	11.271	760	1	844	852	N
4	IPI00858466	K.GGSM(+15.99)QTV.S	N	41.34	-0.4	695.3026	1	11.134	749	1	643	649	Y
4	IPI00858466	A.GLLGTLEEMR.D	N	40.92	1.7	559.7983	2	23.413	1885	1	770	779	N
4	IPI00858466	R.SLSTELFK.M	N	40.83	-0.3	462.7553	2	18.193	1399	1	1478	1485	N
4	IPI00858466	R.MEAPPHI.F	N	40.72	-1.7	397.6962	2	34.622	2803	15	150	156	N
4	IPI00858466	K.DFETSQLL.S	N	40.1	-0.4	952.4618	1	21.779	1735	4	1086	1093	N
4	IPI00858466	V.DASERVGL.L	N	36.18	2.2	846.4334	1	13.895	993	1	1710	1717	N
4	IPI00858466	L.QHRLDEAENL.A	N	35.46	0.3	612.8022	2	13.78	983	1	1796	1805	N
4	IPI00858466	R.LQDLVDK.L	N	33.03	0.4	415.7347	2	13.264	933	2	1866	1872	N
4	IPI00858466	K.MEGDLNEMEI.Q	N	32.94	0.3	1180.487	1	21.265	1684	1	1620	1629	N
4	IPI00858466	A.RHDCDL.L	N	32.55	-1	379.6657	2	7.595	492	1	1339	1344	N
4	IPI00858466	R.LQGEVEDL.M	N	32.25	-0.7	902.4459	1	16.842	1269	1	1423	1430	N
4	IPI00858466	R.TLEDQLSEI.K	N	31.38	-0.7	1047.52	1	21.659	1722	2	1253	1261	N
4	IPI00858466	R.LDEAENL.A	N	29.69	1	402.1931	2	15.129	1108	1	1799	1805	N
4	IPI00858466	L.LHSQNTSL.L	N	29.48	0.1	450.2327	2	11.627	790	1	1718	1725	N
4	IPI00858466	L.DEAENL.A	N	29.44	-0.5	690.2936	1	12.335	850	1	1800	1805	N
4	IPI00858466	L.RRDLEESTL.Q	N	28.64	0.2	559.7938	2	13.414	948	1	1177	1185	N
4	IPI00858466	R.KVAEQEL.V	N	27.77	-0.3	408.7266	2	12.275	845	1	1702	1708	N
4	IPI00858466	K.NLEITVK.D	N	26.89	-0.7	408.7446	2	14.997	1096	1	1787	1793	N
4	IPI00858466	A.ANPLLEA.Y	N	26.73	-1	727.3977	1	17.041	1288	1	227	233	N
4	IPI00858466	R.QLEEKEAL.V	N	26.51	0.1	480.2559	2	13.643	969	2	1292	1299	N

4	IPI00858466	L.DIAGFEI.F	N	26.37	-0.3	764.3822	1	23.78	1918	1	465	471	N
4	IPI00858466	Y.TIQYNIR.S	N	25.79	0.2	454.2535	2	14.31	1029	1	815	821	N
4	IPI00858466	K.NLQQEI.S	N	22.83	0.2	744.3887	1	15.658	1158	1	1506	1511	N
4	IPI00858466	L.RSTHPHFV.R	N	22.18	-1.3	327.5064	3	11.007	739	1	665	672	N
4	IPI00858466	A.ITDAAMMA.E	N	20.53	-0.3	823.3686	1	38.929	3154	3	1761	1768	N
4	IPI00858466	K.VQHELEEA.E	N	20.12	1.5	477.7307	2	12.149	834	1	1901	1908	N
4	IPI00858466	A.IDILGF.N	N	17.98	-0.8	677.3862	1	26.223	2122	1	340	345	N
4	IPI00858466	K.AGLLGTL.E	N	17.74	0.7	644.3981	1	21.877	1744	1	769	775	N
4	IPI00858466	K.GGSMQTV.S	N	17.26	-0.7	679.3074	1	11.125	748	1	643	649	N
4	IPI00858466	L.RMDLER.A	N	16.37	-0.4	410.2105	2	11.207	755	1	1047	1052	N
4	IPI00858466	K.ELTYQTEEDKK.N	N	11.13	2	692.3369	2	12.566	871	1	1851	1861	N
6	IPI00500057	K.GGSMQTVSSQFR.E	N	67.71	0.3	642.8038	2	15.401	1134	1	641	652	N
6	IPI00500057	K.GGSM(+15.99)QTVSSQFR.E	N	63.76	0	650.8011	2	15.41	1135	1	641	652	Y
6	IPI00500057	L.REQFEEEQEAK.A	N	56.47	0.3	711.8286	2	12.056	825	2	1344	1354	N
6	IPI00500057	R.STHPHFV.R	N	56.21	0.2	412.7062	2	12.081	828	1	664	670	N
6	IPI00500057	K.YETDAIQR.T	N	56.12	0.5	498.2435	2	12.745	886	1	1375	1382	N
6	IPI00500057	R.MEAPPHIF.S	N	55.47	0.1	471.2311	2	18.565	1435	1	150	157	N
6	IPI00500057	R.EQFEEEQEAK.A	N	54.1	-0.3	633.7776	2	12.558	870	1	1345	1354	N
6	IPI00500057	A.LEEAEGTLEHEESK.I	N	54.03	-0.2	534.2493	3	13.656	971	1	1544	1557	N
6	IPI00500057	K.KGGSMQTVSSQF.R	N	53.35	0.1	628.8007	2	15.597	1152	1	640	651	N
6	IPI00500057	R.M(+15.99)EAPPHI.F	N	53.08	1.2	405.6948	2	14.837	1080	1	150	156	Y
6	IPI00500057	F.M(+15.99)LTDRENQSV.L	N	50.22	1.6	604.7834	2	13.544	960	1	167	176	Y
6	IPI00500057	R.TLEDQLSEIK.S	N	49.7	1.2	588.3121	2	18.507	1429	4	1251	1260	N
6	IPI00500057	F.MLTDRENQSV.L	N	48.64	1.2	596.7857	2	13.519	957	1	167	176	N
6	IPI00500057	K.TPGLMENFL.V	N	48.45	-1.7	1021.501	1	25.514	2064	1	680	688	N
6	IPI00500057	R.ENLGKLMTNL.R	N	44.92	1	566.8057	2	21.507	1707	1	653	662	N
6	IPI00500057	K.LYDQHLGK.C	N	44.19	-0.9	325.1746	3	12.41	857	1	556	563	N
6	IPI00500057	F.MLTDRENQSVL.I	N	42.19	-0.5	653.3267	2	16.331	1221	1	167	177	N
6	IPI00500057	K.SAETEKELA.N	N	41.66	0.2	489.243	2	11.271	760	1	842	850	N
6	IPI00500057	K.GGSM(+15.99)QTV.S	N	41.34	-0.4	695.3026	1	11.134	749	1	641	647	Y
6	IPI00500057	A.GLLGTLEEMR.D	N	40.92	1.7	559.7983	2	23.413	1885	1	768	777	N

6	IPI00500057	R.SLSTELFK.M	N	40.83	-0.3	462.7553	2	18.193	1399	1	1476	1483	N
6	IPI00500057	R.MEAPPHI.F	N	40.72	-1.7	397.6962	2	34.622	2803	15	150	156	N
6	IPI00500057	K.DFETSQLL.S	N	40.1	-0.4	952.4618	1	21.779	1735	4	1084	1091	N
6	IPI00500057	I.ELIEKPMGIF.S	N	36.19	-0.2	588.8201	2	22.857	1835	1	526	535	N
6	IPI00500057	V.DASERVGL.L	N	36.18	2.2	846.4334	1	13.895	993	1	1708	1715	N
6	IPI00500057	L.QHRLDEAENL.A	N	35.46	0.3	612.8022	2	13.78	983	1	1794	1803	N
6	IPI00500057	R.LQDLVDK.L	N	33.03	0.4	415.7347	2	13.264	933	2	1864	1870	N
6	IPI00500057	K.MEGDLNEMEI.Q	N	32.94	0.3	1180.487	1	21.265	1684	1	1618	1627	N
6	IPI00500057	A.RHDCDL.L	N	32.55	-1	379.6657	2	7.595	492	1	1337	1342	N
6	IPI00500057	R.LQGEVEDL.M	N	32.25	-0.7	902.4459	1	16.842	1269	1	1421	1428	N
6	IPI00500057	R.TLEDQLSEI.K	N	31.38	-0.7	1047.52	1	21.659	1722	2	1251	1259	N
6	IPI00500057	R.LDEAENL.A	N	29.69	1	402.1931	2	15.129	1108	1	1797	1803	N
6	IPI00500057	L.LHSQNTSL.L	N	29.48	0.1	450.2327	2	11.627	790	1	1716	1723	N
6	IPI00500057	L.DEAENL.A	N	29.44	-0.5	690.2936	1	12.335	850	1	1798	1803	N
6	IPI00500057	L.RRDLEESTL.Q	N	28.64	0.2	559.7938	2	13.414	948	1	1175	1183	N
6	IPI00500057	R.KVAEQEL.V	N	27.77	-0.3	408.7266	2	12.275	845	1	1700	1706	N
6	IPI00500057	K.NLEITVK.D	N	26.89	-0.7	408.7446	2	14.997	1096	1	1785	1791	N
6	IPI00500057	A.ANPLLEA.Y	N	26.73	-1	727.3977	1	17.041	1288	1	227	233	N
6	IPI00500057	R.QLEEKEAL.V	N	26.51	0.1	480.2559	2	13.643	969	2	1290	1297	N
6	IPI00500057	L.DIAGFEI.F	N	26.37	-0.3	764.3822	1	23.78	1918	1	465	471	N
6	IPI00500057	Y.TIQYNIR.S	N	25.79	0.2	454.2535	2	14.31	1029	1	813	819	N
6	IPI00500057	K.NLQQEI.S	N	22.83	0.2	744.3887	1	15.658	1158	1	1504	1509	N
6	IPI00500057	L.RSTHPHFV.R	N	22.18	-1.3	327.5064	3	11.007	739	1	663	670	N
6	IPI00500057	I.SDLTEQI.G	N	21.64	-1.1	805.3928	1	16.48	1236	1	1510	1516	N
6	IPI00500057	A.ITDAAMMA.E	N	20.53	-0.3	823.3686	1	38.929	3154	3	1759	1766	N
6	IPI00500057	K.VQHELEEA.E	N	20.12	1.5	477.7307	2	12.149	834	1	1899	1906	N
6	IPI00500057	A.IDILGF.T	N	17.98	-0.8	677.3862	1	26.223	2122	1	340	345	N
6	IPI00500057	K.AGLLGTL.E	N	17.74	0.7	644.3981	1	21.877	1744	1	767	773	N
6	IPI00500057	K.GGSMQTV.S	N	17.26	-0.7	679.3074	1	11.125	748	1	641	647	N
6	IPI00500057	L.RMDLER.A	N	16.37	-0.4	410.2105	2	11.207	755	1	1045	1050	N
6	IPI00500057	K.ELTYQTEEDKK.N	N	11.13	2	692.3369	2	12.566	871	1	1849	1859	N

6	IPI00500057	A.CIELIEKPMGI.F	N	8.61	0.5	623.333	2	22.329	1786	1	524	534	N
1	IPI00933204	K.GGSMQTVSSQFR.E	N	67.71	0.3	642.8038	2	15.401	1134	1	643	654	N
1	IPI00933204	K.GGSM(+15.99)QTVSSQFR.E	N	63.76	0	650.8011	2	15.41	1135	1	643	654	Y
1	IPI00933204	L.REQFEEEQEAK.A	N	56.47	0.3	711.8286	2	12.056	825	2	1346	1356	N
1	IPI00933204	R.STHPHFV.R	N	56.21	0.2	412.7062	2	12.081	828	1	666	672	N
1	IPI00933204	K.YETDAIQR.T	N	56.12	0.5	498.2435	2	12.745	886	1	1377	1384	N
1	IPI00933204	R.MEAPPHIF.S	N	55.47	0.1	471.2311	2	18.565	1435	1	150	157	N
1	IPI00933204	L.GLNSADMLK.A	N	54.57	0.3	474.7447	2	15.21	1116	1	393	401	N
1	IPI00933204	R.EQFEEEQEAK.A	N	54.1	-0.3	633.7776	2	12.558	870	1	1347	1356	N
1	IPI00933204	A.LEEAEGTLEHEESK.I	N	54.03	-0.2	534.2493	3	13.656	971	1	1546	1559	N
1	IPI00933204	K.KGGSMQTVSSQF.R	N	53.35	0.1	628.8007	2	15.597	1152	1	642	653	N
1	IPI00933204	R.M(+15.99)EAPPHI.F	N	53.08	1.2	405.6948	2	14.837	1080	1	150	156	Y
1	IPI00933204	F.M(+15.99)LTDRENQSV.L	N	50.22	1.6	604.7834	2	13.544	960	1	167	176	Y
1	IPI00933204	F.MLTDRENQSV.L	N	48.64	1.2	596.7857	2	13.519	957	1	167	176	N
1	IPI00933204	K.TPGLMENFL.V	N	48.45	-1.7	1021.501	1	25.514	2064	1	682	690	N
1	IPI00933204	R.ENLGKLMTNL.R	N	44.92	1	566.8057	2	21.507	1707	1	655	664	N
1	IPI00933204	K.LYDQHLGK.C	N	44.19	-0.9	325.1746	3	12.41	857	1	556	563	N
1	IPI00933204	F.MLTDRENQSVL.I	N	42.19	-0.5	653.3267	2	16.331	1221	1	167	177	N
1	IPI00933204	K.SAETEKELA.T	N	41.66	0.2	489.243	2	11.271	760	1	844	852	N
1	IPI00933204	K.GGSM(+15.99)QTV.S	N	41.34	-0.4	695.3026	1	11.134	749	1	643	649	Y
1	IPI00933204	A.GLLGTLEEMR.D	N	40.92	1.7	559.7983	2	23.413	1885	1	770	779	N
1	IPI00933204	R.SLSTELFK.M	N	40.83	-0.3	462.7553	2	18.193	1399	1	1478	1485	N
1	IPI00933204	R.MEAPPHI.F	N	40.72	-1.7	397.6962	2	34.622	2803	15	150	156	N
1	IPI00933204	V.DASERVGL.L	N	36.18	2.2	846.4334	1	13.895	993	1	1710	1717	N
1	IPI00933204	L.QHRLDEAENL.A	N	35.46	0.3	612.8022	2	13.78	983	1	1796	1805	N
1	IPI00933204	R.LQDLVDK.L	N	33.03	0.4	415.7347	2	13.264	933	2	1866	1872	N
1	IPI00933204	K.MEGDLNEMEI.Q	N	32.94	0.3	1180.487	1	21.265	1684	1	1620	1629	N
1	IPI00933204	A.RHDCDL.L	N	32.55	-1	379.6657	2	7.595	492	1	1339	1344	N
1	IPI00933204	R.LQGEVEDL.M	N	32.25	-0.7	902.4459	1	16.842	1269	1	1423	1430	N
1	IPI00933204	R.LDEAENL.A	N	29.69	1	402.1931	2	15.129	1108	1	1799	1805	N
1	IPI00933204	L.LHSQNTSL.L	N	29.48	0.1	450.2327	2	11.627	790	1	1718	1725	N

1	IPI00933204	L.DEAENL.A	N	29.44	-0.5	690.2936	1	12.335	850	1	1800	1805	N
1	IPI00933204	L.RRDLEESTL.Q	N	28.64	0.2	559.7938	2	13.414	948	1	1177	1185	N
1	IPI00933204	R.KVAEQEL.V	N	27.77	-0.3	408.7266	2	12.275	845	1	1702	1708	N
1	IPI00933204	K.NLEVTVK.D	N	27.56	-0.7	802.4663	1	13.609	966	9	1787	1793	N
1	IPI00933204	A.ANPLLEA.Y	N	26.73	-1	727.3977	1	17.041	1288	1	227	233	N
1	IPI00933204	R.QLEEKEAL.V	N	26.51	0.1	480.2559	2	13.643	969	2	1292	1299	N
1	IPI00933204	L.DIAGFEI.F	N	26.37	-0.3	764.3822	1	23.78	1918	1	465	471	N
1	IPI00933204	Y.TIQYNIR.S	N	25.79	0.2	454.2535	2	14.31	1029	1	815	821	N
1	IPI00933204	K.NLQQEI.S	N	22.83	0.2	744.3887	1	15.658	1158	1	1506	1511	N
1	IPI00933204	L.RSTHPHFV.R	N	22.18	-1.3	327.5064	3	11.007	739	1	665	672	N
1	IPI00933204	A.ITDAAMMA.E	N	20.53	-0.3	823.3686	1	38.929	3154	3	1761	1768	N
1	IPI00933204	K.VQHELEEA.E	N	20.12	1.5	477.7307	2	12.149	834	1	1901	1908	N
1	IPI00933204	A.IDILGF.T	N	17.98	-0.8	677.3862	1	26.223	2122	1	340	345	N
1	IPI00933204	K.AGLLGTL.E	N	17.74	0.7	644.3981	1	21.877	1744	1	769	775	N
1	IPI00933204	K.GGSMQTV.S	N	17.26	-0.7	679.3074	1	11.125	748	1	643	649	N
1	IPI00933204	L.RMDLER.A	N	16.37	-0.4	410.2105	2	11.207	755	1	1047	1052	N
1	IPI00933204	K.NLEVTV.K	N	15.56	0.5	674.3723	1	17.292	1312	1	1787	1792	N
1	IPI00933204	K.ELTYQTEEDKK.N	N	11.13	2	692.3369	2	12.566	871	1	1851	1861	N
8	IPI00961738	L.REQFEEEQEAK.A	N	56.47	0.3	711.8286	2	12.056	825	2	1344	1354	N
8	IPI00961738	R.STHPHFV.R	N	56.21	0.2	412.7062	2	12.081	828	1	664	670	N
8	IPI00961738	K.YETDAIQR.T	N	56.12	0.5	498.2435	2	12.745	886	1	1375	1382	N
8	IPI00961738	R.EQFEEEQEAK.A	N	54.1	-0.3	633.7776	2	12.558	870	1	1345	1354	N
8	IPI00961738	A.LEEAEGTLEHEESK.I	N	54.03	-0.2	534.2493	3	13.656	971	1	1544	1557	N
8	IPI00961738	F.M(+15.99)LTDRENQSV.L	N	50.22	1.6	604.7834	2	13.544	960	1	165	174	Y
8	IPI00961738	R.TLEDQLSEIK.T	N	49.7	1.2	588.3121	2	18.507	1429	4	1251	1260	N
8	IPI00961738	F.MLTDRENQSV.L	N	48.64	1.2	596.7857	2	13.519	957	1	165	174	N
8	IPI00961738	K.TPGLMENFL.V	N	48.45	-1.7	1021.501	1	25.514	2064	1	680	688	N
8	IPI00961738	R.ENLGKLMTNL.R	N	44.92	1	566.8057	2	21.507	1707	1	653	662	N
8	IPI00961738	F.MLTDRENQSVL.I	N	42.19	-0.5	653.3267	2	16.331	1221	1	165	175	N
8	IPI00961738	A.GLLGTLEEMR.D	N	40.92	1.7	559.7983	2	23.413	1885	1	768	777	N
8	IPI00961738	R.SLSTEIFK.M	N	40.83	-0.3	462.7553	2	18.193	1399	1	1476	1483	N

8	IPI00961738	I.ELIEKPMGIF.S	N	36.19	-0.2	588.8201	2	22.857	1835	1	524	533	N
8	IPI00961738	V.DASERVGL.L	N	36.18	2.2	846.4334	1	13.895	993	1	1708	1715	N
8	IPI00961738	L.QHRLDEAENL.A	N	35.46	0.3	612.8022	2	13.78	983	1	1794	1803	N
8	IPI00961738	R.LQDLVDK.L	N	33.03	0.4	415.7347	2	13.264	933	2	1864	1870	N
8	IPI00961738	K.MEGDLNEMEI.Q	N	32.94	0.3	1180.487	1	21.265	1684	1	1618	1627	N
8	IPI00961738	A.RHDCDL.L	N	32.55	-1	379.6657	2	7.595	492	1	1337	1342	N
8	IPI00961738	R.LQGEVEDL.M	N	32.25	-0.7	902.4459	1	16.842	1269	1	1421	1428	N
8	IPI00961738	R.TLEDQLSEI.K	N	31.38	-0.7	1047.52	1	21.659	1722	2	1251	1259	N
8	IPI00961738	R.LDEAENL.A	N	29.69	1	402.1931	2	15.129	1108	1	1797	1803	N
8	IPI00961738	L.LHSQNTSL.I	N	29.48	0.1	450.2327	2	11.627	790	1	1716	1723	N
8	IPI00961738	L.DEAENL.A	N	29.44	-0.5	690.2936	1	12.335	850	1	1798	1803	N
8	IPI00961738	R.NVQGQL.K	N	28.73	0	658.3519	1	12.598	873	1	1645	1650	N
8	IPI00961738	L.RRDLEESTL.Q	N	28.64	0.2	559.7938	2	13.414	948	1	1175	1183	N
8	IPI00961738	R.KVAEQEL.V	N	27.77	-0.3	408.7266	2	12.275	845	1	1700	1706	N
8	IPI00961738	K.NLEVTVK.D	N	27.56	-0.7	802.4663	1	13.609	966	9	1785	1791	N
8	IPI00961738	A.ANPLLEA.Y	N	26.73	-1	727.3977	1	17.041	1288	1	225	231	N
8	IPI00961738	R.QLEEKEAL.V	N	26.51	0.1	480.2559	2	13.643	969	2	1290	1297	N
8	IPI00961738	L.DIAGFEI.F	N	26.37	-0.3	764.3822	1	23.78	1918	1	463	469	N
8	IPI00961738	K.NLQQEI.S	N	22.83	0.2	744.3887	1	15.658	1158	1	1504	1509	N
8	IPI00961738	L.RSTHPHFV.R	N	22.18	-1.3	327.5064	3	11.007	739	1	663	670	N
8	IPI00961738	A.ITDAAMMA.E	N	20.53	-0.3	823.3686	1	38.929	3154	3	1759	1766	N
8	IPI00961738	R.SLSTEI.F	Y	19.95	0	649.3403	1	16.076	1197	1	1476	1481	N
8	IPI00961738	A.IDILGF.T	N	17.98	-0.8	677.3862	1	26.223	2122	1	338	343	N
8	IPI00961738	K.AGLLGTL.E	N	17.74	0.7	644.3981	1	21.877	1744	1	767	773	N
8	IPI00961738	L.RMDLER.A	N	16.37	-0.4	410.2105	2	11.207	755	1	1045	1050	N
8	IPI00961738	K.NLEVTV.K	N	15.56	0.5	674.3723	1	17.292	1312	1	1785	1790	N
8	IPI00961738	R.VLDAMQSTL.D	Y	12.69	-0.3	977.4969	1	33.607	2719	3	1593	1601	N
8	IPI00961738	K.ELTYQTEEDKK.N	N	11.13	2	692.3369	2	12.566	871	1	1849	1859	N
8	IPI00961738	A.CIELIEKPMGI.F	N	8.61	0.5	623.333	2	22.329	1786	1	522	532	N
13	IPI00484075	R.LEEAGGATSA.Q	N	56.89	-0.5	453.2139	2	11.348	767	3	1152	1161	N
13	IPI00484075	R.STHPHFV.R	N	56.21	0.2	412.7062	2	12.081	828	1	666	672	N

13	IPI00484075	K.YETDAIQR.T	N	56.12	0.5	498.2435	2	12.745	886	1	1377	1384	N
13	IPI00484075	L.GLNSADMLK.A	N	54.57	0.3	474.7447	2	15.21	1116	1	391	399	N
13	IPI00484075	K.TPGLMENFL.V	N	48.45	-1.7	1021.501	1	25.514	2064	1	682	690	N
13	IPI00484075	R.ENLGKLMTNL.R	N	44.92	1	566.8057	2	21.507	1707	1	655	664	N
13	IPI00484075	A.GLLGTLEEMR.D	N	40.92	1.7	559.7983	2	23.413	1885	1	770	779	N
13	IPI00484075	R.SLSTELFK.M	N	40.83	-0.3	462.7553	2	18.193	1399	1	1478	1485	N
13	IPI00484075	I.ELIEKPMGIF.S	N	36.19	-0.2	588.8201	2	22.857	1835	1	524	533	N
13	IPI00484075	R.LQDLVDK.L	N	33.03	0.4	415.7347	2	13.264	933	2	1868	1874	N
13	IPI00484075	K.MEGDLNEMEI.Q	N	32.94	0.3	1180.487	1	21.265	1684	1	1622	1631	N
13	IPI00484075	L.LHSQNTSL.I	N	29.48	0.1	450.2327	2	11.627	790	1	1720	1727	N
13	IPI00484075	R.NVQGQL.K	N	28.73	0	658.3519	1	12.598	873	1	1649	1654	N
13	IPI00484075	L.RRDLEESTL.Q	N	28.64	0.2	559.7938	2	13.414	948	1	1177	1185	N
13	IPI00484075	R.KVAEQEL.V	N	27.77	-0.3	408.7266	2	12.275	845	1	1704	1710	N
13	IPI00484075	K.NLEVTVK.D	N	27.56	-0.7	802.4663	1	13.609	966	9	1789	1795	N
13	IPI00484075	A.ANPLLEA.Y	N	26.73	-1	727.3977	1	17.041	1288	1	225	231	N
13	IPI00484075	L.DIAGFEI.F	N	26.37	-0.3	764.3822	1	23.78	1918	1	463	469	N
13	IPI00484075	L.RSTHPHFV.R	N	22.18	-1.3	327.5064	3	11.007	739	1	665	672	N
13	IPI00484075	A.ITDAAMMA.E	N	20.53	-0.3	823.3686	1	38.929	3154	3	1763	1770	N
13	IPI00484075	K.VQHELEEA.Q	N	20.12	1.5	477.7307	2	12.149	834	1	1903	1910	N
13	IPI00484075	A.IDILGF.N	N	17.98	-0.8	677.3862	1	26.223	2122	1	338	343	N
13	IPI00484075	K.AGLLGTL.E	N	17.74	0.7	644.3981	1	21.877	1744	1	769	775	N
13	IPI00484075	L.RMDLER.A	N	16.37	-0.4	410.2105	2	11.207	755	1	1047	1052	N
13	IPI00484075	K.NLEVTV.K	N	15.56	0.5	674.3723	1	17.292	1312	1	1789	1794	N
13	IPI00484075	K.ELTYQTEEDKK.N	N	11.13	2	692.3369	2	12.566	871	1	1853	1863	N
13	IPI00484075	A.CIELIEKPMGI.F	N	8.61	0.5	623.333	2	22.329	1786	1	522	532	N
45	IPI00488085	F.EQSQIQEYKEA.F	N	59.89	-0.5	676.8197	2	13.455	951	1	24	34	N
45	IPI00488085	F.SMFEQSQIQEY.K	N	59.75	1.3	695.3041	2	20.104	1578	1	21	31	N
45	IPI00488085	L.ASM(+15.99)GQLNVK.N	Y	57.45	-0.5	482.2498	2	13.727	978	2	56	64	Y
45	IPI00488085	L.ASMGQLNVK.N	Y	50.95	-0.5	474.2523	2	13.714	976	2	56	64	N
45	IPI00488085	I.KEASGPINF.T	N	46.83	-0.6	481.7504	2	16.302	1219	1	73	81	N
45	IPI00488085	K.EASGPINF.T	N	41.24	1.2	834.4001	1	18.473	1425	2	74	81	N

45	IPI00488085	F.LTMFGEKL.K	N	37.65	-0.3	469.7543	2	21.636	1719	1	85	92	N
45	IPI00488085	F.TVFLTMF.G	N	37.52	-0.9	858.4422	1	27.316	2211	1	82	88	N
45	IPI00488085	F.LTM(+15.99)FGEK.L	N	36.81	-1.5	421.2092	2	15.769	1169	1	85	91	Y
45	IPI00488085	L.TM(+15.99)FGEK.L	N	34.63	-0.1	364.6678	2	12.693	882	1	86	91	Y
45	IPI00488085	F.SMFEQSQI.Q	N	34.49	1	969.4355	1	18.488	1427	1	21	28	N
45	IPI00488085	F.LTMFGEK.L	N	32.38	-1.6	413.2117	2	15.753	1167	2	85	91	N
45	IPI00488085	R.DGIISKDDL.R	N	32.24	-0.5	488.253	2	17.23	1306	1	43	51	N
45	IPI00488085	L.TMFGEK.L	N	31.66	-0.1	356.6703	2	12.686	881	1	86	91	N
45	IPI00488085	F.EQSQIQEYK.E	N	30.14	1	576.7808	2	12.548	869	1	24	32	N
45	IPI00488085	R.DVLASMGQL.N	Y	30.14	0.3	933.4713	1	22.129	1767	1	53	61	N
45	IPI00488085	A.SGPINF.T	N	23.77	0.4	634.3197	1	18.066	1386	1	76	81	N
45	IPI00488085	F.EQSQIQEY.K	N	21.44	1.7	1024.46	1	14.045	1006	2	24	31	N
52	IPI00496651	F.EQSQIQEYKEA.F	N	59.89	-0.5	676.8197	2	13.455	951	1	24	34	N
52	IPI00496651	F.SMFEQSQIQEY.K	N	59.75	1.3	695.3041	2	20.104	1578	1	21	31	N
52	IPI00496651	K.NEELEAM(+15.99)VK.E	Y	47.88	1.2	539.7585	2	15.958	1186	1	65	73	Y
52	IPI00496651	K.NEELEAMVK.E	Y	47.42	1.4	531.7612	2	15.951	1185	1	65	73	N
52	IPI00496651	V.KEASGPINF.T	N	46.83	-0.6	481.7504	2	16.302	1219	1	73	81	N
52	IPI00496651	Y.VITHGEEKEEE	Y	44.43	-0.9	650.3062	2	7.037	459	1	160	170	N
52	IPI00496651	K.EASGPINF.T	N	41.24	1.2	834.4001	1	18.473	1425	2	74	81	N
52	IPI00496651	F.LTMFGEKL.K	N	37.65	-0.3	469.7543	2	21.636	1719	1	85	92	N
52	IPI00496651	F.TVFLTMF.G	N	37.52	-0.9	858.4422	1	27.316	2211	1	82	88	N
52	IPI00496651	F.LTM(+15.99)FGEK.L	N	36.81	-1.5	421.2092	2	15.769	1169	1	85	91	Y
52	IPI00496651	L.TM(+15.99)FGEK.L	N	34.63	-0.1	364.6678	2	12.693	882	1	86	91	Y
52	IPI00496651	F.SMFEQSQI.Q	N	34.49	1	969.4355	1	18.488	1427	1	21	28	N
52	IPI00496651	F.LTMFGEK.L	N	32.38	-1.6	413.2117	2	15.753	1167	2	85	91	N
52	IPI00496651	R.DGIISKDDL.R	N	32.24	-0.5	488.253	2	17.23	1306	1	43	51	N
52	IPI00496651	L.TMFGEK.L	N	31.66	-0.1	356.6703	2	12.686	881	1	86	91	N
52	IPI00496651	F.EQSQIQEYK.E	N	30.14	1	576.7808	2	12.548	869	1	24	32	N
52	IPI00496651	A.SGPINF.T	N	23.77	0.4	634.3197	1	18.066	1386	1	76	81	N
52	IPI00496651	F.EQSQIQEY.K	N	21.44	1.7	1024.46	1	14.045	1006	2	24	31	N
11	IPI00490216	R.LEEAGGATSA.Q	N	56.89	-0.5	453.2139	2	11.348	767	3	1150	1159	N

11	IPI00490216	L.REQFEEEQEAK.A	N	56.47	0.3	711.8286	2	12.056	825	2	1344	1354	N
11	IPI00490216	R.EQFEEEQEAK.A	N	54.1	-0.3	633.7776	2	12.558	870	1	1345	1354	N
11	IPI00490216	Y.M(+15.99)LTDRENQSV.L	N	50.22	1.6	604.7834	2	13.544	960	1	165	174	Y
11	IPI00490216	Y.MLTDRENQSV.L	N	48.64	1.2	596.7857	2	13.519	957	1	165	174	N
11	IPI00490216	K.VGNEYVTK.G	Y	47.22	-0.1	455.2374	2	11.618	789	2	405	412	N
11	IPI00490216	Y.MLTDRENQSVL.I	N	42.19	-0.5	653.3267	2	16.331	1221	1	165	175	N
11	IPI00490216	A.GLLGTLEEMR.D	N	40.92	1.7	559.7983	2	23.413	1885	1	768	777	N
11	IPI00490216	R.SLSTELFK.L	N	40.83	-0.3	462.7553	2	18.193	1399	1	1476	1483	N
11	IPI00490216	R.LQDLVDK.L	N	33.03	0.4	415.7347	2	13.264	933	2	1864	1870	N
11	IPI00490216	K.MEGDLNEMEI.Q	N	32.94	0.3	1180.487	1	21.265	1684	1	1618	1627	N
11	IPI00490216	A.RHDCDL.L	N	32.55	-1	379.6657	2	7.595	492	1	1337	1342	N
11	IPI00490216	I.RRDLEESTL.Q	N	28.64	0.2	559.7938	2	13.414	948	1	1175	1183	N
11	IPI00490216	L.DIAGFEI.F	N	26.37	-0.3	764.3822	1	23.78	1918	1	460	466	N
11	IPI00490216	A.ITDAAMMA.E	N	20.53	-0.3	823.3686	1	38.929	3154	3	1759	1766	N
11	IPI00490216	K.AGLLGTL.E	N	17.74	0.7	644.3981	1	21.877	1744	1	767	773	N
11	IPI00490216	V.RMDLER.S	N	16.37	-0.4	410.2105	2	11.207	755	1	1045	1050	N
20	IPI00504207	K.DSYVGDEAQSK.R	Y	72.12	0.3	599.7649	2	12.064	826	1	53	63	N
20	IPI00504207	I.GMESAGIHETA.Y	Y	58.64	1.7	551.7462	2	13.342	941	1	270	280	N
20	IPI00504207	K.AGFAGDDAPR.A	Y	55.9	0.6	488.728	2	12.892	900	1	21	30	N
20	IPI00504207	A.GFAGDDAPR.A	Y	52.25	2	453.2101	2	12.478	863	1	22	30	N
20	IPI00504207	K.SYELPDGQVI.T	Y	51.24	-0.5	1120.552	1	22.719	1822	1	241	250	N
20	IPI00504207	L.TEAPLNPK.A	Y	40.59	-0.7	435.2397	2	11.4	771	2	108	115	N
20	IPI00504207	Y.ELPDGQVITI.G	Y	35.61	-0.3	1084.588	1	22.283	1782	1	243	252	N
20	IPI00504207	R.HQGVM(+15.99)VGM(+15.99)GQK.D	Y	28.73	1.2	602.2848	2	12.962	906	1	42	52	Y
20	IPI00504207	K.IIAPPERK.Y	Y	17.49	-0.6	308.5271	3	12.014	822	1	331	338	N
21	IPI00507230	K.DSYVGDEAQSK.R	Y	72.12	0.3	599.7649	2	12.064	826	1	53	63	N
21	IPI00507230	I.GMESAGIHETA.Y	Y	58.64	1.7	551.7462	2	13.342	941	1	270	280	N
21	IPI00507230	K.AGFAGDDAPR.A	Y	55.9	0.6	488.728	2	12.892	900	1	21	30	N
21	IPI00507230	A.GFAGDDAPR.A	Y	52.25	2	453.2101	2	12.478	863	1	22	30	N
21	IPI00507230	K.SYELPDGQVI.T	Y	51.24	-0.5	1120.552	1	22.719	1822	1	241	250	N
21	IPI00507230	L.TEAPLNPK.A	Y	40.59	-0.7	435.2397	2	11.4	771	2	108	115	N

21	IPI00507230	Y.ELPDGQVITI.G	Y	35.61	-0.3	1084.588	1	22.283	1782	1	243	252	N
21	IPI00507230	R.HQGVM(+15.99)VGM(+15.99)GQK.D	Y	28.73	1.2	602.2848	2	12.962	906	1	42	52	Y
21	IPI00507230	K.IIAPPERK.Y	Y	17.49	-0.6	308.5271	3	12.014	822	1	331	338	N
22	IPI00551966	K.DSYVGDEAQSK.R	Y	72.12	0.3	599.7649	2	12.064	826	1	53	63	N
22	IPI00551966	I.GMESAGIHETA.Y	Y	58.64	1.7	551.7462	2	13.342	941	1	270	280	N
22	IPI00551966	K.AGFAGDDAPR.A	Y	55.9	0.6	488.728	2	12.892	900	1	21	30	N
22	IPI00551966	A.GFAGDDAPR.A	Y	52.25	2	453.2101	2	12.478	863	1	22	30	N
22	IPI00551966	K.SYELPDGQVI.T	Y	51.24	-0.5	1120.552	1	22.719	1822	1	241	250	N
22	IPI00551966	L.TEAPLNPK.A	Y	40.59	-0.7	435.2397	2	11.4	771	2	108	115	N
22	IPI00551966	Y.ELPDGQVITI.G	Y	35.61	-0.3	1084.588	1	22.283	1782	1	243	252	N
22	IPI00551966	R.HQGVM(+15.99)VGM(+15.99)GQK.D	Y	28.73	1.2	602.2848	2	12.962	906	1	42	52	Y
22	IPI00551966	K.IIAPPERK.Y	Y	17.49	-0.6	308.5271	3	12.014	822	1	331	338	N
23	IPI00628880	K.DSYVGDEAQSK.R	Y	72.12	0.3	599.7649	2	12.064	826	1	53	63	N
23	IPI00628880	I.GMESAGIHETA.Y	Y	58.64	1.7	551.7462	2	13.342	941	1	270	280	N
23	IPI00628880	K.AGFAGDDAPR.A	Y	55.9	0.6	488.728	2	12.892	900	1	21	30	N
23	IPI00628880	A.GFAGDDAPR.A	Y	52.25	2	453.2101	2	12.478	863	1	22	30	N
23	IPI00628880	K.SYELPDGQVI.T	Y	51.24	-0.5	1120.552	1	22.719	1822	1	241	250	N
23	IPI00628880	L.TEAPLNPK.A	Y	40.59	-0.7	435.2397	2	11.4	771	2	108	115	N
23	IPI00628880	Y.ELPDGQVITI.G	Y	35.61	-0.3	1084.588	1	22.283	1782	1	243	252	N
23	IPI00628880	R.HQGVM(+15.99)VGM(+15.99)GQK.D	Y	28.73	1.2	602.2848	2	12.962	906	1	42	52	Y
23	IPI00628880	K.IIAPPERK.Y	Y	17.49	-0.6	308.5271	3	12.014	822	1	331	338	N
14	IPI00934366	L.REQFEEEQEAK.A	N	56.47	0.3	711.8286	2	12.056	825	2	1347	1357	N
14	IPI00934366	R.STHPHFV.R	N	56.21	0.2	412.7062	2	12.081	828	1	667	673	N
14	IPI00934366	K.YETDAIQR.T	N	56.12	0.5	498.2435	2	12.745	886	1	1378	1385	N
14	IPI00934366	R.EQFEEEQEAK.A	N	54.1	-0.3	633.7776	2	12.558	870	1	1348	1357	N
14	IPI00934366	A.GLLGTLEEMR.D	N	40.92	1.7	559.7983	2	23.413	1885	1	771	780	N
14	IPI00934366	R.SLSTELFK.L	N	40.83	-0.3	462.7553	2	18.193	1399	1	1479	1486	N
14	IPI00934366	R.LQDLVDK.L	N	33.03	0.4	415.7347	2	13.264	933	2	1867	1873	N
14	IPI00934366	K.MEGDLNEMEI.Q	N	32.94	0.3	1180.487	1	21.265	1684	1	1621	1630	N
14	IPI00934366	L.LHSQNTSL.L	N	29.48	0.1	450.2327	2	11.627	790	1	1719	1726	N
14	IPI00934366	L.DIAGFEI.F	N	26.37	-0.3	764.3822	1	23.78	1918	1	461	467	N

14	IPI00934366	Y.TQQIEDLK.R	Y	23.78	-0.1	487.7612	2	12.267	844	1	1312	1319	N
14	IPI00934366	L.RSTHPHFV.R	N	22.18	-1.3	327.5064	3	11.007	739	1	666	673	N
14	IPI00934366	Y.TQQIEDLKR.Q	Y	21.31	0.3	565.812	2	11.94	816	2	1312	1320	N
14	IPI00934366	A.ITDAAMMA.E	N	20.53	-0.3	823.3686	1	38.929	3154	3	1762	1769	N
14	IPI00934366	K.AGLLGTL.E	N	17.74	0.7	644.3981	1	21.877	1744	1	770	776	N
14	IPI00934366	L.RMDLER.A	N	16.37	-0.4	410.2105	2	11.207	755	1	1048	1053	N
14	IPI00934366	A.CIELIEKPMGI.M	N	8.61	0.5	623.333	2	22.329	1786	1	520	530	N
18	IPI00501288	L.REQFEEEQEAK.S	N	56.47	0.3	711.8286	2	12.056	825	2	1353	1363	N
18	IPI00501288	K.YETDAIQR.T	N	56.12	0.5	498.2435	2	12.745	886	1	1384	1391	N
18	IPI00501288	R.EQFEEEQEAK.S	N	54.1	-0.3	633.7776	2	12.558	870	1	1354	1363	N
18	IPI00501288	A.LEEAEGTLEHEESK.T	N	54.03	-0.2	534.2493	3	13.656	971	1	1553	1566	N
18	IPI00501288	R.SLSTELFK.L	N	40.83	-0.3	462.7553	2	18.193	1399	1	1485	1492	N
18	IPI00501288	L.THLNEASVL.F	N	32.56	1.3	492.2621	2	15.514	1144	1	95	103	N
18	IPI00501288	L.DIAGFEI.F	N	26.37	-0.3	764.3822	1	23.78	1918	1	466	472	N
18	IPI00501288	A.ITDAAMMA.E	N	20.53	-0.3	823.3686	1	38.929	3154	3	1768	1775	N
18	IPI00501288	V.RMDLER.V	N	16.37	-0.4	410.2105	2	11.207	755	1	1054	1059	N
18	IPI00501288	R.EFGEAA.T	Y	8.2	0.4	623.2673	1	10.319	684	1	9	14	N
29	IPI00800858	K.KALQESHQQTL.D	Y	60	2	641.8424	2	12.121	831	2	998	1008	N
29	IPI00800858	R.LEEAGGATSA.Q	N	56.89	-0.5	453.2139	2	11.348	767	3	1151	1160	N
29	IPI00800858	A.LEEAEGTLEHEESK.T	N	54.03	-0.2	534.2493	3	13.656	971	1	1545	1558	N
29	IPI00800858	K.ALQESHQQTL.D	Y	52.09	2.9	577.7953	2	13.005	909	1	999	1008	N
29	IPI00800858	L.THLNEASVL.F	N	32.56	1.3	492.2621	2	15.514	1144	1	95	103	N
29	IPI00800858	L.DIAGFEI.F	N	26.37	-0.3	764.3822	1	23.78	1918	1	458	464	N
29	IPI00800858	A.ITDAAMMA.E	N	20.53	-0.3	823.3686	1	38.929	3154	3	1760	1767	N
29	IPI00800858	L.RMDLER.S	N	16.37	-0.4	410.2105	2	11.207	755	1	1046	1051	N
30	IPI00616127	R.STHPHFV.R	N	56.21	0.2	412.7062	2	12.081	828	1	668	674	N
30	IPI00616127	K.YETDAIQR.T	N	56.12	0.5	498.2435	2	12.745	886	1	1382	1389	N
30	IPI00616127	R.SLSTELFK.L	N	40.83	-0.3	462.7553	2	18.193	1399	1	1483	1490	N
30	IPI00616127	R.LQDLVDK.L	N	33.03	0.4	415.7347	2	13.264	933	2	1871	1877	N
30	IPI00616127	K.MEGDLNEMEI.Q	N	32.94	0.3	1180.487	1	21.265	1684	1	1625	1634	N
30	IPI00616127	L.LHSQNTSL.I	N	29.48	0.1	450.2327	2	11.627	790	1	1723	1730	N

30	IPI00616127	L.DIAGFEI.F	N	26.37	-0.3	764.3822	1	23.78	1918	1	463	469	N
30	IPI00616127	L.RSTHPHFV.R	N	22.18	-1.3	327.5064	3	11.007	739	1	667	674	N
30	IPI00616127	A.ITDAAMMA.E	N	20.53	-0.3	823.3686	1	38.929	3154	3	1766	1773	N
30	IPI00616127	L.QSALESETRSR.N	Y	17.18	2.1	632.3193	2	47.113	3826	1	1605	1615	N
30	IPI00616127	I.RMDLER.A	N	16.37	-0.4	410.2105	2	11.207	755	1	1052	1057	N
106	IPI00923343	K.GTYDDYVEGL.R	Y	43.87	-0.1	1131.484	1	21.195	1677	1	108	117	N
106	IPI00923343	F.EAFLPM(+15.99)LK.T	Y	22.25	-0.1	482.7622	2	37.014	2998	8	93	100	Y
63	IPI00488248	K.GTYDDYVEGL.R	Y	43.87	-0.1	1131.484	1	21.195	1677	1	84	93	N
63	IPI00488248	F.EAFLPM(+15.99)LK.T	Y	22.25	-0.1	482.7622	2	37.014	2998	8	69	76	Y
64	IPI00499941	Y.NQIADIM(+15.99)R.A	Y	42.52	2.7	488.749	2	16.539	1242	1	69	76	Y
6190	IPI00492089	L.TM(+15.99)LDS(+79.97)KGKEMSK.C	Y	36.47	1.3	725.8205	2	28.99	2345	20	428	439	Y
6190	IPI00492089	L.TM(+15.99)LDS(+79.97)KGKEM(+15.99)SK.C	Y	7.28	1.4	733.818	2	19.296	1504	1	428	439	Y
955	IPI00512746	V.MVGTGVGAQNGI.L	Y	30.81	1.5	552.2802	2	16.218	1211	1	998	1009	N
955	IPI00512746	I.HIQVSLEQNNA.T	Y	6.01	-0.5	418.214	3	15.7	1162	1	38	48	N
963	IPI00742506	L.QELDDSTQLPL.L	Y	28.49	-0.6	629.8113	2	29.001	2346	14	981	991	N
964	IPI00500513	L.QELDDSTQLPL.L	Y	28.49	-0.6	629.8113	2	29.001	2346	14	1170	1180	N
114	IPI00901816	I.ELDQSELKQQQL.Q	Y	28	0.3	729.8755	2	16.098	1200	1	245	256	N
115	IPI00933229	I.ELDQSELKQQQL.Q	Y	28	0.3	729.8755	2	16.098	1200	1	246	257	N
1288	IPI00833554	R.MPETCI.T	Y	26.96	-2.1	693.2932	1	9.569	626	1	230	235	N
1288	IPI00833554	A.NQITTTASIPLI.E	Y	6.94	-0.1	424.5783	3	51.141	4150	2	599	610	N
1288	IPI00833554	A.NQITTTASIPL.I	Y	5.82	0.1	579.8219	2	41.259	3343	1	599	609	N
147	IPI00993424	A.APGEEEQV.L	Y	25.93	-1.9	858.3823	1	9.841	648	1	768	775	N
147	IPI00993424	K.M(+15.99)PNQIS(+79.97)S(+79.97)L.D	Y	13.42	0.3	533.19	2	51.665	4192	1	705	712	Y
6192	IPI00962988	I.EMTNAMTGM(+15.99)SPSPSLSAL.T	Y	23.92	-2.1	614.2744	3	22.211	1775	1	393	410	Y
6192	IPI00962988	R.FY(+79.97)QFTS(+79.97)L.R	Y	13.15	0.3	533.1903	2	5.279	346	1	716	722	Y
982	IPI00962792	I.EMTNAMTGM(+15.99)SPSPSLSAL.S	Y	23.92	-2.1	614.2744	3	22.211	1775	1	393	410	Y
6212	IPI00516018	I.NNTCSCI.S	Y	23.19	0.8	377.6469	2	10.663	711	1	89	95	N
698	IPI00515924	I.NNTCSCI.S	Y	23.19	0.8	377.6469	2	10.663	711	1	142	148	N
990	IPI00994665	A.TLDDINQQQETQR.S	Y	22.72	-0.7	530.2565	3	26.546	2149	3	92	104	N
794	IPI00829298	L.WFM(+15.99)LEV.L	Y	22.7	-0.9	840.3952	1	25.41	2055	1	1028	1033	Y
1029	IPI00489045	Y.GKPGGAGS(+79.97)I.A	Y	22.41	-2.7	823.3687	1	36.495	2956	6	1164	1172	Y

465	IPI00897430	R.DCLTLQTA.S	Y	21.86	-0.8	864.4125	1	13.616	967	1	1642	1649	N
1051	IPI00961772	F.SFLPML.V	Y	21.04	0.1	707.3797	1	26.284	2127	1	363	368	N
6197	IPI00484190	L.SHGSNTRAL.R	Y	20.87	2.4	942.4774	1	17.318	1315	1	154	162	N
6199	IPI00931483	L.MCVEEIEL.L	Y	20.41	0.1	965.4319	1	21.906	1747	1	1658	1665	N
6198	IPI00919826	L.DMILTPF.F	Y	20.26	0.4	836.4225	1	26.659	2158	3	244	250	N
6194	IPI00899042	I.NT(+79.97)ACIPA.Q	Y	20.04	2	385.1519	2	0.324	26	1	88	94	Y
6194	IPI00899042	L.HRDNGLR.R	Y	6.43	-1.8	434.23	2	51.829	4205	1	792	798	N
6201	IPI00928833	I.NT(+79.97)ACIPA.Q	Y	20.04	2	385.1519	2	0.324	26	1	69	75	Y

APPENDIX K
PEAKS DATABASE SEARCH RESULTS FOR CEM HIGH

Database search summary report (generated by Peaks DB software)

1. Notes

2. Result Statistics

Figure 1: The false discovery rate (FDR) curve. X-axis is the number of peptide-spectrum matches (PSM) being kept and the y-axis is the FDR.

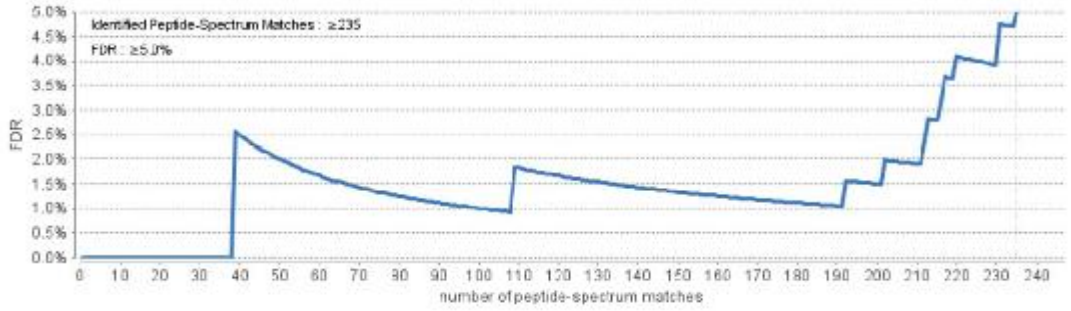

Figure 2: The distribution of PEAKS peptide score (-10lgP): **(a)** histogram of score; **(b)** The plot of precursor mass error vs. score.

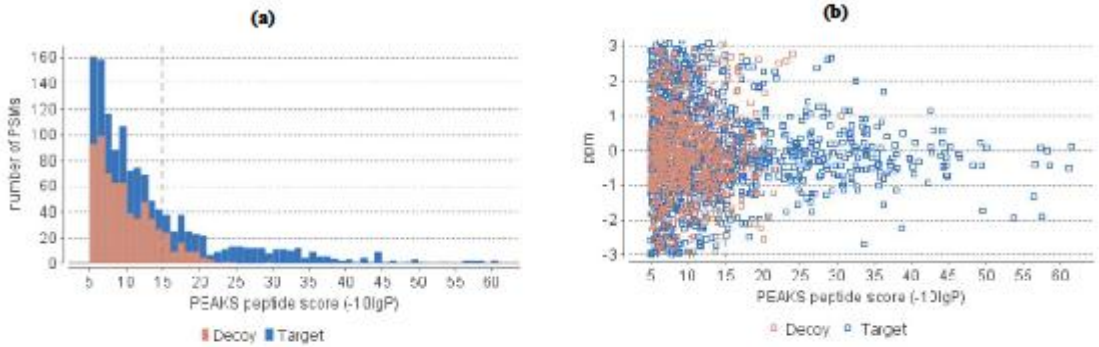

Table 1. Statistics of data.

# of MS Scans	883
# of MS/MS Scans	3564

Table 2. Result filtration parameters.

Peptide -10lgP	≥15	De Novo TLC	≥3
Protein -10lgP	≥20	De Novo ALC	≥50%
Proteins Unique Peptides	≥0		

Table 3. Statistics of filtered result.

Peptide-Spectrum Matches	301
Peptide Sequences	129
Protein Groups	29
Proteins	50
Proteins (#Unique Peptides)	6 (>2); 1 (=2); 34 (=1);
FDR (Peptide-Spectrum Matches)	26.2%
FDR (Peptide Sequences)	44.2%
De Novo Only	1981

Table 4. PTM Profile.

T(+79.97)	1
M(+15.99)	8
S(+79.97)	1

3. Experiment Control

Figure 3: The precursor mass error (observed m/z - theoretical m/z) distribution of the PSMs in filtered result. **(a)** Each bar indicates the number of PSMs (y-axis) with a certain precursor error (x-axis); **(b)** Each data point represents a PSM. x-axis is the theoretical m/z and y-axis is the precursor mass error

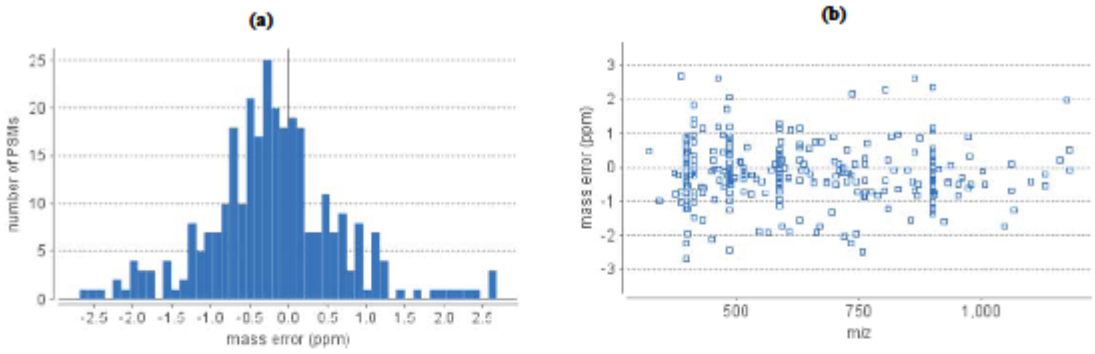

Table 5. number of peptides by number of missed cleavages

Missed Cleavages	0	1	2	3
Peptides	13	37	54	25

4. Other Information

Table 6. Search parameters.

Search Engine Name: PEAKS 5.3
Parent Mass Error Tolerance: 3.0 ppm
Fragment Mass Error Tolerance: 0.5 Da
Precursor Mass Search Type: monoisotopic
Enzyme: CEM_SC
Max Missed Cleavages: 3
Variable Modifications:
  Phosphorylation-STY: 79.97
  Oxidation M: 15.99
Max variable PTM per peptide: 3
Database: IPI_danre.v3.82
Taxon: All
Searched Entry: 41893
Decoy Performed: true

Table 7. Instrument parameters.

Fractions: CEM_HIGH.RAW
Ion Source: ESI(nano-spray)
Fragmentation Mode: CID, CAD, IRMPD (y and b ions)
MS Scan Mode: FT-ICR/Orbitrap
MS/MS Scan Mode: Linear Ion Trap

Protein results for CEM high digested myosin – generated by PEAKS DB software

Protein Group	Protein ID	Accession	-10lgP	Coverage (%)	#Peptides	#Unique	Mass	Best Unique Peptide	Description
2	2	IPI00773363	226.22	17	54	0	222157.875		Tax_Id=7955 Gene_Symbol=myhz1.2 Novel myosin family protein
1	6	IPI00500057	225.53	17	53	0	222199.0312		Tax_Id=7955 Gene_Symbol=LOC100149148 myosin heavy chain, fast skeletal muscle
4	1	IPI00933204	224.54	17	51	1	221878.8125	886	Tax_Id=7955 Gene_Symbol=myhz2 Myosin, heavy polypeptide 2, fast muscle specific
3	8	IPI00961738	214.5	15	45	0	221423.5469		Tax_Id=7955 Gene_Symbol=wu:fd14a01 myosin heavy chain, fast skeletal muscle
5	13	IPI00484075	185.65	10	30	0	222841.5781		Tax_Id=7955 Gene_Symbol=myhb Uncharacterized protein
7	11	IPI00490216	181	7	22	1	222803.3594	770	Tax_Id=7955 Gene_Symbol=myh6 Myosin, heavy polypeptide 6, cardiac muscle, alpha
6	14	IPI00934366	172.63	8	19	0	223043.4375		Tax_Id=7955 Gene_Symbol=smyhc1 Uncharacterized protein
13	18	IPI00501288	153.97	4	11	0	226660.125		Tax_Id=7955 Gene_Symbol=myh7;myh7bb Uncharacterized protein
9	30	IPI00616127	151.38	5	14	0	224164		Tax_Id=7955 Gene_Symbol=vmhcl Uncharacterized protein
10	31	IPI00882712	148.98	5	13	0	223229.7812		Tax_Id=7955 Gene_Symbol=vmhc Ventricular myosin heavy chain
8	32	IPI00914342	146.65	7	15	1	223276.7812	1275	Tax_Id=7955 Gene_Symbol=smyhc3 Slow myosin heavy chain 3
8	33	IPI00960836	146.65	6	15	1	223154.7188	1275	Tax_Id=7955 Gene_Symbol=LOC100329670 myosin-7-like
8	34	IPI00771791	146.65	6	15	1	223953.75	1275	Tax_Id=7955 Gene_Symbol=LOC567740 Uncharacterized protein
8	35	IPI00962033	146.65	6	15	1	223951.7188	1275	Tax_Id=7955 Gene_Symbol=LOC100329813 Uncharacterized protein
15	19	IPI00656493	141.25	26	12	12	41837.8594	819	Tax_Id=7955 Gene_Symbol=zgc:123289 Zgc:123289
15	24	IPI00482295	141.25	23	12	12	41766.7812	819	Tax_Id=7955 Gene_Symbol=bactin1 Actin, cytoplasmic 1
15	25	IPI00490006	141.25	23	12	12	41752.7539	819	Tax_Id=7955 Gene_Symbol=bactin2 Actin, cytoplasmic 2
14	29	IPI00800858	139.99	4	8	0	225510.3594		Tax_Id=7955 Gene_Symbol=myh7b myosin-7
11	44	IPI00817902	101.06	34	10	3	16317.5605	1762	Tax_Id=7955 Gene_Symbol=mylz2 Uncharacterized protein
11	45	IPI00488085	101.06	30	10	3	18865.3379	1762	Tax_Id=7955 Gene_Symbol=mylz2 Myosin, light polypeptide 2, skeletal muscle
12	51	IPI00919778	88.49	31	8	1	15343.418	1230	Tax_Id=7955 Gene_Symbol=zgc:103639 Uncharacterized protein
12	52	IPI00496651	88.49	25	8	1	19122.625	1230	Tax_Id=7955 Gene_Symbol=zgc:103639 Zgc:103639
18	63	IPI00488248	71.01	13	3	3	16767.8711	939	Tax_Id=7955 Gene_Symbol=mylz3 Myosin, light polypeptide 3, skeletal muscle
53	95	IPI00516071	29.66	5	1	1	19612.8594	1502	Tax_Id=7955 Gene_Symbol=ckbb Creatine kinase, brain
53	96	IPI00919917	29.66	3	1	1	29424.5078	1502	Tax_Id=7955 Gene_Symbol=ckba Novel protein
53	97	IPI00919712	29.66	3	1	1	30369.5625	1502	Tax_Id=7955 Gene_Symbol=ckba Novel protein
53	98	IPI00508395	29.66	2	1	1	42851.7188	1502	Tax_Id=7955 Gene_Symbol=ckmb Ckmb protein

53	99	IPI00482319	29.66	2	1	1	42814.6055	1502	Tax_Id=7955 Gene_Symbol=ckma Muscle-specific creatine kinase
53	100	IPI00497388	29.66	2	1	1	42883.6133	1502	Tax_Id=7955 Gene_Symbol=ckbb Creatine kinase, brain b
53	101	IPI00506249	29.66	2	1	1	42866.0625	1502	Tax_Id=7955 Gene_Symbol=ckba Zgc:154095
53	102	IPI00485952	29.66	2	1	1	46294.6992	1502	Tax_Id=7955 Gene_Symbol=ckmt2 Ckmt2 protein
53	103	IPI00817153	29.66	2	1	1	46296.7305	1502	Tax_Id=7955 Gene_Symbol=ckmt2 Creatine kinase, mitochondrial 2
53	104	IPI00490232	29.66	2	1	1	46706.293	1502	Tax_Id=7955 Gene_Symbol=ckmt1 Creatine kinase, mitochondrial 1
53	105	IPI00960817	29.66	2	1	1	46895.7109	1502	Tax_Id=7955 Gene_Symbol=- Uncharacterized protein
41	109	IPI00995606	29.46	3	1	1	55640.6172	1084	Tax_Id=7955 Gene_Symbol=sybu Syntabulin
54	117	IPI00996774	29.25	1	1	1	224356.5156	4111	Tax_Id=7955 Gene_Symbol=dscam Uncharacterized protein (Fragment)
55	108	IPI00501538	27.84	4	1	1	21441.8359	1684	Tax_Id=7955 Gene_Symbol=zgc:91930 Zgc:91930
56	94	IPI00505794	27.07	1	1	1	110157.4219	1815	Tax_Id=7955 Gene_Symbol=atp2a1 Atp2a1 protein
28	1453	IPI00799120	26.97	1	2	2	178741.9531	1071	Tax_Id=7955 Gene_Symbol=abcc8 Uncharacterized protein
57	110	IPI00515939	24.81	4	1	1	28624.9531	1726	Tax_Id=7955 Gene_Symbol=tpma Alpha-tropomyosin
57	111	IPI00506010	24.81	3	1	1	32889.8633	1726	Tax_Id=7955 Gene_Symbol=tpm3 Zgc:77592
57	112	IPI00508152	24.81	3	1	1	32722.6777	1726	Tax_Id=7955 Gene_Symbol=tpma Tropomyosin alpha-1 chain
57	113	IPI00634377	24.81	3	1	1	32749.6426	1726	Tax_Id=7955 Gene_Symbol=tpm1;zgc:171719 Tpm1 protein
58	3679	IPI00512597	24.71	2	1	1	39775.2461	668	Tax_Id=7955 Gene_Symbol=LOC557297 potassium channel subfamily K member 1-like
59	114	IPI00901816	24.04	1	1	1	153645.0312	1220	Tax_Id=7955 Gene_Symbol=LOC100329883 FYVE and coiled-coil domain-containing protein 1-like
59	115	IPI00933229	24.04	1	1	1	156622.4375	1220	Tax_Id=7955 Gene_Symbol=LOC100329883 Uncharacterized protein (Fragment)
39	3685	IPI00995577	20.81	2	1	1	58895.25	964	Tax_Id=7955 Gene_Symbol=- Uncharacterized protein
33	547	IPI00997640	20.8	2	1	1	35660.6797	3094	Tax_Id=7955 Gene_Symbol=LOC100537387 neuronal acetylcholine receptor subunit alpha-7-like
61	3684	IPI00972163	20.74	5	1	1	26039.873	1197	Tax_Id=7955 Gene_Symbol=si:ch1073-75f15.2 Uncharacterized protein (Fragment)
19	3694	IPI01005517	20.34	1	1	1	117360.5547	3323	Tax_Id=7955 Gene_Symbol=LOC100333514 hypothetical protein LOC100333514
total 50 proteins									

Peptide results for CEM high digested myosin – generated by PEAKS DB software

Protein ID	Protein Accession	Peptide	isUnique	-10lgP	ppm	m/z	z	RT	Scan	#Spectra	Start	End	hasPTM
2	IPI00773363	I.SDLTEQIGETGK.S	N	61.48	0.1	639.3146	2	15.248	1114	1	1512	1523	N
2	IPI00773363	L.EQQVDDLEGSLEQEK.K	N	61.12	-0.5	873.9046	2	18.378	1408	1	1030	1044	N
2	IPI00773363	K.VQHELEEAEER.A	N	58.54	-0.4	684.8228	2	12.936	900	2	1901	1911	N
2	IPI00773363	Y.KMEIDDLSSNMEA.V	N	57.36	0.1	741.8262	2	19.452	1510	1	1227	1239	N
2	IPI00773363	L.EEAEGTLEHEESK.I	N	56.67	-0.4	744.3281	2	12.385	850	2	1547	1559	N
2	IPI00773363	V.DDLEGSLEQEKK.L	N	56.5	-1.3	695.8375	2	14.576	1050	2	1034	1045	N
2	IPI00773363	L.REQFEEEQEAK.A	N	50.07	0.1	711.8284	2	11.96	812	3	1346	1356	N
2	IPI00773363	V.AELGEQIDNL.Q	N	49.46	-0.4	551.2745	2	20.331	1592	2	1203	1212	N
2	IPI00773363	K.QRLQGEVEDL.M	N	49.24	0.2	593.8068	2	16.686	1251	2	1421	1430	N
2	IPI00773363	R.EQFEEEQEAK.A	N	46.36	-0.1	633.7778	2	12.635	872	2	1347	1356	N
2	IPI00773363	L.DDLQAEEDKV.N	N	45.2	0.1	581.2672	2	15.669	1155	2	1010	1019	N
2	IPI00773363	K.ETTERLEDEEEI.N	N	44.7	-0.7	746.8355	2	16.482	1232	1	923	934	N
2	IPI00773363	R.M(+15.99)EAPPHI.F	N	44.65	-0.2	405.6942	2	15.108	1101	1	150	156	Y
2	IPI00773363	L.SKIEDEQSLGA.Q	N	44.27	-0.4	588.7905	2	13.767	974	1	1094	1104	N
2	IPI00773363	V.DDLEGSLEQEK.K	N	44.18	0.6	631.7913	2	29.467	2374	6	1034	1044	N
2	IPI00773363	L.REQFEEEQEA.K	N	42.96	0.6	647.7812	2	13.24	926	1	1346	1355	N
2	IPI00773363	I.SERLEEAGGA.T	N	42.68	0.1	509.7437	2	11.752	794	1	1149	1158	N
2	IPI00773363	R.KVQHELEEA.E	N	41.01	-0.3	541.7773	2	11.051	734	1	1900	1908	N
2	IPI00773363	L.DDLQAEEDK.V	N	40.39	-0.7	1062.458	1	11.353	760	1	1010	1018	N
2	IPI00773363	R.MEAPPHI.F	N	39.66	-0.2	397.6968	2	15.102	1100	26	150	156	N
2	IPI00773363	R.TLEDQLSEIK.S	N	38.88	0.5	588.3116	2	19.91	1554	31	1253	1262	N
2	IPI00773363	K.SAETEKELA.T	N	38.2	-0.5	489.2426	2	11.061	735	2	844	852	N
2	IPI00773363	L.EEAEERADI.A	N	37.38	-0.2	531.2408	2	12.981	904	1	1906	1914	N
2	IPI00773363	K.MEIDDLSSNMEAV.A	N	37.22	-0.4	727.3126	2	22.774	1814	1	1228	1240	N
2	IPI00773363	L.GLNSADM(+15.99)LK.A	N	36.24	1.7	482.7429	2	15.496	1138	1	393	401	Y
2	IPI00773363	K.YEEGQAEL.E	N	35.9	0.1	938.4102	1	15.193	1109	1	1462	1469	N
2	IPI00773363	K.NLTEEM(+15.99)A.A	N	35.37	-0.1	823.3502	1	15.316	1121	1	979	985	Y
2	IPI00773363	K.DFETSQLL.S	N	34.7	-0.5	952.4617	1	21.964	1744	2	1086	1093	N

2	IPI00773363	K.MEGDLNEMEI.Q	N	34.11	-0.1	1180.486	1	21.369	1688	3	1620	1629	N
2	IPI00773363	K.VQHELEEA.E	N	33.91	-0.1	477.7299	2	12.024	818	2	1901	1908	N
2	IPI00773363	L.GTLEEMRDEK.L	N	33.34	0.9	403.1927	3	13.171	920	1	773	782	N
2	IPI00773363	R.TLEDQLSEI.K	N	30.97	0.6	524.2642	2	21.769	1725	2	1253	1261	N
2	IPI00773363	R.LQGEVEDL.M	N	30.84	-1	902.4456	1	34.524	2794	30	1423	1430	N
2	IPI00773363	R.LQDLVDK.L	N	30.84	0.2	415.7346	2	24.837	1989	20	1866	1872	N
2	IPI00773363	L.GTLEEM(+15.99)RDEK.L	N	26.47	1.1	612.2829	2	13.199	923	1	773	782	Y
2	IPI00773363	K.SAETEKEL.A	N	26.36	0.5	453.7245	2	10.981	728	1	844	851	N
2	IPI00773363	R.IEELEEEI.E	N	25.63	-0.1	1003.483	1	20.041	1566	1	1117	1124	N
2	IPI00773363	I.DFGMDL.A	N	25.26	0.9	697.2867	1	22.099	1755	1	516	521	N
2	IPI00773363	F.QLPDER.G	N	24.98	-0.8	379.1953	2	10.106	657	1	280	285	N
2	IPI00773363	K.NLEVTVK.D	N	23.21	0.5	401.7372	2	13.894	986	7	1787	1793	N
2	IPI00773363	I.DFGMDLA.A	N	22.78	0.7	768.3238	1	21.581	1708	1	516	522	N
2	IPI00773363	I.SDLTEQI.G	N	21.65	2.3	805.3956	1	16.549	1238	2	1512	1518	N
2	IPI00773363	A.ANPLLEA.Y	N	21.19	0.5	727.3988	1	17.347	1312	1	227	233	N
2	IPI00773363	A.SIDDKEEL.V	N	20.54	1	474.7301	2	13.962	993	1	326	333	N
2	IPI00773363	Y.KMEIDDL.S	N	20.38	1.1	432.213	2	17.593	1335	1	1227	1233	N
2	IPI00773363	K.NLEVTV.K	N	19.16	0.7	674.3724	1	17.586	1334	1	1787	1792	N
2	IPI00773363	R.LDEAENL.A	N	19.08	-0.7	803.3776	1	15.167	1106	1	1799	1805	N
2	IPI00773363	R.LEDEEEI.N	N	18.85	0.8	876.384	1	15.355	1124	1	928	934	N
2	IPI00773363	K.NLQQEI.S	N	18.52	-2	744.3871	1	16.043	1190	1	1506	1511	N
2	IPI00773363	V.AELGEQI.D	N	18.17	-2.5	759.3864	1	16.106	1196	1	1203	1209	N
2	IPI00773363	L.DIAGFEI.F	N	17.47	-0.7	764.3819	1	23.765	1899	2	465	471	N
2	IPI00773363	K.MEIDDL.S	N	17.34	-0.2	735.3228	1	19.769	1540	2	1228	1233	N
2	IPI00773363	F.IDFGMDL.A	N	17.16	-1.2	810.3692	1	24.425	1955	1	515	521	N
2	IPI00773363	R.SLSTELFK.M	N	16.4	1.2	462.756	2	18.957	1462	1	1478	1485	N
2	IPI00773363	Y.EEGQAEL.E	N	16.08	-0.7	775.3463	1	12.661	875	1	1463	1469	N
2	IPI00773363	K.AGLLGTL.E	N	15.71	-0.1	644.3976	1	22.303	1773	2	769	775	N
2	IPI00773363	F.IGVLDI.A	N	14.33	0.3	629.387	1	23.19	1850	2	461	466	N
2	IPI00773363	L.QGEVEDLMI.D	N	12.86	-0.2	1033.487	1	20.398	1599	1	1424	1432	N
2	IPI00773363	W.LDKNKDPL.N	N	12.69	-1	471.7659	2	12.257	839	2	598	605	N

2	IPI00773363	I.AGFEIF.D	N	12.68	-1.1	683.3391	1	24.56	1966	1	467	472	N
2	IPI00773363	L.EEEIEAERA.A	N	11.64	-1.1	538.2481	2	12.736	882	1	1121	1129	N
2	IPI00773363	L.SRELEEI.S	N	9.38	0.2	438.2271	2	14.679	1059	1	1142	1148	N
6	IPI00500057	I.SDLTEQIGETGK.S	N	61.48	0.1	639.3146	2	15.248	1114	1	1510	1521	N
6	IPI00500057	L.EQQVDDLEGSLEQEK.K	N	61.12	-0.5	873.9046	2	18.378	1408	1	1028	1042	N
6	IPI00500057	K.VQHELEEAEER.A	N	58.54	-0.4	684.8228	2	12.936	900	2	1899	1909	N
6	IPI00500057	Y.KMEIDDLSSNMEA.V	N	57.36	0.1	741.8262	2	19.452	1510	1	1225	1237	N
6	IPI00500057	L.EEAEGTLEHEESK.I	N	56.67	-0.4	744.3281	2	12.385	850	2	1545	1557	N
6	IPI00500057	V.DDLEGSLEQEKK.L	N	56.5	-1.3	695.8375	2	14.576	1050	2	1032	1043	N
6	IPI00500057	L.REQFEEEQEAK.A	N	50.07	0.1	711.8284	2	11.96	812	3	1344	1354	N
6	IPI00500057	V.AELGEQIDNL.Q	N	49.46	-0.4	551.2745	2	20.331	1592	2	1201	1210	N
6	IPI00500057	K.QRLQGEVEDL.M	N	49.24	0.2	593.8068	2	16.686	1251	2	1419	1428	N
6	IPI00500057	R.EQFEEEQEAK.A	N	46.36	-0.1	633.7778	2	12.635	872	2	1345	1354	N
6	IPI00500057	L.DDLQAEEDKV.N	N	45.2	0.1	581.2672	2	15.669	1155	2	1008	1017	N
6	IPI00500057	K.ETTERLEDEEEI.N	N	44.7	-0.7	746.8355	2	16.482	1232	1	921	932	N
6	IPI00500057	R.M(+15.99)EAPPHI.F	N	44.65	-0.2	405.6942	2	15.108	1101	1	150	156	Y
6	IPI00500057	L.SKIEDEQSLGA.Q	N	44.27	-0.4	588.7905	2	13.767	974	1	1092	1102	N
6	IPI00500057	V.DDLEGSLEQEK.K	N	44.18	0.6	631.7913	2	29.467	2374	6	1032	1042	N
6	IPI00500057	L.REQFEEEQEA.K	N	42.96	0.6	647.7812	2	13.24	926	1	1344	1353	N
6	IPI00500057	I.SERLEEAGGA.T	N	42.68	0.1	509.7437	2	11.752	794	1	1147	1156	N
6	IPI00500057	R.KVQHELEEA.E	N	41.01	-0.3	541.7773	2	11.051	734	1	1898	1906	N
6	IPI00500057	L.DDLQAEEDK.V	N	40.39	-0.7	1062.458	1	11.353	760	1	1008	1016	N
6	IPI00500057	R.MEAPPHI.F	N	39.66	-0.2	397.6968	2	15.102	1100	26	150	156	N
6	IPI00500057	R.TLEDQLSEIK.S	N	38.88	0.5	588.3116	2	19.91	1554	31	1251	1260	N
6	IPI00500057	K.SAETEKELA.N	N	38.2	-0.5	489.2426	2	11.061	735	2	842	850	N
6	IPI00500057	L.EEAEERADI.S	N	37.38	-0.2	531.2408	2	12.981	904	1	1904	1912	N
6	IPI00500057	K.MEIDDLSSNMEAV.A	N	37.22	-0.4	727.3126	2	22.774	1814	1	1226	1238	N
6	IPI00500057	K.YEEGQAEL.E	N	35.9	0.1	938.4102	1	15.193	1109	1	1460	1467	N
6	IPI00500057	K.NLTEEM(+15.99)A.S	N	35.37	-0.1	823.3502	1	15.316	1121	1	977	983	Y
6	IPI00500057	K.DFETSQLL.S	N	34.7	-0.5	952.4617	1	21.964	1744	2	1084	1091	N
6	IPI00500057	K.MEGDLNEMEI.Q	N	34.11	-0.1	1180.486	1	21.369	1688	3	1618	1627	N

6	IPI00500057	K.VQHELEEA.E	N	33.91	-0.1	477.7299	2	12.024	818	2	1899	1906	N
6	IPI00500057	L.GTLEEMRDEK.L	N	33.34	0.9	403.1927	3	13.171	920	1	771	780	N
6	IPI00500057	R.TLEDQLSEI.K	N	30.97	0.6	524.2642	2	21.769	1725	2	1251	1259	N
6	IPI00500057	R.LQGEVEDL.M	N	30.84	-1	902.4456	1	34.524	2794	30	1421	1428	N
6	IPI00500057	R.LQDLVDK.L	N	30.84	0.2	415.7346	2	24.837	1989	20	1864	1870	N
6	IPI00500057	L.GTLEEM(+15.99)RDEK.L	N	26.47	1.1	612.2829	2	13.199	923	1	771	780	Y
6	IPI00500057	K.SAETEKEL.A	N	26.36	0.5	453.7245	2	10.981	728	1	842	849	N
6	IPI00500057	L.IEKPMGIF.S	N	26.01	-0.4	467.7567	2	20.21	1581	1	528	535	N
6	IPI00500057	R.IEELEEEI.E	N	25.63	-0.1	1003.483	1	20.041	1566	1	1115	1122	N
6	IPI00500057	I.DFGMDL.A	N	25.26	0.9	697.2867	1	22.099	1755	1	516	521	N
6	IPI00500057	F.QLPDER.G	N	24.98	-0.8	379.1953	2	10.106	657	1	280	285	N
6	IPI00500057	I.ELIEKPMGI.F	N	23.73	0	515.2861	2	31.019	2502	9	526	534	N
6	IPI00500057	I.DFGMDLA.A	N	22.78	0.7	768.3238	1	21.581	1708	1	516	522	N
6	IPI00500057	I.SDLTEQI.G	N	21.65	2.3	805.3956	1	16.549	1238	2	1510	1516	N
6	IPI00500057	A.ANPLLEA.Y	N	21.19	0.5	727.3988	1	17.347	1312	1	227	233	N
6	IPI00500057	A.SIDDKEEL.V	N	20.54	1	474.7301	2	13.962	993	1	326	333	N
6	IPI00500057	Y.KMEIDDL.S	N	20.38	1.1	432.213	2	17.593	1335	1	1225	1231	N
6	IPI00500057	R.LDEAENL.A	N	19.08	-0.7	803.3776	1	15.167	1106	1	1797	1803	N
6	IPI00500057	R.LEDEEEI.N	N	18.85	0.8	876.384	1	15.355	1124	1	926	932	N
6	IPI00500057	K.NLQQEI.S	N	18.52	-2	744.3871	1	16.043	1190	1	1504	1509	N
6	IPI00500057	V.AELGEQI.D	N	18.17	-2.5	759.3864	1	16.106	1196	1	1201	1207	N
6	IPI00500057	L.DIAGFEI.F	N	17.47	-0.7	764.3819	1	23.765	1899	2	465	471	N
6	IPI00500057	K.MEIDDL.S	N	17.34	-0.2	735.3228	1	19.769	1540	2	1226	1231	N
6	IPI00500057	F.IDFGMDL.A	N	17.16	-1.2	810.3692	1	24.425	1955	1	515	521	N
6	IPI00500057	R.SLSTELFK.M	N	16.4	1.2	462.756	2	18.957	1462	1	1476	1483	N
6	IPI00500057	Y.EEGQAEL.E	N	16.08	-0.7	775.3463	1	12.661	875	1	1461	1467	N
6	IPI00500057	K.AGLLGTL.E	N	15.71	-0.1	644.3976	1	22.303	1773	2	767	773	N
6	IPI00500057	F.IGVLDI.A	N	14.33	0.3	629.387	1	23.19	1850	2	461	466	N
6	IPI00500057	L.QGEVEDLMI.D	N	12.86	-0.2	1033.487	1	20.398	1599	1	1422	1430	N
6	IPI00500057	W.LDKNKDPL.N	N	12.69	-1	471.7659	2	12.257	839	2	598	605	N
6	IPI00500057	I.AGFEIF.D	N	12.68	-1.1	683.3391	1	24.56	1966	1	467	472	N

6	IPI00500057	L.EEEIEAERA.A	N	11.64	-1.1	538.2481	2	12.736	882	1	1119	1127	N
6	IPI00500057	L.SRELEEI.S	N	9.38	0.2	438.2271	2	14.679	1059	1	1140	1146	N
1	IPI00933204	I.SDLTEQLGETGK.S	N	61.48	0.1	639.3146	2	15.248	1114	1	1512	1523	N
1	IPI00933204	L.EQQVDDLEGSLEQEK.K	N	61.12	-0.5	873.9046	2	18.378	1408	1	1030	1044	N
1	IPI00933204	K.VQHELEEAEER.A	N	58.54	-0.4	684.8228	2	12.936	900	2	1901	1911	N
1	IPI00933204	Y.KMEIDDLSSNMEA.V	N	57.36	0.1	741.8262	2	19.452	1510	1	1227	1239	N
1	IPI00933204	L.EEAEGTLEHEESK.I	N	56.67	-0.4	744.3281	2	12.385	850	2	1547	1559	N
1	IPI00933204	V.DDLEGSLEQEKK.L	N	56.5	-1.3	695.8375	2	14.576	1050	2	1034	1045	N
1	IPI00933204	L.REQFEEEQEAK.A	N	50.07	0.1	711.8284	2	11.96	812	3	1346	1356	N
1	IPI00933204	V.AELGEQIDNL.Q	N	49.46	-0.4	551.2745	2	20.331	1592	2	1203	1212	N
1	IPI00933204	K.QRLQGEVEDL.M	N	49.24	0.2	593.8068	2	16.686	1251	2	1421	1430	N
1	IPI00933204	R.EQFEEEQEAK.A	N	46.36	-0.1	633.7778	2	12.635	872	2	1347	1356	N
1	IPI00933204	L.DDLQAEEDKV.N	N	45.2	0.1	581.2672	2	15.669	1155	2	1010	1019	N
1	IPI00933204	K.ETTERLEDEEEI.N	N	44.7	-0.7	746.8355	2	16.482	1232	1	923	934	N
1	IPI00933204	R.M(+15.99)EAPPHI.F	N	44.65	-0.2	405.6942	2	15.108	1101	1	150	156	Y
1	IPI00933204	L.SKIEDEQSLGA.Q	N	44.27	-0.4	588.7905	2	13.767	974	1	1094	1104	N
1	IPI00933204	V.DDLEGSLEQEK.K	N	44.18	0.6	631.7913	2	29.467	2374	6	1034	1044	N
1	IPI00933204	L.AEKDEEMEQIK.R	Y	43.96	-0.1	450.5465	3	12.787	886	1	1579	1589	N
1	IPI00933204	L.REQFEEEQEA.K	N	42.96	0.6	647.7812	2	13.24	926	1	1346	1355	N
1	IPI00933204	I.SERLEEAGGA.T	N	42.68	0.1	509.7437	2	11.752	794	1	1149	1158	N
1	IPI00933204	R.KVQHELEEA.E	N	41.01	-0.3	541.7773	2	11.051	734	1	1900	1908	N
1	IPI00933204	L.DDLQAEEDK.V	N	40.39	-0.7	1062.458	1	11.353	760	1	1010	1018	N
1	IPI00933204	R.MEAPPHI.F	N	39.66	-0.2	397.6968	2	15.102	1100	26	150	156	N
1	IPI00933204	K.SAETEKELA.T	N	38.2	-0.5	489.2426	2	11.061	735	2	844	852	N
1	IPI00933204	L.EEAEERADI.A	N	37.38	-0.2	531.2408	2	12.981	904	1	1906	1914	N
1	IPI00933204	K.MEIDDLSSNMEAV.A	N	37.22	-0.4	727.3126	2	22.774	1814	1	1228	1240	N
1	IPI00933204	L.GLNSADM(+15.99)LK.A	N	36.24	1.7	482.7429	2	15.496	1138	1	393	401	Y
1	IPI00933204	K.YEEGQAEL.E	N	35.9	0.1	938.4102	1	15.193	1109	1	1462	1469	N
1	IPI00933204	K.NLTEEM(+15.99)A.S	N	35.37	-0.1	823.3502	1	15.316	1121	1	979	985	Y
1	IPI00933204	K.MEGDLNEMEI.Q	N	34.11	-0.1	1180.486	1	21.369	1688	3	1620	1629	N
1	IPI00933204	K.VQHELEEA.E	N	33.91	-0.1	477.7299	2	12.024	818	2	1901	1908	N

1	IPI00933204	L.GTLEEMRDEK.L	N	33.34	0.9	403.1927	3	13.171	920	1	773	782	N
1	IPI00933204	R.LQGEVEDL.M	N	30.84	-1	902.4456	1	34.524	2794	30	1423	1430	N
1	IPI00933204	R.LQDLVDK.L	N	30.84	0.2	415.7346	2	24.837	1989	20	1866	1872	N
1	IPI00933204	L.GTLEEM(+15.99)RDEK.L	N	26.47	1.1	612.2829	2	13.199	923	1	773	782	Y
1	IPI00933204	K.SAETEKEL.A	N	26.36	0.5	453.7245	2	10.981	728	1	844	851	N
1	IPI00933204	R.IEELEEEI.E	N	25.63	-0.1	1003.483	1	20.041	1566	1	1117	1124	N
1	IPI00933204	I.DFGMDL.A	N	25.26	0.9	697.2867	1	22.099	1755	1	516	521	N
1	IPI00933204	F.QLPDER.G	N	24.98	-0.8	379.1953	2	10.106	657	1	280	285	N
1	IPI00933204	K.NLEVTVK.D	N	23.21	0.5	401.7372	2	13.894	986	7	1787	1793	N
1	IPI00933204	I.DFGMDLA.A	N	22.78	0.7	768.3238	1	21.581	1708	1	516	522	N
1	IPI00933204	A.ANPLLEA.Y	N	21.19	0.5	727.3988	1	17.347	1312	1	227	233	N
1	IPI00933204	A.SIDDKEEL.V	N	20.54	1	474.7301	2	13.962	993	1	326	333	N
1	IPI00933204	Y.KMEIDDL.S	N	20.38	1.1	432.213	2	17.593	1335	1	1227	1233	N
1	IPI00933204	K.NLEVTV.K	N	19.16	0.7	674.3724	1	17.586	1334	1	1787	1792	N
1	IPI00933204	R.LDEAENL.A	N	19.08	-0.7	803.3776	1	15.167	1106	1	1799	1805	N
1	IPI00933204	R.LEDEEEI.N	N	18.85	0.8	876.384	1	15.355	1124	1	928	934	N
1	IPI00933204	K.NLQQEI.S	N	18.52	-2	744.3871	1	16.043	1190	1	1506	1511	N
1	IPI00933204	V.AELGEQI.D	N	18.17	-2.5	759.3864	1	16.106	1196	1	1203	1209	N
1	IPI00933204	L.DIAGFEI.F	N	17.47	-0.7	764.3819	1	23.765	1899	2	465	471	N
1	IPI00933204	K.MEIDDL.S	N	17.34	-0.2	735.3228	1	19.769	1540	2	1228	1233	N
1	IPI00933204	F.IDFGMDL.A	N	17.16	-1.2	810.3692	1	24.425	1955	1	515	521	N
1	IPI00933204	R.SLSTELFK.M	N	16.4	1.2	462.756	2	18.957	1462	1	1478	1485	N
1	IPI00933204	Y.EEGQAEL.E	N	16.08	-0.7	775.3463	1	12.661	875	1	1463	1469	N
1	IPI00933204	K.AGLLGTL.E	N	15.71	-0.1	644.3976	1	22.303	1773	2	769	775	N
1	IPI00933204	F.IGVLDI.A	N	14.33	0.3	629.387	1	23.19	1850	2	461	466	N
1	IPI00933204	L.QGEVEDLMI.D	N	12.86	-0.2	1033.487	1	20.398	1599	1	1424	1432	N
1	IPI00933204	W.LDKNKDPL.N	N	12.69	-1	471.7659	2	12.257	839	2	598	605	N
1	IPI00933204	I.AGFEIF.D	N	12.68	-1.1	683.3391	1	24.56	1966	1	467	472	N
1	IPI00933204	L.EEEIEAERA.A	N	11.64	-1.1	538.2481	2	12.736	882	1	1121	1129	N
1	IPI00933204	L.SRELEEI.S	N	9.38	0.2	438.2271	2	14.679	1059	1	1142	1148	N
8	IPI00961738	I.SDLTEQLGETGK.S	N	61.48	0.1	639.3146	2	15.248	1114	1	1510	1521	N

8	IPI00961738	L.EQQVDDLEGSLEQEK.K	N	61.12	-0.5	873.9046	2	18.378	1408	1	1028	1042	N
8	IPI00961738	Y.KMEIDDLSSNMEA.V	N	57.36	0.1	741.8262	2	19.452	1510	1	1225	1237	N
8	IPI00961738	L.EEAEGTLEHEESK.I	N	56.67	-0.4	744.3281	2	12.385	850	2	1545	1557	N
8	IPI00961738	V.DDLEGSLEQEKK.L	N	56.5	-1.3	695.8375	2	14.576	1050	2	1032	1043	N
8	IPI00961738	L.REQFEEEQEAK.A	N	50.07	0.1	711.8284	2	11.96	812	3	1344	1354	N
8	IPI00961738	V.AELGEQIDNL.Q	N	49.46	-0.4	551.2745	2	20.331	1592	2	1201	1210	N
8	IPI00961738	K.QRLQGEVEDL.M	N	49.24	0.2	593.8068	2	16.686	1251	2	1419	1428	N
8	IPI00961738	R.EQFEEEQEAK.A	N	46.36	-0.1	633.7778	2	12.635	872	2	1345	1354	N
8	IPI00961738	L.DDLQAEEDKV.N	N	45.2	0.1	581.2672	2	15.669	1155	2	1008	1017	N
8	IPI00961738	K.ETTERLEDEEEI.N	N	44.7	-0.7	746.8355	2	16.482	1232	1	921	932	N
8	IPI00961738	L.SKIEDEQSLGA.Q	N	44.27	-0.4	588.7905	2	13.767	974	1	1092	1102	N
8	IPI00961738	V.DDLEGSLEQEK.K	N	44.18	0.6	631.7913	2	29.467	2374	6	1032	1042	N
8	IPI00961738	L.REQFEEEQEA.K	N	42.96	0.6	647.7812	2	13.24	926	1	1344	1353	N
8	IPI00961738	I.SERLEEAGGA.T	N	42.68	0.1	509.7437	2	11.752	794	1	1147	1156	N
8	IPI00961738	L.DDLQAEEDK.V	N	40.39	-0.7	1062.458	1	11.353	760	1	1008	1016	N
8	IPI00961738	R.TLEDQLSEIK.T	N	38.88	0.5	588.3116	2	19.91	1554	31	1251	1260	N
8	IPI00961738	K.MEIDDLSSNMEAV.A	N	37.22	-0.4	727.3126	2	22.774	1814	1	1226	1238	N
8	IPI00961738	K.YEEGQAEL.E	N	35.9	0.1	938.4102	1	15.193	1109	1	1460	1467	N
8	IPI00961738	K.NLTEEM(+15.99)A.S	N	35.37	-0.1	823.3502	1	15.316	1121	1	977	983	Y
8	IPI00961738	K.MEGDLNEMEI.Q	N	34.11	-0.1	1180.486	1	21.369	1688	3	1618	1627	N
8	IPI00961738	L.GTLEEMRDEK.L	N	33.34	0.9	403.1927	3	13.171	920	1	771	780	N
8	IPI00961738	R.TLEDQLSEI.K	N	30.97	0.6	524.2642	2	21.769	1725	2	1251	1259	N
8	IPI00961738	R.LQGEVEDL.M	N	30.84	-1	902.4456	1	34.524	2794	30	1421	1428	N
8	IPI00961738	R.LQDLVDK.L	N	30.84	0.2	415.7346	2	24.837	1989	20	1864	1870	N
8	IPI00961738	L.GTLEEM(+15.99)RDEK.L	N	26.47	1.1	612.2829	2	13.199	923	1	771	780	Y
8	IPI00961738	L.IEKPMGIF.S	N	26.01	-0.4	467.7567	2	20.21	1581	1	526	533	N
8	IPI00961738	R.IEELEEEI.E	N	25.63	-0.1	1003.483	1	20.041	1566	1	1115	1122	N
8	IPI00961738	I.DFGMDL.A	N	25.26	0.9	697.2867	1	22.099	1755	1	514	519	N
8	IPI00961738	I.ELIEKPMGI.F	N	23.73	0	515.2861	2	31.019	2502	9	524	532	N
8	IPI00961738	K.NLEVTVK.D	N	23.21	0.5	401.7372	2	13.894	986	7	1785	1791	N
8	IPI00961738	R.NVQGQL.K	N	22.81	-0.5	658.3516	1	12.575	867	1	1645	1650	N

8	IPI00961738	I.DFGMDLA.A	N	22.78	0.7	768.3238	1	21.581	1708	1	514	520	N
8	IPI00961738	A.ANPLLEA.Y	N	21.19	0.5	727.3988	1	17.347	1312	1	225	231	N
8	IPI00961738	Y.KMEIDDL.S	N	20.38	1.1	432.213	2	17.593	1335	1	1225	1231	N
8	IPI00961738	K.NLEVTV.K	N	19.16	0.7	674.3724	1	17.586	1334	1	1785	1790	N
8	IPI00961738	R.LDEAENL.A	N	19.08	-0.7	803.3776	1	15.167	1106	1	1797	1803	N
8	IPI00961738	R.LEDEEEI.N	N	18.85	0.8	876.384	1	15.355	1124	1	926	932	N
8	IPI00961738	K.NLQQEI.S	N	18.52	-2	744.3871	1	16.043	1190	1	1504	1509	N
8	IPI00961738	V.AELGEQI.D	N	18.17	-2.5	759.3864	1	16.106	1196	1	1201	1207	N
8	IPI00961738	L.DIAGFEI.F	N	17.47	-0.7	764.3819	1	23.765	1899	2	463	469	N
8	IPI00961738	K.MEIDDL.S	N	17.34	-0.2	735.3228	1	19.769	1540	2	1226	1231	N
8	IPI00961738	F.IDFGMDL.A	N	17.16	-1.2	810.3692	1	24.425	1955	1	513	519	N
8	IPI00961738	R.SLSTEIFK.M	N	16.4	1.2	462.756	2	18.957	1462	1	1476	1483	N
8	IPI00961738	Y.EEGQAEL.E	N	16.08	-0.7	775.3463	1	12.661	875	1	1461	1467	N
8	IPI00961738	K.AGLLGTL.E	N	15.71	-0.1	644.3976	1	22.303	1773	2	767	773	N
8	IPI00961738	F.IGVLDI.A	N	14.33	0.3	629.387	1	23.19	1850	2	459	464	N
8	IPI00961738	L.QGEVEDLMI.D	N	12.86	-0.2	1033.487	1	20.398	1599	1	1422	1430	N
8	IPI00961738	W.LDKNKDPL.N	N	12.69	-1	471.7659	2	12.257	839	2	596	603	N
8	IPI00961738	I.AGFEIF.D	N	12.68	-1.1	683.3391	1	24.56	1966	1	465	470	N
8	IPI00961738	L.EEEIEAERA.A	N	11.64	-1.1	538.2481	2	12.736	882	1	1119	1127	N
8	IPI00961738	L.SRELEEI.S	N	9.38	0.2	438.2271	2	14.679	1059	1	1140	1146	N
13	IPI00484075	L.EQQVDDLEGSLEQEK.K	N	61.12	-0.5	873.9046	2	18.378	1408	1	1030	1044	N
13	IPI00484075	K.NSYEETLDHL.E	N	57.59	-1.9	610.7739	2	19.706	1534	1	1488	1497	N
13	IPI00484075	V.DDLEGSLEQEKK.L	N	56.5	-1.3	695.8375	2	14.576	1050	2	1034	1045	N
13	IPI00484075	V.AELGEQIDNL.Q	N	49.46	-0.4	551.2745	2	20.331	1592	2	1203	1212	N
13	IPI00484075	L.DDLQAEEDKV.N	N	45.2	0.1	581.2672	2	15.669	1155	2	1010	1019	N
13	IPI00484075	R.LEEAGGATSA.Q	N	44.9	-0.7	905.4203	1	11.194	746	1	1152	1161	N
13	IPI00484075	V.DDLEGSLEQEK.K	N	44.18	0.6	631.7913	2	29.467	2374	6	1034	1044	N
13	IPI00484075	I.SERLEEAGGA.T	N	42.68	0.1	509.7437	2	11.752	794	1	1149	1158	N
13	IPI00484075	R.KVQHELEEA.Q	N	41.01	-0.3	541.7773	2	11.051	734	1	1902	1910	N
13	IPI00484075	L.DDLQAEEDK.V	N	40.39	-0.7	1062.458	1	11.353	760	1	1010	1018	N
13	IPI00484075	L.GLNSADM(+15.99)LK.A	N	36.24	1.7	482.7429	2	15.496	1138	1	391	399	Y

13	IPI00484075	K.MEGDLNEMEI.Q	N	34.11	-0.1	1180.486	1	21.369	1688	3	1622	1631	N
13	IPI00484075	K.VQHELEEA.Q	N	33.91	-0.1	477.7299	2	12.024	818	2	1903	1910	N
13	IPI00484075	L.GTLEEMRDEK.L	N	33.34	0.9	403.1927	3	13.171	920	1	773	782	N
13	IPI00484075	R.LQDLVDK.L	N	30.84	0.2	415.7346	2	24.837	1989	20	1868	1874	N
13	IPI00484075	L.GTLEEM(+15.99)RDEK.L	N	26.47	1.1	612.2829	2	13.199	923	1	773	782	Y
13	IPI00484075	L.IEKPMGIF.S	N	26.01	-0.4	467.7567	2	20.21	1581	1	526	533	N
13	IPI00484075	R.IEELEEEI.E	N	25.63	-0.1	1003.483	1	20.041	1566	1	1117	1124	N
13	IPI00484075	I.DFGMDL.A	N	25.26	0.9	697.2867	1	22.099	1755	1	514	519	N
13	IPI00484075	I.ELIEKPMGI.F	N	23.73	0	515.2861	2	31.019	2502	9	524	532	N
13	IPI00484075	K.NLEVTVK.D	N	23.21	0.5	401.7372	2	13.894	986	7	1789	1795	N
13	IPI00484075	R.NVQGQL.K	N	22.81	-0.5	658.3516	1	12.575	867	1	1649	1654	N
13	IPI00484075	I.DFGMDLA.A	N	22.78	0.7	768.3238	1	21.581	1708	1	514	520	N
13	IPI00484075	A.ANPLLEA.Y	N	21.19	0.5	727.3988	1	17.347	1312	1	225	231	N
13	IPI00484075	K.NLEVTV.K	N	19.16	0.7	674.3724	1	17.586	1334	1	1789	1794	N
13	IPI00484075	R.LEDEEEI.N	N	18.85	0.8	876.384	1	15.355	1124	1	928	934	N
13	IPI00484075	V.AELGEQI.D	N	18.17	-2.5	759.3864	1	16.106	1196	1	1203	1209	N
13	IPI00484075	L.DIAGFEI.F	N	17.47	-0.7	764.3819	1	23.765	1899	2	463	469	N
13	IPI00484075	F.IDFGMDL.A	N	17.16	-1.2	810.3692	1	24.425	1955	1	513	519	N
13	IPI00484075	R.SLSTELFK.M	N	16.4	1.2	462.756	2	18.957	1462	1	1478	1485	N
13	IPI00484075	K.AGLLGTL.E	N	15.71	-0.1	644.3976	1	22.303	1773	2	769	775	N
13	IPI00484075	F.IGVLDI.A	N	14.33	0.3	629.387	1	23.19	1850	2	459	464	N
13	IPI00484075	W.LDKNKDPL.N	N	12.69	-1	471.7659	2	12.257	839	2	596	603	N
13	IPI00484075	I.AGFEIF.D	N	12.68	-1.1	683.3391	1	24.56	1966	1	465	470	N
13	IPI00484075	L.EEEIEAERA.A	N	11.64	-1.1	538.2481	2	12.736	882	1	1121	1129	N
11	IPI00490216	L.EQQVDDLEGSLEQEK.K	N	61.12	-0.5	873.9046	2	18.378	1408	1	1028	1042	N
11	IPI00490216	K.NSYEETLDHL.E	N	57.59	-1.9	610.7739	2	19.706	1534	1	1486	1495	N
11	IPI00490216	V.DDLEGSLEQEKK.V	N	56.5	-1.3	695.8375	2	14.576	1050	2	1032	1043	N
11	IPI00490216	L.REQFEEEQEAK.A	N	50.07	0.1	711.8284	2	11.96	812	3	1344	1354	N
11	IPI00490216	V.AELGEQIDNL.Q	N	49.46	-0.4	551.2745	2	20.331	1592	2	1201	1210	N
11	IPI00490216	R.EQFEEEQEAK.A	N	46.36	-0.1	633.7778	2	12.635	872	2	1345	1354	N
11	IPI00490216	R.LEEAGGATSA.Q	N	44.9	-0.7	905.4203	1	11.194	746	1	1150	1159	N

11	IPI00490216	V.DDLEGSLEQEK.K	N	44.18	0.6	631.7913	2	29.467	2374	6	1032	1042	N
11	IPI00490216	L.REQFEEEQEA.K	N	42.96	0.6	647.7812	2	13.24	926	1	1344	1353	N
11	IPI00490216	I.SERLEEAGGA.T	N	42.68	0.1	509.7437	2	11.752	794	1	1147	1156	N
11	IPI00490216	K.VGNEYVTK.G	Y	42.29	-0.9	455.237	2	11.471	770	1	405	412	N
11	IPI00490216	L.EEAEERADI.A	N	37.38	-0.2	531.2408	2	12.981	904	1	1904	1912	N
11	IPI00490216	K.NITEEM(+15.99)A.S	N	35.37	-0.1	823.3502	1	15.316	1121	1	977	983	Y
11	IPI00490216	K.MEGDLNEMEI.Q	N	34.11	-0.1	1180.486	1	21.369	1688	3	1618	1627	N
11	IPI00490216	R.LQDLVDK.L	N	30.84	0.2	415.7346	2	24.837	1989	20	1864	1870	N
11	IPI00490216	I.DFGMDL.Q	N	25.26	0.9	697.2867	1	22.099	1755	1	511	516	N
11	IPI00490216	R.IEDEEEI.N	N	18.85	0.8	876.384	1	15.355	1124	1	926	932	N
11	IPI00490216	V.AELGEQI.D	N	18.17	-2.5	759.3864	1	16.106	1196	1	1201	1207	N
11	IPI00490216	L.DIAGFEI.F	N	17.47	-0.7	764.3819	1	23.765	1899	2	460	466	N
11	IPI00490216	F.IDFGMDL.Q	N	17.16	-1.2	810.3692	1	24.425	1955	1	510	516	N
11	IPI00490216	R.SLSTELFK.L	N	16.4	1.2	462.756	2	18.957	1462	1	1476	1483	N
11	IPI00490216	K.AGLLGTL.E	N	15.71	-0.1	644.3976	1	22.303	1773	2	767	773	N
11	IPI00490216	F.IGVLDI.A	N	14.33	0.3	629.387	1	23.19	1850	2	456	461	N
11	IPI00490216	I.AGFEIF.D	N	12.68	-1.1	683.3391	1	24.56	1966	1	462	467	N
14	IPI00934366	I.SDLTEQLGETGK.S	N	61.48	0.1	639.3146	2	15.248	1114	1	1513	1524	N
14	IPI00934366	L.EQQVDDLEGSLEQEK.K	N	61.12	-0.5	873.9046	2	18.378	1408	1	1031	1045	N
14	IPI00934366	V.DDLEGSLEQEKK.L	N	56.5	-1.3	695.8375	2	14.576	1050	2	1035	1046	N
14	IPI00934366	L.REQFEEEQEAK.A	N	50.07	0.1	711.8284	2	11.96	812	3	1347	1357	N
14	IPI00934366	R.EQFEEEQEAK.A	N	46.36	-0.1	633.7778	2	12.635	872	2	1348	1357	N
14	IPI00934366	V.DDLEGSLEQEK.K	N	44.18	0.6	631.7913	2	29.467	2374	6	1035	1045	N
14	IPI00934366	L.REQFEEEQEA.K	N	42.96	0.6	647.7812	2	13.24	926	1	1347	1356	N
14	IPI00934366	I.SERLEEAGGA.T	N	42.68	0.1	509.7437	2	11.752	794	1	1150	1159	N
14	IPI00934366	K.NLTEEM(+15.99)A.A	N	35.37	-0.1	823.3502	1	15.316	1121	1	980	986	Y
14	IPI00934366	K.MEGDLNEMEI.Q	N	34.11	-0.1	1180.486	1	21.369	1688	3	1621	1630	N
14	IPI00934366	R.LQDLVDK.L	N	30.84	0.2	415.7346	2	24.837	1989	20	1867	1873	N
14	IPI00934366	L.MVDVER.S	N	28.78	-0.2	374.6865	2	11.968	813	1	1432	1437	N
14	IPI00934366	L.M(+15.99)VDVER.S	N	28.24	-0.2	382.6839	2	11.993	816	1	1432	1437	Y
14	IPI00934366	I.DFGMDL.Q	N	25.26	0.9	697.2867	1	22.099	1755	1	512	517	N

14	IPI00934366	I.ELIEKPMGI.M	N	23.73	0	515.2861	2	31.019	2502	9	522	530	N
14	IPI00934366	L.DIAGFEI.F	N	17.47	-0.7	764.3819	1	23.765	1899	2	461	467	N
14	IPI00934366	F.IDFGMDL.Q	N	17.16	-1.2	810.3692	1	24.425	1955	1	511	517	N
14	IPI00934366	Y.TQQIEDLK.R	N	16.62	-0.8	487.7609	2	12.234	836	1	1312	1319	N
14	IPI00934366	R.SLSTELFK.L	N	16.4	1.2	462.756	2	18.957	1462	1	1479	1486	N
14	IPI00934366	K.AGLLGTL.E	N	15.71	-0.1	644.3976	1	22.303	1773	2	770	776	N
14	IPI00934366	F.IGVLDI.A	N	14.33	0.3	629.387	1	23.19	1850	2	457	462	N
14	IPI00934366	I.AGFEIF.D	N	12.68	-1.1	683.3391	1	24.56	1966	1	463	468	N
14	IPI00934366	V.DY(+79.97)NIS(+79.97)NW.L	N	12.67	1.3	536.1653	2	45.848	3737	1	587	593	Y
14	IPI00934366	L.EEELEAERA.A	N	11.64	-1.1	538.2481	2	12.736	882	1	1122	1130	N
14	IPI00934366	L.SRELEEI.S	N	9.38	0.2	438.2271	2	14.679	1059	1	1143	1149	N
18	IPI00501288	L.EQQVDDLEGSLEQEK.K	N	61.12	-0.5	873.9046	2	18.378	1408	1	1037	1051	N
18	IPI00501288	L.EEAEGTLEHEESK.T	N	56.67	-0.4	744.3281	2	12.385	850	2	1554	1566	N
18	IPI00501288	V.DDLEGSLEQEKK.V	N	56.5	-1.3	695.8375	2	14.576	1050	2	1041	1052	N
18	IPI00501288	L.REQFEEEQEAK.S	N	50.07	0.1	711.8284	2	11.96	812	3	1353	1363	N
18	IPI00501288	R.EQFEEEQEAK.S	N	46.36	-0.1	633.7778	2	12.635	872	2	1354	1363	N
18	IPI00501288	V.DDLEGSLEQEK.K	N	44.18	0.6	631.7913	2	29.467	2374	6	1041	1051	N
18	IPI00501288	L.REQFEEEQEA.K	N	42.96	0.6	647.7812	2	13.24	926	1	1353	1362	N
18	IPI00501288	L.SERLEEAGGA.T	N	42.68	0.1	509.7437	2	11.752	794	1	1156	1165	N
18	IPI00501288	L.DIAGFEI.F	N	17.47	-0.7	764.3819	1	23.765	1899	2	466	472	N
18	IPI00501288	R.SLSTELFK.L	N	16.4	1.2	462.756	2	18.957	1462	1	1485	1492	N
18	IPI00501288	K.DLDDLEI.T	N	16.28	-0.7	832.3929	1	22.166	1761	1	962	968	N
18	IPI00501288	F.IGVLDI.A	N	14.33	0.3	629.387	1	23.19	1850	2	462	467	N
18	IPI00501288	K.KDLDDLEI.T	N	13.39	1.7	480.7486	2	19.102	1476	1	961	968	N
18	IPI00501288	I.AGFEIF.E	N	12.68	-1.1	683.3391	1	24.56	1966	1	468	473	N
18	IPI00501288	L.EEELEAERA.A	N	11.64	-1.1	538.2481	2	12.736	882	1	1128	1136	N
30	IPI00616127	L.EQQVDDLEGSLEQEK.K	N	61.12	-0.5	873.9046	2	18.378	1408	1	1035	1049	N
30	IPI00616127	V.DDLEGSLEQEKK.I	N	56.5	-1.3	695.8375	2	14.576	1050	2	1039	1050	N
30	IPI00616127	V.AELGEQIDNL.Q	N	49.46	-0.4	551.2745	2	20.331	1592	2	1208	1217	N
30	IPI00616127	V.DDLEGSLEQEK.K	N	44.18	0.6	631.7913	2	29.467	2374	6	1039	1049	N
30	IPI00616127	I.SERLEEAGGA.T	N	42.68	0.1	509.7437	2	11.752	794	1	1154	1163	N

30	IPI00616127	K.NLTEEM(+15.99)A.A	N	35.37	-0.1	823.3502	1	15.316	1121	1	984	990	Y
30	IPI00616127	K.MEGDLNEMEI.Q	N	34.11	-0.1	1180.486	1	21.369	1688	3	1625	1634	N
30	IPI00616127	R.LQDLVDK.L	N	30.84	0.2	415.7346	2	24.837	1989	20	1871	1877	N
30	IPI00616127	L.MVDVER.S	N	28.78	-0.2	374.6865	2	11.968	813	1	1436	1441	N
30	IPI00616127	L.M(+15.99)VDVER.S	N	28.24	-0.2	382.6839	2	11.993	816	1	1436	1441	Y
30	IPI00616127	I.DFGMDL.Q	N	25.26	0.9	697.2867	1	22.099	1755	1	514	519	N
30	IPI00616127	V.AELGEQI.D	N	18.17	-2.5	759.3864	1	16.106	1196	1	1208	1214	N
30	IPI00616127	L.DIAGFEI.F	N	17.47	-0.7	764.3819	1	23.765	1899	2	463	469	N
30	IPI00616127	F.IDFGMDL.Q	N	17.16	-1.2	810.3692	1	24.425	1955	1	513	519	N
30	IPI00616127	R.SLSTELFK.L	N	16.4	1.2	462.756	2	18.957	1462	1	1483	1490	N
30	IPI00616127	F.IGVLDI.A	N	14.33	0.3	629.387	1	23.19	1850	2	459	464	N
30	IPI00616127	I.AGFEIF.D	N	12.68	-1.1	683.3391	1	24.56	1966	1	465	470	N
30	IPI00616127	L.EEELEAERA.A	N	11.64	-1.1	538.2481	2	12.736	882	1	1126	1134	N
31	IPI00882712	L.EQQVDDLEGSLEQEK.K	N	61.12	-0.5	873.9046	2	18.378	1408	1	1030	1044	N
31	IPI00882712	V.DDLEGSLEQEKK.L	N	56.5	-1.3	695.8375	2	14.576	1050	2	1034	1045	N
31	IPI00882712	V.AELGEQIDNL.Q	N	49.46	-0.4	551.2745	2	20.331	1592	2	1203	1212	N
31	IPI00882712	V.DDLEGSLEQEK.K	N	44.18	0.6	631.7913	2	29.467	2374	6	1034	1044	N
31	IPI00882712	I.SERLEEAGGA.T	N	42.68	0.1	509.7437	2	11.752	794	1	1149	1158	N
31	IPI00882712	K.NLTEEM(+15.99)A.A	N	35.37	-0.1	823.3502	1	15.316	1121	1	979	985	Y
31	IPI00882712	K.MEGDLNEMEI.Q	N	34.11	-0.1	1180.486	1	21.369	1688	3	1620	1629	N
31	IPI00882712	R.LQDLVDK.L	N	30.84	0.2	415.7346	2	24.837	1989	20	1866	1872	N
31	IPI00882712	I.DFGMDL.Q	N	25.26	0.9	697.2867	1	22.099	1755	1	511	516	N
31	IPI00882712	V.AELGEQI.D	N	18.17	-2.5	759.3864	1	16.106	1196	1	1203	1209	N
31	IPI00882712	L.DIAGFEI.F	N	17.47	-0.7	764.3819	1	23.765	1899	2	460	466	N
31	IPI00882712	F.IDFGMDL.Q	N	17.16	-1.2	810.3692	1	24.425	1955	1	510	516	N
31	IPI00882712	Y.TQQIEDLK.R	N	16.62	-0.8	487.7609	2	12.234	836	1	1311	1318	N
31	IPI00882712	F.IGVLDI.A	N	14.33	0.3	629.387	1	23.19	1850	2	456	461	N
31	IPI00882712	I.AGFEIF.D	N	12.68	-1.1	683.3391	1	24.56	1966	1	462	467	N
31	IPI00882712	L.EEELEAERA.A	N	11.64	-1.1	538.2481	2	12.736	882	1	1121	1129	N
32	IPI00914342	L.EQQVDDLEGSLEQEK.K	N	61.12	-0.5	873.9046	2	18.378	1408	1	1030	1044	N
32	IPI00914342	V.DDLEGSLEQEKK.L	N	56.5	-1.3	695.8375	2	14.576	1050	2	1034	1045	N

32	IPI00914342	V.DDLEGSLEQEK.K	N	44.18	0.6	631.7913	2	29.467	2374	6	1034	1044	N
32	IPI00914342	I.SERLEEAGGA.T	N	42.68	0.1	509.7437	2	11.752	794	1	1149	1158	N
32	IPI00914342	K.NLTEEM(+15.99)A.A	N	35.37	-0.1	823.3502	1	15.316	1121	1	979	985	Y
32	IPI00914342	K.MEGDLNEMEI.Q	N	34.11	-0.1	1180.486	1	21.369	1688	3	1620	1629	N
32	IPI00914342	R.LQDLVDK.L	N	30.84	0.2	415.7346	2	24.837	1989	20	1866	1872	N
32	IPI00914342	L.MVDVER.S	N	28.78	-0.2	374.6865	2	11.968	813	1	1431	1436	N
32	IPI00914342	L.M(+15.99)VDVER.S	N	28.24	-0.2	382.6839	2	11.993	816	1	1431	1436	Y
32	IPI00914342	I.DFGMDL.Q	N	25.26	0.9	697.2867	1	22.099	1755	1	510	515	N
32	IPI00914342	A.DLTEQI.G	Y	17.96	-0.1	718.3617	1	16.956	1275	1	1513	1518	N
32	IPI00914342	L.DIAGFEI.F	N	17.47	-0.7	764.3819	1	23.765	1899	2	459	465	N
32	IPI00914342	F.IDFGMDL.Q	N	17.16	-1.2	810.3692	1	24.425	1955	1	509	515	N
32	IPI00914342	Y.TQQIEDLK.R	N	16.62	-0.8	487.7609	2	12.234	836	1	1311	1318	N
32	IPI00914342	R.SLSTELFK.L	N	16.4	1.2	462.756	2	18.957	1462	1	1478	1485	N
32	IPI00914342	K.AGLLGTL.E	N	15.71	-0.1	644.3976	1	22.303	1773	2	769	775	N
32	IPI00914342	F.IGVLDI.A	N	14.33	0.3	629.387	1	23.19	1850	2	455	460	N
32	IPI00914342	I.AGFEIF.D	N	12.68	-1.1	683.3391	1	24.56	1966	1	461	466	N
32	IPI00914342	L.EEELEAERA.A	N	11.64	-1.1	538.2481	2	12.736	882	1	1121	1129	N
32	IPI00914342	L.SRELEEI.S	N	9.38	0.2	438.2271	2	14.679	1059	1	1142	1148	N
32	IPI00914342	V.QTEQDNLCDAEER.C	Y	6.86	-0.1	775.8229	2	13.576	957	1	894	906	N
33	IPI00960836	L.EQQVDDLEGSLEQEK.K	N	61.12	-0.5	873.9046	2	18.378	1408	1	1030	1044	N
33	IPI00960836	V.DDLEGSLEQEKK.L	N	56.5	-1.3	695.8375	2	14.576	1050	2	1034	1045	N
33	IPI00960836	V.DDLEGSLEQEK.K	N	44.18	0.6	631.7913	2	29.467	2374	6	1034	1044	N
33	IPI00960836	I.SERLEEAGGA.T	N	42.68	0.1	509.7437	2	11.752	794	1	1149	1158	N
33	IPI00960836	K.NLTEEM(+15.99)A.A	N	35.37	-0.1	823.3502	1	15.316	1121	1	979	985	Y
33	IPI00960836	K.MEGDLNEMEI.Q	N	34.11	-0.1	1180.486	1	21.369	1688	3	1620	1629	N
33	IPI00960836	R.LQDLVDK.L	N	30.84	0.2	415.7346	2	24.837	1989	20	1866	1872	N
33	IPI00960836	L.MVDVER.S	N	28.78	-0.2	374.6865	2	11.968	813	1	1431	1436	N
33	IPI00960836	L.M(+15.99)VDVER.S	N	28.24	-0.2	382.6839	2	11.993	816	1	1431	1436	Y
33	IPI00960836	I.DFGMDL.Q	N	25.26	0.9	697.2867	1	22.099	1755	1	510	515	N
33	IPI00960836	A.DLTEQI.G	Y	17.96	-0.1	718.3617	1	16.956	1275	1	1513	1518	N
33	IPI00960836	L.DIAGFEI.F	N	17.47	-0.7	764.3819	1	23.765	1899	2	459	465	N

33	IPI00960836	F.IDFGMDL.Q	N	17.16	-1.2	810.3692	1	24.425	1955	1	509	515	N
33	IPI00960836	Y.TQQIEDLK.R	N	16.62	-0.8	487.7609	2	12.234	836	1	1311	1318	N
33	IPI00960836	R.SLSTELFK.L	N	16.4	1.2	462.756	2	18.957	1462	1	1478	1485	N
33	IPI00960836	K.AGLLGTL.E	N	15.71	-0.1	644.3976	1	22.303	1773	2	769	775	N
33	IPI00960836	F.IGVLDI.A	N	14.33	0.3	629.387	1	23.19	1850	2	455	460	N
33	IPI00960836	I.AGFEIF.D	N	12.68	-1.1	683.3391	1	24.56	1966	1	461	466	N
33	IPI00960836	L.EEELEAERA.A	N	11.64	-1.1	538.2481	2	12.736	882	1	1121	1129	N
33	IPI00960836	L.SRELEEI.S	N	9.38	0.2	438.2271	2	14.679	1059	1	1142	1148	N
34	IPI00771791	L.EQQVDDLEGSLEQEK.K	N	61.12	-0.5	873.9046	2	18.378	1408	1	1030	1044	N
34	IPI00771791	V.DDLEGSLEQEKK.L	N	56.5	-1.3	695.8375	2	14.576	1050	2	1034	1045	N
34	IPI00771791	V.DDLEGSLEQEK.K	N	44.18	0.6	631.7913	2	29.467	2374	6	1034	1044	N
34	IPI00771791	I.SERLEEAGGA.T	N	42.68	0.1	509.7437	2	11.752	794	1	1149	1158	N
34	IPI00771791	K.NLTEEM(+15.99)A.A	N	35.37	-0.1	823.3502	1	15.316	1121	1	979	985	Y
34	IPI00771791	K.MEGDLNEMEI.Q	N	34.11	-0.1	1180.486	1	21.369	1688	3	1620	1629	N
34	IPI00771791	R.LQDLVDK.L	N	30.84	0.2	415.7346	2	24.837	1989	20	1866	1872	N
34	IPI00771791	L.MVDVER.S	N	28.78	-0.2	374.6865	2	11.968	813	1	1431	1436	N
34	IPI00771791	L.M(+15.99)VDVER.S	N	28.24	-0.2	382.6839	2	11.993	816	1	1431	1436	Y
34	IPI00771791	I.DFGMDL.Q	N	25.26	0.9	697.2867	1	22.099	1755	1	510	515	N
34	IPI00771791	A.DLTEQI.G	Y	17.96	-0.1	718.3617	1	16.956	1275	1	1513	1518	N
34	IPI00771791	L.DIAGFEI.F	N	17.47	-0.7	764.3819	1	23.765	1899	2	459	465	N
34	IPI00771791	F.IDFGMDL.Q	N	17.16	-1.2	810.3692	1	24.425	1955	1	509	515	N
34	IPI00771791	Y.TQQIEDLK.R	N	16.62	-0.8	487.7609	2	12.234	836	1	1311	1318	N
34	IPI00771791	R.SLSTELFK.L	N	16.4	1.2	462.756	2	18.957	1462	1	1478	1485	N
34	IPI00771791	K.AGLLGTL.E	N	15.71	-0.1	644.3976	1	22.303	1773	2	769	775	N
34	IPI00771791	F.IGVLDI.A	N	14.33	0.3	629.387	1	23.19	1850	2	455	460	N
34	IPI00771791	I.AGFEIF.D	N	12.68	-1.1	683.3391	1	24.56	1966	1	461	466	N
34	IPI00771791	L.EEELEAERA.A	N	11.64	-1.1	538.2481	2	12.736	882	1	1121	1129	N
34	IPI00771791	L.SRELEEI.S	N	9.38	0.2	438.2271	2	14.679	1059	1	1142	1148	N
35	IPI00962033	L.EQQVDDLEGSLEQEK.K	N	61.12	-0.5	873.9046	2	18.378	1408	1	1031	1045	N
35	IPI00962033	V.DDLEGSLEQEKK.L	N	56.5	-1.3	695.8375	2	14.576	1050	2	1035	1046	N
35	IPI00962033	V.DDLEGSLEQEK.K	N	44.18	0.6	631.7913	2	29.467	2374	6	1035	1045	N

35	IPI00962033	I.SERLEEAGGA.T	N	42.68	0.1	509.7437	2	11.752	794	1	1150	1159	N
35	IPI00962033	K.NLTEEM(+15.99)A.A	N	35.37	-0.1	823.3502	1	15.316	1121	1	980	986	Y
35	IPI00962033	K.MEGDLNEMEI.Q	N	34.11	-0.1	1180.486	1	21.369	1688	3	1621	1630	N
35	IPI00962033	R.LQDLVDK.L	N	30.84	0.2	415.7346	2	24.837	1989	20	1867	1873	N
35	IPI00962033	L.MVDVER.S	N	28.78	-0.2	374.6865	2	11.968	813	1	1432	1437	N
35	IPI00962033	L.M(+15.99)VDVER.S	N	28.24	-0.2	382.6839	2	11.993	816	1	1432	1437	Y
35	IPI00962033	I.DFGMDL.Q	N	25.26	0.9	697.2867	1	22.099	1755	1	511	516	N
35	IPI00962033	A.DLTEQI.G	Y	17.96	-0.1	718.3617	1	16.956	1275	1	1514	1519	N
35	IPI00962033	L.DIAGFEI.F	N	17.47	-0.7	764.3819	1	23.765	1899	2	460	466	N
35	IPI00962033	F.IDFGMDL.Q	N	17.16	-1.2	810.3692	1	24.425	1955	1	510	516	N
35	IPI00962033	Y.TQQIEDLK.R	N	16.62	-0.8	487.7609	2	12.234	836	1	1312	1319	N
35	IPI00962033	R.SLSTELFK.L	N	16.4	1.2	462.756	2	18.957	1462	1	1479	1486	N
35	IPI00962033	K.AGLLGTL.E	N	15.71	-0.1	644.3976	1	22.303	1773	2	770	776	N
35	IPI00962033	F.IGVLDI.A	N	14.33	0.3	629.387	1	23.19	1850	2	456	461	N
35	IPI00962033	I.AGFEIF.D	N	12.68	-1.1	683.3391	1	24.56	1966	1	462	467	N
35	IPI00962033	L.EEELEAERA.A	N	11.64	-1.1	538.2481	2	12.736	882	1	1122	1130	N
35	IPI00962033	L.SRELEEI.S	N	9.38	0.2	438.2271	2	14.679	1059	1	1143	1149	N
19	IPI00656493	K.DSYVGDEAQSK.R	Y	58.22	0	599.7647	2	12.031	819	1	52	62	N
19	IPI00656493	L.SGGTTMYPGIADR.M	Y	53.71	-1.9	663.3101	2	16.05	1191	1	301	313	N
19	IPI00656493	L.SGGTTM(+15.99)YPGIADR.M	Y	49.58	-1.7	671.3076	2	16.058	1192	1	301	313	Y
19	IPI00656493	K.AGFAGDDAPR.A	Y	48.2	-0.4	488.7275	2	12.965	902	1	20	29	N
19	IPI00656493	K.SYELPDGQV.I	Y	44.38	-0.5	1007.468	1	18.521	1421	1	240	248	N
19	IPI00656493	A.GFAGDDAPR.A	Y	40.61	0.2	453.2093	2	12.518	862	1	21	29	N
19	IPI00656493	L.TEAPLNPK.A	Y	36.69	-0.6	435.2397	2	11.332	758	2	107	114	N
19	IPI00656493	K.SYELPDGQVI.T	Y	35.81	-0.8	560.7792	2	22.795	1816	1	240	249	N
19	IPI00656493	Y.ELPDGQVI.T	Y	22.91	-0.8	870.4559	1	18.36	1406	1	242	249	N
19	IPI00656493	R.LDLAGR.D	Y	18.26	0.5	322.6901	2	13.063	911	1	179	184	N
19	IPI00656493	Y.DESGPSI.V	Y	17.79	-0.3	704.3095	1	12.404	852	1	364	370	N
19	IPI00656493	A.VFPSIV.G	Y	17.45	0.7	661.3924	1	21.589	1709	1	31	36	N
19	IPI00656493	K.IIAPPER.K	Y	16.86	0.2	398.2398	2	13.249	927	1	330	336	N
19	IPI00656493	R.AVFPSIV.G	Y	11.82	1.5	732.4301	1	22.854	1821	3	30	36	N

19	IPI00656493	W.IGGSIL.A	Y	11.15	0.4	559.3452	1	17.403	1317	1	342	347	N
19	IPI00656493	K.EITALAPSTMK.I	Y	7.75	0	581.3128	2	23.978	1917	1	317	327	N
24	IPI00482295	K.DSYVGDEAQSK.R	Y	58.22	0	599.7647	2	12.031	819	1	51	61	N
24	IPI00482295	L.SGGTTMYPGIADR.M	Y	53.71	-1.9	663.3101	2	16.05	1191	1	300	312	N
24	IPI00482295	L.SGGTTM(+15.99)YPGIADR.M	Y	49.58	-1.7	671.3076	2	16.058	1192	1	300	312	Y
24	IPI00482295	K.AGFAGDDAPR.A	Y	48.2	-0.4	488.7275	2	12.965	902	1	19	28	N
24	IPI00482295	K.SYELPDGQV.I	Y	44.38	-0.5	1007.468	1	18.521	1421	1	239	247	N
24	IPI00482295	A.GFAGDDAPR.A	Y	40.61	0.2	453.2093	2	12.518	862	1	20	28	N
24	IPI00482295	L.TEAPLNPK.A	Y	36.69	-0.6	435.2397	2	11.332	758	2	106	113	N
24	IPI00482295	K.SYELPDGQVI.T	Y	35.81	-0.8	560.7792	2	22.795	1816	1	239	248	N
24	IPI00482295	Y.ELPDGQVI.T	Y	22.91	-0.8	870.4559	1	18.36	1406	1	241	248	N
24	IPI00482295	R.LDLAGR.D	Y	18.26	0.5	322.6901	2	13.063	911	1	178	183	N
24	IPI00482295	Y.DESGPSI.V	Y	17.79	-0.3	704.3095	1	12.404	852	1	363	369	N
24	IPI00482295	A.VFPSIV.G	Y	17.45	0.7	661.3924	1	21.589	1709	1	30	35	N
24	IPI00482295	K.IIAPPER.K	Y	16.86	0.2	398.2398	2	13.249	927	1	329	335	N
24	IPI00482295	R.AVFPSIV.G	Y	11.82	1.5	732.4301	1	22.854	1821	3	29	35	N
24	IPI00482295	W.IGGSIL.A	Y	11.15	0.4	559.3452	1	17.403	1317	1	341	346	N
25	IPI00490006	K.DSYVGDEAQSK.R	Y	58.22	0	599.7647	2	12.031	819	1	51	61	N
25	IPI00490006	L.SGGTTMYPGIADR.M	Y	53.71	-1.9	663.3101	2	16.05	1191	1	300	312	N
25	IPI00490006	L.SGGTTM(+15.99)YPGIADR.M	Y	49.58	-1.7	671.3076	2	16.058	1192	1	300	312	Y
25	IPI00490006	K.AGFAGDDAPR.A	Y	48.2	-0.4	488.7275	2	12.965	902	1	19	28	N
25	IPI00490006	K.SYELPDGQV.I	Y	44.38	-0.5	1007.468	1	18.521	1421	1	239	247	N
25	IPI00490006	A.GFAGDDAPR.A	Y	40.61	0.2	453.2093	2	12.518	862	1	20	28	N
25	IPI00490006	L.TEAPLNPK.A	Y	36.69	-0.6	435.2397	2	11.332	758	2	106	113	N
25	IPI00490006	K.SYELPDGQVI.T	Y	35.81	-0.8	560.7792	2	22.795	1816	1	239	248	N
25	IPI00490006	Y.ELPDGQVI.T	Y	22.91	-0.8	870.4559	1	18.36	1406	1	241	248	N
25	IPI00490006	R.LDLAGR.D	Y	18.26	0.5	322.6901	2	13.063	911	1	178	183	N
25	IPI00490006	Y.DESGPSI.V	Y	17.79	-0.3	704.3095	1	12.404	852	1	363	369	N
25	IPI00490006	A.VFPSIV.G	Y	17.45	0.7	661.3924	1	21.589	1709	1	30	35	N
25	IPI00490006	K.IIAPPER.K	Y	16.86	0.2	398.2398	2	13.249	927	1	329	335	N
25	IPI00490006	R.AVFPSIV.G	Y	11.82	1.5	732.4301	1	22.854	1821	3	29	35	N

25	IPI00490006	W.IGGSIL.A	Y	11.15	0.4	559.3452	1	17.403	1317	1	341	346	N
29	IPI00800858	L.EQQVDDLEGSLEQEK.K	N	61.12	-0.5	873.9046	2	18.378	1408	1	1029	1043	N
29	IPI00800858	L.EEAEGTLEHEESK.T	N	56.67	-0.4	744.3281	2	12.385	850	2	1546	1558	N
29	IPI00800858	V.DDLEGSLEQEKK.L	N	56.5	-1.3	695.8375	2	14.576	1050	2	1033	1044	N
29	IPI00800858	R.LEEAGGATSA.Q	N	44.9	-0.7	905.4203	1	11.194	746	1	1151	1160	N
29	IPI00800858	V.DDLEGSLEQEK.K	N	44.18	0.6	631.7913	2	29.467	2374	6	1033	1043	N
29	IPI00800858	L.SERLEEAGGA.T	N	42.68	0.1	509.7437	2	11.752	794	1	1148	1157	N
29	IPI00800858	L.DIAGFEI.F	N	17.47	-0.7	764.3819	1	23.765	1899	2	458	464	N
29	IPI00800858	K.DIDDLEI.T	N	16.28	-0.7	832.3929	1	22.166	1761	1	954	960	N
29	IPI00800858	F.IGVLDI.A	N	14.33	0.3	629.387	1	23.19	1850	2	454	459	N
29	IPI00800858	K.KDIDDLEI.T	N	13.39	1.7	480.7486	2	19.102	1476	1	953	960	N
29	IPI00800858	W.LDKNKDPL.N	N	12.69	-1	471.7659	2	12.257	839	2	592	599	N
29	IPI00800858	I.AGFEIF.E	N	12.68	-1.1	683.3391	1	24.56	1966	1	460	465	N
29	IPI00800858	L.M(+15.99)ATDHA.M	Y	9.93	1.3	661.2618	1	2.659	176	1	327	332	Y
44	IPI00817902	R.DVLASMGQL.N	Y	40.15	-0.5	933.4705	1	22.175	1762	2	29	37	N
44	IPI00817902	K.LKGADPEDV.I	N	39.93	-0.3	472.24	2	13.391	940	1	68	76	N
44	IPI00817902	R.DGIISKDDL.R	N	35.8	-0.6	975.4987	1	17.46	1322	33	19	27	N
44	IPI00817902	L.ASMGQLNV.K	Y	33.82	0.9	819.4036	1	17.269	1304	1	32	39	N
44	IPI00817902	F.TIIDQNR.D	N	33.34	-0.6	430.235	2	11.628	784	2	12	18	N
44	IPI00817902	K.GADPEDV.I	N	24.63	0.2	702.2941	1	11.929	810	1	70	76	N
44	IPI00817902	L.ASMGQL.N	Y	21.68	-0.3	606.2914	1	14.162	1011	1	32	37	N
44	IPI00817902	K.NEELEA.M	N	20.45	-0.5	704.3093	1	12.299	842	1	41	46	N
44	IPI00817902	K.GADPEDVIV.S	N	19.61	-0.1	914.4464	1	18.304	1401	1	70	78	N
44	IPI00817902	K.EASGPI.N	N	19.5	-0.1	573.2878	1	10.255	669	1	50	55	N
45	IPI00488085	R.DVLASMGQL.N	Y	40.15	-0.5	933.4705	1	22.175	1762	2	53	61	N
45	IPI00488085	K.LKGADPEDV.I	N	39.93	-0.3	472.24	2	13.391	940	1	92	100	N
45	IPI00488085	R.DGIISKDDL.R	N	35.8	-0.6	975.4987	1	17.46	1322	33	43	51	N
45	IPI00488085	L.ASMGQLNV.K	Y	33.82	0.9	819.4036	1	17.269	1304	1	56	63	N
45	IPI00488085	F.TIIDQNR.D	N	33.34	-0.6	430.235	2	11.628	784	2	36	42	N
45	IPI00488085	K.GADPEDV.I	N	24.63	0.2	702.2941	1	11.929	810	1	94	100	N
45	IPI00488085	L.ASMGQL.N	Y	21.68	-0.3	606.2914	1	14.162	1011	1	56	61	N

45	IPI00488085	K.NEELEA.M	N	20.45	-0.5	704.3093	1	12.299	842	1	65	70	N
45	IPI00488085	K.GADPEDVIV.S	N	19.61	-0.1	914.4464	1	18.304	1401	1	94	102	N
45	IPI00488085	K.EASGPI.N	N	19.5	-0.1	573.2878	1	10.255	669	1	74	79	N
51	IPI00919778	K.LKGADPEDV.I	N	39.93	-0.3	472.24	2	13.391	940	1	71	79	N
51	IPI00919778	R.DGIISKDDL.R	N	35.8	-0.6	975.4987	1	17.46	1322	33	22	30	N
51	IPI00919778	F.TIIDQNR.D	N	33.34	-0.6	430.235	2	11.628	784	2	15	21	N
51	IPI00919778	K.GADPEDV.I	N	24.63	0.2	702.2941	1	11.929	810	1	73	79	N
51	IPI00919778	K.NEELEAMVK.E	Y	23.68	-0.8	531.76	2	16.451	1230	1	44	52	N
51	IPI00919778	K.NEELEA.M	N	20.45	-0.5	704.3093	1	12.299	842	1	44	49	N
51	IPI00919778	K.GADPEDVIV.S	N	19.61	-0.1	914.4464	1	18.304	1401	1	73	81	N
51	IPI00919778	K.EASGPI.N	N	19.5	-0.1	573.2878	1	10.255	669	1	53	58	N
52	IPI00496651	K.LKGADPEDV.I	N	39.93	-0.3	472.24	2	13.391	940	1	92	100	N
52	IPI00496651	R.DGIISKDDL.R	N	35.8	-0.6	975.4987	1	17.46	1322	33	43	51	N
52	IPI00496651	F.TIIDQNR.D	N	33.34	-0.6	430.235	2	11.628	784	2	36	42	N
52	IPI00496651	K.GADPEDV.I	N	24.63	0.2	702.2941	1	11.929	810	1	94	100	N
52	IPI00496651	K.NEELEAMVK.E	Y	23.68	-0.8	531.76	2	16.451	1230	1	65	73	N
52	IPI00496651	K.NEELEA.M	N	20.45	-0.5	704.3093	1	12.299	842	1	65	70	N
52	IPI00496651	K.GADPEDVIV.S	N	19.61	-0.1	914.4464	1	18.304	1401	1	94	102	N
52	IPI00496651	K.EASGPI.N	N	19.5	-0.1	573.2878	1	10.255	669	1	74	79	N
63	IPI00488248	R.VFDKEGNGTV.M	Y	46.48	-0.2	533.264	2	13.383	939	1	95	104	N
63	IPI00488248	K.GTYDDYVEGL.R	Y	32.78	-0.5	1131.484	1	21.259	1678	2	84	93	N
63	IPI00488248	Y.DDYVEGL.R	Y	24.43	0.2	810.3517	1	18.824	1449	1	87	93	N
95	IPI00516071	F.LFDKPVSPL.L	Y	29.66	0.2	508.2948	2	19.369	1502	1	132	140	N
96	IPI00919917	F.LFDKPVSPL.L	Y	29.66	0.2	508.2948	2	19.369	1502	1	194	202	N
97	IPI00919712	F.LFDKPVSPL.L	Y	29.66	0.2	508.2948	2	19.369	1502	1	203	211	N
98	IPI00508395	F.LFDKPVSPL.L	Y	29.66	0.2	508.2948	2	19.369	1502	1	192	200	N
99	IPI00482319	F.LFDKPVSPL.L	Y	29.66	0.2	508.2948	2	19.369	1502	1	193	201	N
100	IPI00497388	F.LFDKPVSPL.L	Y	29.66	0.2	508.2948	2	19.369	1502	1	193	201	N
101	IPI00506249	F.LFDKPVSPL.L	Y	29.66	0.2	508.2948	2	19.369	1502	1	193	201	N
102	IPI00485952	F.LFDKPVSPL.L	Y	29.66	0.2	508.2948	2	19.369	1502	1	222	230	N
103	IPI00817153	F.LFDKPVSPL.L	Y	29.66	0.2	508.2948	2	19.369	1502	1	222	230	N

104	IPI00490232	F.LFDKPVSPL.L	Y	29.66	0.2	508.2948	2	19.369	1502	1	227	235	N
105	IPI00960817	F.LFDKPVSPL.L	Y	29.66	0.2	508.2948	2	19.369	1502	1	226	234	N
109	IPI00995606	R.HVSHGPDT	Y	29.46	-0.1	849.3849	1	14.933	1084	1	499	506	N
109	IPI00995606	R.ESEIEELK.S	Y	12.99	0	488.7453	2	14.997	1090	1	150	157	N
117	IPI00996774	A.SNSAGPGPASSEV.R	Y	29.25	2.7	387.1801	3	50.407	4111	1	1074	1086	N
108	IPI00501538	L.DTVLDMIK.D	Y	27.84	-0.1	467.7493	2	21.323	1684	1	70	77	N
94	IPI00505794	R.EIVPGDIVEV.S	Y	27.07	-1.3	1069.576	1	22.785	1815	1	144	153	N
1453	IPI00799120	I.ITEGGENF.S	Y	18.34	0.4	866.3893	1	14.798	1071	1	1487	1494	N
1453	IPI00799120	A.IITEGGENF.S	Y	17.26	-0.5	979.4726	1	18.233	1394	1	1486	1494	N
1453	IPI00799120	I.TEGGENF.S	Y	8.02	-0.3	753.3047	1	11.771	796	1	1488	1494	N
110	IPI00515939	K.TIDDLEDEL.Y	Y	24.81	0.1	1062.484	1	21.776	1726	1	216	224	N
111	IPI00506010	K.TIDDLEDEL.Y	Y	24.81	0.1	1062.484	1	21.776	1726	1	252	260	N
112	IPI00508152	K.TIDDLEDEL.Y	Y	24.81	0.1	1062.484	1	21.776	1726	1	252	260	N
113	IPI00634377	K.TIDDLEDEL.Y	Y	24.81	0.1	1062.484	1	21.776	1726	1	252	260	N
3679	IPI00512597	L.EQPEENL.L	Y	24.71	-1.6	858.3826	1	10.245	668	1	39	45	N
114	IPI00901816	I.ELDQSELKQQQL.Q	Y	24.04	-0.2	729.8752	2	16.355	1220	1	245	256	N
115	IPI00933229	I.ELDQSELKQQQL.Q	Y	24.04	-0.2	729.8752	2	16.355	1220	1	246	257	N
3685	IPI00995577	K.ESSPESLSA.L	Y	20.81	-0.8	906.4043	1	13.648	964	2	339	347	N
3685	IPI00995577	K.ESSPESLSAL.L	Y	11.38	0.1	1019.489	1	19.406	1506	1	339	348	N
547	IPI00997640	K.EPYPDV.T	Y	20.8	0	719.3246	1	38.14	3094	2	21	26	N
3684	IPI00972163	L.TTPAPAAPSDPA.E	Y	20.74	-1.9	548.2684	2	16.113	1197	1	125	136	N
3694	IPI01005517	V.TNVLDMA.F	Y	20.34	-0.4	763.3652	1	40.881	3323	14	940	946	N
3694	IPI01005517	V.TNVLDM(+15.99)A.F	Y	5.63	-0.3	779.3601	1	16.693	1252	1	940	946	Y

APPENDIX L
DE NOVO SEQUENCING RESULTS FOR CHYMOTRYPSIN

De novo summary report (generated by Peaks DB software)

1. Notes

2. Result Statistics

Figure 1: The distribution of de novo ALC score: **(a)** histogram of score **(b)** The plot of error vs. score

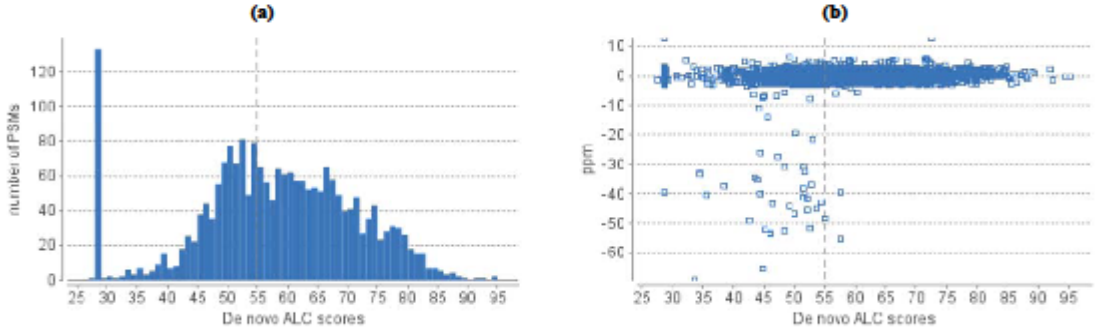

Table 1. Statistics of data and result.

# of MS Scans	867
# of MS/MS Scans	3696
Peptides after filter	1235

Table 2. Result filtration parameters.

De Novo ALC ≥55%
De Novo TLC ≥3

3. Other Information

Table 3. Search parameters.

Parent Mass Error Tolerance: 3.0 ppm
Fragment Mass Error Tolerance: 0.5 Da
Enzyme: Chymptrypsin_fish
Variable Modifications:
Oxidation M: 15.99
Phosphorylation-STY: 79.97
Max variable PTM per peptide: 3
Report # peptides: 3
Data Refine dependencies: 3

Table 4. Instrument parameters.

Fractions: CT.RAW
Ion Source: ESI(nano-spray)
Fragmentation Mode: CID, CAD, IRMPD (y and b ions)
MS Scan Mode: FT-ICR/Orbitrap
MS/MS Scan Mode: Linear Ion Trap

Peptide results for chymotrypsin digested myosin – derived by De novo sequencing with PEAKS DB software

Scan	Sequence	TLC	ALC (%)	m/z	z	RT	ppm	local confidence (%)	tag (>=80%)
1146	STLESEKF	7.6	95	470.7346	2	15.093	-0.3	87 88 97 97 96 97 98 99	STLESEKF
1206	LLEKSRVTF	8.5	94	546.8241	2	15.72	-0.1	98 99 98 98 97 89 83 87 96	LLEKSRVTF
1477	TGEELKNMW	8.3	92	554.2598	2	18.649	-1.3	81 81 94 99 97 95 94 96 88	TGEELKNMW
1047	CRGKEDEDGWHY	11	92	747.8086	2	14.05	2.2	79 79 85 85 95 98 98 98 97 93 94 94	[259.1]GKEDEDGWHY
4027	TGEELKNMW	8	89	554.2612	2	48.09	1.2	73 73 90 98 97 94 93 95 88	[158.1]EELKNMW
1334	TSEPTVKSF	8	89	498.2565	2	17.069	1.3	95 95 95 96 79 78 86 86 86	TSEP[200.1]KSF
1093	KSANWVAQW	7.9	88	545.2769	2	14.522	-0.9	71 77 90 87 97 98 94 95 81	[215.1]ANWVAQW
1085	VHQAM(+15.99)CAKSF	8.8	88	569.2626	2	14.446	0	97 97 89 98 98 97 96 85 85 34	VHQAM(+15.99)CAKS[147.1]
2291	TGEELKNMW	7.9	88	554.2614	2	27.651	1.4	70 69 88 99 98 92 91 92 88	[158.1]EELKNMW
1160	TNSDGEVAQAF	9.6	87	569.7544	2	15.243	0.3	77 73 89 86 85 90 94 97 92 98 72	[215.1]SDGEVAQA[147.1]
3013	LTLTSNPY	7	87	908.4726	1	36.312	0.3	67 67 91 93 94 92 98 92	[214.1]LTSNPY
1994	FPPDVAGRGDYQNLVY(+79.97)	13.9	87	945.9254	2	24.225	0.7	93 91 80 90 96 96 92 82 85 94 96 53 61 85 94 94	FPPDVAGRGDY[242.1]LVY(+79.97)
2423	TGEELKNMW	7.8	87	554.2609	2	29.239	0.7	64 63 83 98 97 94 94 94 87	[158.1]EELKNMW
1304	VKEASGPLNF	8.6	86	1061.5601	1	16.745	-2.3	93 81 81 95 97 95 82 75 80 82	VKEASGP[113.1]NF
2555	GTEELKNMW	7.7	86	554.2608	2	30.829	0.4	70 75 90 97 93 88 85 89 79	[158.1]EELKNM[186.1]
1005	T(+79.97)SNAKEENHF	8.6	86	628.7492	2	13.577	-2.5	96 96 84 92 92 95 89 70 78 57	T(+79.97)SNAKEE[398.2]
1399	FGTSEDKVGLY	9.4	85	608.2974	2	17.805	-1.2	74 80 93 94 94 96 95 94 93 92 28	[147.1]GTSEDKVGL[163.1]
4219	LPTELS(+79.97)QF	6.8	85	1014.4531	1	50.497	-1.2	74 72 87 95 96 80 93 80	[210.1]TELS(+79.97)QF
1764	GSPELLTTQM(+15.99)M(+15.99)RF	11.1	85	771.8678	2	21.744	-0.4	30 59 75 95 98 99 98 97 89 96 87 89 89	[241.1]ELLTTQM(+15.99)M(+15.99)RF
2553	TLLTSNPY	6.8	85	908.4717	1	30.799	-0.7	39 75 95 95 94 90 97 90	[214.1]LTSNPY
3018	TGEELKNMW	7.6	85	554.2608	2	36.373	0.4	76 75 91 98 95 83 81 83 78	[158.1]EELKNM[186.1]
1115	MKADKKLGKSTY	10.2	85	685.3811	2	14.757	3.1	77 87 95 97 97 97 92 92 93 82 74 28	[131.0]KADKKLGKS[264.1]
2489	ASEELKNMW	7.6	85	554.2606	2	30.036	0.1	60 67 90 97 94 90 88 92 78	[158.1]EELKNM[186.1]
1350	QTGSGLVQAGF	9.3	84	532.7733	2	17.247	2.2	66 65 94 96 96 96 98 90 97 97 28	[229.1]GSGLVQAG[147.1]
1159	SKADGEVAQW	8.4	84	545.762	2	15.236	0.3	69 77 86 80 80 86 96 91 93 79	[215.1]ADGEVAQ[186.1]
1697	SQVADLMKF	7.6	84	519.769	2	21.037	1.9	77 67 96 96 97 97 97 99 28	[215.1]VADLMK[147.1]
1661	MKPRLVLGW	7.5	84	550.3273	2	20.647	2.7	94 93 86 86 94 96 86 86 28	MKPRLVLG[186.1]
1782	FPPDVAGPSGSYKNLCY	14.2	84	907.9252	2	21.934	0.7	80 80 73 90 96 96 92 86 80 82 95 97 89 54 79 80 67	FP[97.1]DVAGPSGSYK[227.1]C[163.1]

997	LTSNPY	5	84	694.3405	1	13.486	-0.2	28 98 96 89 98 90	[113.1]TSNPY
1859	VETVKDLSMF	8.4	84	584.7997	2	22.748	0.4	73 78 91 90 69 63 73 98 98 99	[228.1]TV[356.2]SMF
1175	MVNWFGHLF	7.5	84	575.7787	2	15.412	-0.1	97 97 92 98 91 92 77 77 28	MVNWFG[397.2]
1746	KNHLEELTDTMESY	11.6	83	855.3877	2	21.552	-0.4	91 87 93 96 98 97 93 94 96 81 70 59 60 43	KNHLEELTDT[510.2]
1262	MKADKLKGHW	8.3	83	607.3302	2	16.309	1.7	87 87 90 90 93 91 85 84 90 28	MKADKLKGH[186.1]
2952	ASEELKNMW	7.4	83	554.261	2	35.585	0.8	63 68 91 97 96 88 81 82 72	[158.1]EELKNM[186.1]
2420	LTLTSNPY	6.6	83	908.4731	1	29.197	0.8	49 49 95 93 92 91 98 91	[214.1]LTSNPY
3126	STELF	4.1	83	596.2928	1	37.657	0.3	95 95 95 97 28	STEL[147.1]
2013	TLLAKEVASDLEDAKY	13.2	82	883.4644	2	24.431	-0.2	29 29 81 92 96 96 98 98 97 96 94 94 94 95 96 28	[214.1]LAKEVASDLEDAK[163.1]
1427	AWSKLAGYEGAEAF	11.5	82	750.3632	2	18.111	1.7	85 85 75 77 84 97 97 97 97 82 76 79 89 28	AW[215.1]LAGYEG[200.1]A[147.1]
3457	STELF	4.1	82	596.2929	1	41.388	0.5	95 96 94 96 28	STEL[147.1]
2466	STELF	4.1	82	596.2916	1	29.75	-1.6	94 95 95 97 28	STEL[147.1]
1211	MNKRCEALGW	8.2	82	604.2891	2	15.775	-0.1	89 89 88 82 86 98 95 86 79 28	MNKRCEAL[243.1]
2683	TLLTSNPY	6.6	82	908.4724	1	32.375	0.1	29 61 95 95 95 92 97 90	[214.1]LTSNPY
1910	WVEAPAFDGGAPLKGY	13.2	82	839.418	2	23.281	0.9	28 98 98 99 94 97 97 96 82 73 80 87 83 84 86 28	[186.1]VEAPAFDG[57.0]APLKG[163.1]
1351	MEAGMVTGHKPY	9.9	82	660.8092	2	17.255	2.9	93 93 95 96 98 96 94 93 83 53 46 39	MEAGMVTGH[388.2]
971	MHNAQEEAETPHF	10.7	82	770.8287	2	13.165	1.2	91 92 89 98 89 97 99 97 94 83 76 28 28	MHNAQEEAET[381.2]
3984	STELF	4.1	82	596.2927	1	47.579	0.2	94 95 94 97 28	STEL[147.1]
2985	MAKLGHVVMF	8.2	82	566.8047	2	35.973	1.5	93 93 96 89 85 88 81 81 81 28	MAKLGHVVM[147.1]
1416	STELF	4.1	82	596.2932	1	17.991	0.9	94 95 94 97 28	STEL[147.1]
1004	M(+15.99)QGQEDENGSVHY	10.7	82	755.2993	2	13.567	0.2	61 52 87 71 96 98 96 88 82 81 76 85 85	[275.1]G[128.1]EDENGS[99.1]HY
1349	STELF	4.1	82	596.2939	1	17.241	2.1	93 94 94 97 28	STEL[147.1]
2862	STELF	4.1	82	596.2925	1	34.518	-0.1	94 94 94 96 28	STEL[147.1]
1001	MVSKPAGWW	7.3	82	531.2651	2	13.541	-0.7	96 96 96 94 89 85 74 72 28	MVSKPA[429.2]
2059	DGLMVPSVVW	8.2	82	1102.5612	1	24.954	1	67 80 91 96 96 96 86 86 86 28	[115.0]GLMVPSVV[186.1]
3618	WSHYM(+15.99)KF	5.7	81	507.7302	2	43.234	2.9	28 86 86 86 89 99 92	[186.1]SHYM(+15.99)KF
1249	GSLDVSYNQY	8.1	81	1145.5132	1	16.17	1.9	74 73 83 99 99 97 94 59 77 54	[144.1]LDVSY[405.2]
1248	WLLSSADLETY	8.9	81	649.319	2	16.163	-0.2	29 90 74 95 95 93 94 96 97 98 28	[186.1]L[113.1]SSADLET[163.1]
3523	STELF	4.1	81	596.2927	1	42.129	0.2	93 94 93 96 28	STEL[147.1]
3791	SKVADLERW	7.3	81	552.2973	2	45.267	2.7	28 98 97 97 97 97 92 92 28	[87.0]KVADLER[186.1]
2599	STELF	4.1	81	596.2927	1	31.353	0.1	92 93 93 97 28	STEL[147.1]

3689	ASEELKNMW	7.3	81	554.2604	2	44.066	-0.2	54 61 86 97 94 84 83 87 79	[158.1]EELKNM[186.1]
1760	DMLTPF	4.9	81	723.3391	1	21.698	1.3	91 91 97 91 86 28	DMLTP[147.1]
3493	SAEELKNMW	7.3	81	554.2607	2	41.791	0.3	58 58 89 97 94 85 82 88 72	[158.1]EELKNM[186.1]
3193	STELF	4.1	81	596.2928	1	38.445	0.3	92 93 93 97 28	STEL[147.1]
2796	STELF	4	81	596.2932	1	33.748	1	93 93 93 96 28	STEL[147.1]
3323	MDLPTF	4.9	81	723.3384	1	39.978	0.3	95 95 96 84 84 28	MDLPT[147.1]
2400	STELF	4	81	596.2928	1	28.955	0.4	92 93 93 96 28	STEL[147.1]
1823	DMLTPF	4.9	81	723.3391	1	22.367	1.4	92 92 97 90 84 28	DMLTP[147.1]
2000	SM(+15.99)HRGVNKVAAF	9.7	81	666.8475	2	24.287	2.8	55 55 55 78 80 87 78 91 94 95 98 98	[527.2]GV[114.0]KVAAF
2929	STELF	4	81	596.2936	1	35.312	1.7	93 94 92 95 28	STEL[147.1]
1958	FQPSFLGMESAGLHETAY	14.5	81	992.9575	2	23.831	-1.5	67 62 83 84 93 98 98 98 97 96 96 90 88 84 76 55 51 28	[275.1]PSFLGMESAGLH[464.2]
3720	STELF	4	81	596.2928	1	44.436	0.3	91 93 93 96 28	STEL[147.1]
3918	STELF	4	81	596.2927	1	46.785	0.1	92 93 92 95 28	STEL[147.1]
1062	QLPDERGY	6.4	81	489.2382	2	14.209	0.6	69 79 96 98 93 88 89 28	[241.1]PDERG[163.1]
1382	LTLTSNEF	6.4	81	924.4678	1	17.613	0.5	43 43 92 93 96 89 96 88	[214.1]LTSNEF
3258	STELF	4	81	596.2927	1	39.225	0.1	91 93 92 96 28	STEL[147.1]
1041	MQANEDENGSVHY	10.4	80	747.3012	2	13.988	-0.7	59 43 54 54 97 99 97 92 94 93 85 87 87	[444.2]EDENGSVHY
1163	HANGKLSSADLETY	11.2	80	753.3659	2	15.281	1	94 93 87 79 78 85 86 65 64 77 92 92 94 28	HAN[185.1]LS[273.1]LET[163.1]
1482	SAEELQNM(+15.99)AF	8	80	1155.4976	1	18.706	-1.1	60 60 84 99 99 83 74 81 82 74	[158.1]EELQ[114.0]M(+15.99)A[147.1]
2646	MVSKGGCNHLLF	9.6	80	653.3268	2	31.917	1.7	92 92 93 94 84 73 84 73 74 78 90 28	MVSKG[57.0]C[364.2]L[147.1]
1637	KMKNSYEEVDDHLPTY	12.8	80	984.9564	2	20.387	2.4	35 72 81 86 92 95 96 89 96 97 97 91 86 69 63 28	[259.1]KNSYEEVDDHL[361.2]
2333	STELF	4	80	596.2922	1	28.144	-0.6	90 92 92 96 28	STEL[147.1]
3654	STELF	4	80	596.2927	1	43.657	0.2	90 92 91 96 28	STEL[147.1]
1290	AENADLF	5.6	80	779.3585	1	16.601	2	80 80 78 97 95 96 28	AE[114.0]ADL[147.1]
3917	MDLTPF	4.8	80	723.3381	1	46.776	-0.1	89 90 96 89 84 28	MDLTP[147.1]
2309	QSVAM(+15.99)DRTVALW	9.6	80	696.8488	2	27.861	-2.6	73 73 89 97 99 80 80 82 79 77 94 28	[215.1]VAM(+15.99)DRT[170.1]L[186.1]
4014	VSSDQGFQF	7.2	80	507.7303	2	47.938	0.8	92 93 88 78 65 81 98 91 28	VSS[243.1]GFQ[147.1]
1341	KLLDEPATGSLKRTF	12	80	838.4711	2	17.145	-1.7	43 76 97 98 99 92 86 83 76 74 76 94 87 81 28	[241.2]LDEPAT[257.1]KRT[147.1]
2305	CPQACAFKF	7.2	80	1014.4526	1	27.814	-1	92 92 80 83 82 88 83 85 28	CPQACAFK[147.1]
2688	TGEELKNMW	7.2	80	554.261	2	32.438	0.9	62 61 81 98 95 80 77 87 72	[158.1]EELK[114.0]M[186.1]
3876	DYGKSDGVRPVAF	10.4	80	705.8548	2	46.27	0.9	40 47 57 80 94 94 91 90 84 88 88 88 88	[335.1]KSDGVRPVAF

1481	ASEELKNMW	7.2	80	1107.5123	1	18.697	-1.4	54 58 82 96 97 85 79 88 74	[158.1]EELK[114.0]M[186.1]
2687	HVVQSDGVVGDLW	10.3	80	705.8544	2	32.429	0.3	28 97 96 86 96 89 88 87 75 69 73 78 65	[137.1]VVQSDGV[570.3]
3851	DMLTPF	4.8	80	723.3377	1	45.984	-0.6	92 91 95 88 80 28	DMLTP[147.1]
847	CLVQF	4	79	305.1569	2	11.625	0.2	89 89 69 57 90	CL[227.1]F
4194	STELF	4	79	596.2928	1	50.178	0.4	89 91 91 96 28	STEL[147.1]
2994	STELF	4	79	596.2936	1	36.089	1.7	89 91 91 95 28	STEL[147.1]
3174	VFQGGDGTSF	7.9	79	507.7301	2	38.231	0.3	86 86 54 71 73 87 78 79 84 92	VF[242.1]D[158.1]SF
3455	MDLTPF	4.8	79	723.3383	1	41.37	0.2	91 92 95 87 80 28	MDLTP[147.1]
3257	DMLTPF	4.8	79	723.3384	1	39.217	0.3	91 91 95 88 81 28	DMLTP[147.1]
2621	ASEELKNMW	7.1	79	554.2608	2	31.622	0.4	55 62 86 97 93 81 79 80 74	[158.1]EELK[114.0]M[186.1]
2185	MVSKGHSGMKPF	9.5	79	653.3273	2	26.423	2.3	92 92 92 90 86 82 85 84 67 66 81 28	MVSKGHSG[259.1]P[147.1]
4050	STELF	4	79	596.2921	1	48.372	-0.8	90 91 91 94 28	STEL[147.1]
1769	DMLTPF	4.8	79	723.3375	1	21.803	-0.8	91 91 94 87 82 28	DMLTP[147.1]
1913	QNPDKGVLTLGNERF	11.9	79	844.4395	2	23.322	-2.6	56 57 84 81 61 63 93 95 94 96 98 87 92 94 28	[242.1]PD[185.1]VLTLGNER[147.1]
2795	DMLTPF	4.7	79	723.3389	1	33.74	1	90 89 95 87 82 28	DMLTP[147.1]
2676	FGKAVDAGKKSGHY(+79.97)	11.1	79	772.868	2	32.287	1.9	73 83 94 96 96 94 89 87 84 87 86 74 28 28	[147.1]GKAVDAGKKS[437.1]
1080	TSEDKRLY	6.3	79	506.2596	2	14.394	1.4	98 98 97 95 93 91 28 28	TSEDKR[276.1]
3588	TSELF	3.9	79	596.2927	1	42.886	0.2	85 91 91 98 28	TSEL[147.1]
2611	GFQAVDANAKSNHW	11.1	79	772.8682	2	31.493	3.2	80 85 83 97 97 88 87 75 81 84 87 60 61 35	GFQAVDA[114.0]AKS[437.2]
991	HSEPDLNRF	7.1	79	372.1808	3	13.413	0.4	69 71 71 67 80 90 88 91 79	[450.2]DLNR[147.1]
2622	S(+79.97)PAKSTAVGVPVAF	11	79	705.8541	2	31.63	-1.4	45 51 58 83 94 77 75 81 87 88 90 89 89 89	[335.1]KS[172.1]VGVPVAF
2927	DMLTPF	4.7	79	723.3394	1	35.296	1.8	90 88 95 87 82 28	DMLTP[147.1]
3308	MVSKNCNHLLF	8.7	79	653.3265	2	39.796	1.2	91 91 92 95 75 77 75 79 82 77 28	MVSK[468.2]L[260.2]
3719	MDLPTF	4.7	79	723.338	1	44.426	-0.3	95 94 95 80 78 28	MDLP[248.1]
3786	STELF	3.9	79	596.292	1	45.207	-1	91 92 88 92 28	STEL[147.1]
1397	MKPAREKEALVAAW	11	79	800.4381	2	17.786	1	94 93 72 64 73 91 62 82 85 93 87 87 84 28	MK[324.2]E[128.1]EALVAA[186.1]
1310	TPDGVKLF	6.3	79	438.7459	2	16.813	2.4	94 94 92 77 72 82 87 28	TPD[156.1]KL[147.1]
4193	ASEELKNMW	7.1	79	554.2609	2	50.166	0.6	71 74 90 97 94 71 68 71 68	[158.1]EEL[559.3]
3192	DMLTPF	4.7	79	723.3381	1	38.437	0	89 89 94 87 82 28	DMLTP[147.1]
3225	MDLTPF	4.7	79	723.3386	1	38.841	0.7	86 87 94 87 87 28	MDLTP[147.1]
2487	LTLTSNPY	6.3	79	908.471	1	30.005	-1.5	39 39 92 92 93 87 97 86	[214.1]LTSNPY

1357	YPAGM(+15.99)VTGNGPAW	10.2	79	668.806	2	17.318	4.3	95 96 94 94 93 87 78 81 75 70 62 61 28	YPAGM(+15.99)V[101.0]G[525.2]
4058	ARCACVGPVAF	8.6	79	547.2681	2	48.463	0.9	51 55 69 72 76 76 95 96 92 92 86	[603.3]GPVAF
2023	MAKLMGLKAPW	8.6	79	623.3476	2	24.548	2.7	96 95 97 96 95 84 74 73 59 60 28	MAKLMG[595.3]
3480	VHVQSDGVVGDLW	10.2	79	705.8544	2	41.648	0.3	28 99 97 81 94 94 94 94 73 66 66 71 57	[99.1]HVQSDGV[570.3]
3587	MDLTPF	4.7	78	723.3382	1	42.877	0.1	91 92 94 87 75 28	MDLT[244.1]
3983	DMLTPF	4.7	78	723.3384	1	47.57	0.3	90 89 95 87 80 28	DMLTP[147.1]
2262	KLLDPEATGSLKKEF	11.8	78	559.3145	3	27.315	1.5	80 77 82 82 93 89 89 94 76 62 61 86 70 70 55	K[113.1]LDPEAT[257.1]K[404.2]
4074	DYGKSDGVRPVAF	10.2	78	705.8542	2	48.649	0.1	36 42 52 72 94 93 93 93 89 87 87 87 88	[463.2]SDGVRPVAF
1837	MDLPTF	4.7	78	723.3384	1	22.506	0.4	91 91 95 82 81 28	MDLPT[147.1]
1099	FPGNTHNNF	7	78	524.2347	2	14.584	-2	28 96 95 79 85 86 81 91 57	[147.1]PG[114.0]THNN[147.1]
2202	STELF	3.9	78	596.2929	1	26.625	0.5	86 89 89 96 28	STEL[147.1]
3216	GTEELKNMW	7	78	554.261	2	38.737	0.8	67 72 88 97 95 75 68 69 68	[158.1]EEL[559.3]
3894	SAEELKGGMW	7.8	78	554.2614	2	46.491	1.4	59 59 87 98 95 93 84 81 93 28	[158.1]EELKGGM[186.1]
1511	MAEKEELKRGFGLLVY(+79.97)	12.5	78	981.9922	2	19.024	0.7	96 95 93 93 98 98 96 94 82 76 74 44 43 43 66 52	MAEKEELKR[829.4]
1505	EASELAGNMAF	8.6	78	570.256	2	18.962	1	46 51 50 91 97 91 88 83 83 90 83	[287.1]ELAGNMAF
1825	MMHGSLKTGVDNPFKY	12.5	78	912.9423	2	22.382	0.1	94 96 94 81 83 96 98 98 96 88 88 85 42 39 32 30	MMHGSLKTGVDN[535.3]
1057	RM(+15.99)VM(+15.99)AF	4.7	78	393.6865	2	14.16	2.6	28 82 84 84 94 93	[156.1]M(+15.99)VM(+15.99)AF
2225	SAEELKNMW	7	78	554.2609	2	26.883	0.6	64 64 91 98 95 72 69 73 71	[158.1]EEL[559.3]
3785	DMLTPF	4.7	78	723.3376	1	45.198	-0.8	85 87 95 87 82 28	DMLTP[147.1]
1829	ASFPPDVAGNVDYKNLCY	14	78	986.959	2	22.43	0	59 67 91 95 89 90 96 97 88 71 86 96 90 67 48 60 61 41	[158.1]FPPDVAG[114.0]VDY[621.3]
1133	VLEQEEY	5.5	78	909.419	1	14.953	-1.1	81 88 86 81 87 92 28	VLEQEE[163.1]
2885	TYAQSDGVRPVAF	10.1	78	705.8546	2	34.797	0.5	37 46 55 74 90 94 91 91 85 86 86 86 85	[463.2]SDGVRPVAF
3159	DMLTPF	4.7	78	723.3383	1	38.048	0.2	85 85 90 88 87 28	DMLTP[147.1]
1361	LTLTSNPY	6.2	78	908.4727	1	17.368	0.3	32 32 92 90 90 92 98 93	[214.1]LTSNPY
2617	LTLTSNPY	6.2	78	908.472	1	31.567	-0.4	28 28 94 94 94 91 97 90	[214.1]LTSNPY
1199	KFGHTKVFF	7	78	555.8082	2	15.656	-0.2	96 96 96 96 91 82 82 28 28	KFGHTKV[294.1]
3083	TYAQSDGVRPVAF	10.1	78	705.8543	2	37.158	0.2	36 44 53 74 90 94 89 87 79 90 89 89 89	[463.2]SDGV[156.1]PVAF
2679	MAKLPPVVDY	7.8	78	566.8059	2	32.32	-2.3	91 90 91 87 87 28 90 90 90 28	MAKLP[97.1]VVD[163.1]
3125	DMLTPF	4.7	78	723.3383	1	37.649	0.3	87 87 95 86 79 28	DMLT[244.1]
2268	LGVLDLAGF	7	78	904.5143	1	27.379	0.6	54 60 63 78 86 82 82 92 98	[382.3]DLAGF
1668	KMGLGEMSEGAELLW	11.6	78	825.899	2	20.718	2.5	35 49 58 88 87 89 95 94 91 88 88 85 89 94 28	[316.2]LGEMSEGAELL[186.1]

3969	RDGVGASDVAF	8.5	78	547.268	2	47.394	1.3	74 64 63 69 83 81 74 77 79 94 90	[427.2]GA[301.1]AF
1260	TSNAAGGGAVLW	9.3	78	552.2792	2	16.294	2.8	89 90 86 96 96 91 76 61 69 75 68 28	TSNAAG[583.3]
4205	TYAQSDGVRPVAF	10.1	77	705.8544	2	50.32	0.3	36 44 54 68 84 94 90 90 82 90 90 90 89	[463.2]SDGVRPVAF
2282	LSFLSMF	5.4	77	844.4268	1	27.54	-0.6	66 60 59 86 86 91 91	[347.2]LSMF
1813	MAKLMGKPAW	7.7	77	566.8055	2	22.259	2.9	88 90 95 93 91 89 77 61 58 28	MAKLMG[482.3]
3524	AFCHDFKF	6.2	77	1014.4521	1	42.138	2	28 96 96 96 92 89 89 28	[71.0]FCHDFK[147.1]
3947	EGSDQGFKF	7	77	507.7306	2	47.127	1.2	90 90 77 72 60 78 98 99 28	EG[387.1]FK[147.1]
1686	LKVVDTAMGCLKEDYVLW	13.9	77	1042.0338	2	20.915	0	55 55 87 97 97 97 96 94 87 70 66 58 58 79 74 91 92 28	[241.2]VVDTAMG[751.3]VL[186.1]
2352	DVLTSNLF	6.2	77	908.4723	1	28.371	-0.1	28 28 93 91 91 92 98 93	[214.1]LTSNLF
3521	DMLPTF	4.6	77	723.3382	1	42.111	0.1	87 90 94 87 75 28	DMLP[248.1]
930	KRVTPEPCGGSCANSY	12.4	77	834.8765	2	12.652	-0.7	77 73 65 58 85 96 86 85 93 85 61 63 77 73 85 64	[484.3]PEPCGG[375.1]S[163.1]
4268	ATSGQEDENGWHY	10	77	747.3013	2	51.125	1.7	30 42 44 84 72 91 96 93 90 93 86 86 87	[259.1]G[128.1]EDENGWHY
4047	FFGVAGMLPNY	8.5	77	608.2976	2	48.33	1.1	90 90 89 88 88 85 61 60 62 71 59	FFGVAG[618.3]
1809	MAGALGGRRPF	8.5	77	566.806	2	22.214	0.2	96 96 97 97 93 92 92 95 28 28 28	MAGALGGR[400.2]
2580	MVSKSGHGKMPF	9.2	77	653.3275	2	31.126	2.6	92 92 92 90 72 63 78 86 72 71 82 28	MVSK[281.1]G[259.1]P[147.1]
3852	STELF	3.9	77	596.2922	1	45.993	-0.7	84 88 87 95 28	STEL[147.1]
2001	DMLTPF	4.6	77	723.3382	1	24.295	0.1	86 86 94 85 79 28	DMLT[244.1]
3349	HVVQSDGVVGDLW	10	77	705.856	2	40.25	2.6	28 98 97 85 93 96 96 92 56 48 59 79 66	[137.1]VVQSDGV[570.3]
1479	SAEELKNM(+15.99)W	6.9	77	562.2572	2	18.667	-1.4	58 58 87 98 97 67 74 67 81	[158.1]EEL[389.2]W
2515	GFFGNAGGGRLY	9.2	77	608.2987	2	30.334	-0.3	91 92 92 82 73 81 71 64 80 80 81 28	GFFG[114.0]A[114.0]GRL[163.1]
1081	KALGFPDTY	6.9	77	1011.5125	1	14.4	-2	65 72 89 93 94 86 80 78 28	[199.1]LGFPD[264.1]
1548	STEDRVATAKW	8.4	77	632.3204	2	19.434	0.6	89 91 91 87 79 77 83 82 69 63 28	STED[255.2]AT[385.2]
1740	LADLPVLPGKPY	9.2	77	641.8737	2	21.491	-0.2	72 74 88 86 85 28 98 92 87 70 74 60	[184.1]DLP[99.1]LPG[388.2]
2886	ASEELKNMW	6.9	77	554.261	2	34.805	0.9	53 60 84 97 91 75 72 78 74	[158.1]EEL[559.3]
2820	SAEELKNMW	6.9	77	554.261	2	34.036	0.8	58 58 88 97 92 78 75 77 63	[158.1]EEL[559.3]
3017	TYAQSDGVRPVAF	10	77	705.8544	2	36.363	0.3	38 46 55 73 88 92 86 85 77 88 88 88 86	[463.2]SDGV[156.1]PVAF
1844	QSVAFLVGVGPW	9.2	77	630.3423	2	22.578	-0.7	73 73 94 98 99 98 92 83 74 73 28 28	[215.1]VAFLVG[439.2]
3182	QSVAFVLPGW	7.6	76	552.2978	2	38.318	0	74 74 88 86 86 83 88 75 77 28	[215.1]VAFVL[340.2]
4259	KLLDPEATGSLKKEF	11.5	76	559.314	3	51.017	0.7	32 72 91 90 91 91 90 93 94 83 83 90 49 49 40	[241.2]LDPEATGSLK[404.2]
4131	STELF	3.8	76	596.2925	1	49.361	-0.1	84 87 87 94 28	STEL[147.1]
3012	DMLPTF	4.6	76	723.3386	1	36.303	0.6	85 87 92 86 76 28	DMLP[248.1]

980	MLPAPHATF	6.9	76	492.7536	2	13.274	2.9	90 89 85 85 28 91 91 94 28	MLPA[97.1]HAT[147.1]
3888	T(+79.97)LGVWGLRAY	7.6	76	608.2985	2	46.417	-2.1	82 85 95 96 94 90 71 62 56 28	T(+79.97)LGVWG[503.3]
2709	DMLTPF	4.6	76	723.3387	1	32.684	0.8	88 89 93 83 74 28	DMLT[244.1]
2576	MDLTPF	4.6	76	723.3381	1	31.076	-0.1	80 79 91 88 88 28	M[115.0]LTP[147.1]
2021	HVVAAGGKALVDVW	10.7	76	711.3993	2	24.531	0.9	28 74 76 77 90 72 67 85 90 96 94 92 92 28	[406.2]A[114.0]KALVDV[186.1]
1839	WTANKKVAAFGW	9.1	76	689.8669	2	22.521	0.1	65 64 83 88 93 97 80 80 70 77 84 28	[287.1]ANKKVA[218.1]G[186.1]
1187	KRPNAKEEAGGDCMLY	12.2	76	891.4207	2	15.528	1.8	54 74 72 68 90 94 98 96 91 87 80 61 54 55 79 58	[495.3]AKEEAGG[625.2]
4321	DRVASDNVAF	7.6	76	547.2673	2	51.785	0.1	85 85 70 58 62 83 70 78 87 79	DR[257.1]D[213.1]A[147.1]
3942	YDKGSDGVRPVAF	9.9	76	705.8538	2	47.064	-0.5	30 35 33 41 93 95 94 93 89 98 96 96 93	[463.2]SDGVRPVAF
2861	MDLTPF	4.6	76	723.3382	1	34.511	0.1	88 89 92 82 75 28	MDLT[244.1]
2322	SGPSDDDMAGGKRLNF	12.2	76	833.8784	2	28.01	0.3	29 65 71 66 48 94 98 93 92 87 89 93 78 65 73 67	[443.2]DDMAGGK[530.3]
1710	VSSNADFQF	6.8	76	507.7305	2	21.175	1.1	92 93 70 38 39 69 87 95 95	VS[387.1]FQF
3551	VSSANDFQF	6.8	76	507.7303	2	42.467	0.7	89 90 71 67 60 86 98 91 28	VS[272.1]DFQ[147.1]
1669	YPDVGGHQAHMLPY	10.6	76	792.8652	2	20.726	-2	69 66 61 75 86 92 95 83 78 71 79 83 91 28	[474.2]GGHQ[339.1]LP[163.1]
1337	VVRDLLATGSLKQEF	11.4	76	559.3171	3	17.109	-0.5	28 66 66 76 89 93 94 95 92 82 81 61 50 84 73	[469.3]LLATGSL[256.2]E[147.1]
2226	TYQASDGVRPVAF	9.9	76	705.8541	2	26.894	-0.2	37 37 39 59 80 90 89 88 86 97 94 94 90	[463.2]SDGVRPVAF
2118	KYEDSAGVGVAMYFYF	12.1	76	923.9186	2	25.638	-3	85 84 78 71 86 85 86 64 68 75 86 75 77 50 67 67	KY[244.1]SAG[255.2]A[751.3]
2594	LTENVSFGHLF	8.3	76	632.3213	2	31.293	-1.1	81 85 92 79 84 86 88 80 61 63 28	LTE[114.0]VSFG[397.2]
2951	HVVQSDGVGVDLW	9.8	76	705.8544	2	35.576	0.3	28 97 96 84 93 94 95 92 65 61 66 61 44	[137.1]VVQSDGV[570.3]
4181	DMLTPF	4.5	76	723.3382	1	50.014	0.1	86 86 92 83 75 28	DMLT[244.1]
3073	GSPSDDDMANKRLNF	11.3	76	833.8777	2	37.034	-0.4	30 68 86 80 52 93 99 94 92 87 92 72 60 64 60	[144.1]PS[115.0]DDMANK[530.3]
1200	NKLKSRVSF	6.8	76	539.8225	2	15.663	1	37 37 40 96 95 96 92 92 92	[355.2]KSRVSF
1094	NTAGGWVAQAF	8.3	76	561.2719	2	14.528	-0.7	42 42 63 57 58 94 98 98 94 99 79	[400.2]WVAQA[147.1]
887	MKKKAEATHDFVF	9.8	76	776.4032	2	12.125	0.2	78 78 95 97 97 96 94 85 79 52 54 42 28	[259.1]KKAEAT[645.3]
3611	KSTM(+15.99)SDGVRPVAF	9.8	75	705.8542	2	43.156	-2.4	42 39 40 28 97 94 85 84 77 98 97 97 95	[463.2]SDGV[156.1]PVAF
2289	LTLTSNPY	6	75	908.4736	1	27.62	1.4	36 36 89 80 81 87 98 93	[214.1]LTSNPY
3079	MDLTPF	4.5	75	723.3384	1	37.109	0.4	79 80 91 85 86 28	[131.0]DLTP[147.1]
2993	MDLPTF	4.5	75	723.3395	1	36.082	1.9	89 89 92 76 74 28	MDL[345.2]
3325	STELF	3.8	75	596.2925	1	39.995	-0.1	81 85 85 94 28	STEL[147.1]
2064	DMLTPF	4.5	75	723.338	1	25.017	-0.3	87 87 89 83 74 28	DMLT[244.1]
4049	MDLPTF	4.5	75	723.3375	1	48.362	-0.9	89 89 92 77 73 28	MDL[345.2]

3284	TYAQSDGVRPVAF	9.8	75	705.8543	2	39.522	0.2	40 43 56 43 93 95 94 94 90 77 80 80 88	[463.2]SDGVR[97.1]VAF
3677	YDGKSDGVRPVAF	9.8	75	705.8541	2	43.931	-0.2	36 36 38 40 95 95 92 92 88 89 89 89 91	[463.2]SDGVRPVAF
2462	LTENVSFGHLF	8.3	75	632.3205	2	29.697	-2.3	68 80 90 85 90 92 95 84 53 55 28	[113.1]TENVSFG[397.2]
3115	NTVAPLGWVF	7.5	75	552.2977	2	37.526	-0.1	75 82 92 94 83 75 85 76 28 55	[114.0]TVAP[113.1]G[432.2]
2946	DMLTPF	4.5	75	723.3385	1	35.513	0.5	75 78 84 91 91 28	[246.1]LTP[147.1]
2424	TYAQSDGVRPVAF	9.7	75	705.8546	2	29.247	0.6	47 46 53 44 87 92 92 91 89 80 81 81 86	[463.2]SDGVRPVAF
790	VNTM(+15.99)DSETLKF	8.2	75	650.8079	2	10.889	-0.2	59 57 74 89 92 85 84 81 81 88 28	[314.2]M(+15.99)DSETLK[147.1]
2214	MDLLTPF	5.2	75	836.4216	1	26.758	-0.7	75 62 71 96 94 94 28	[359.2]LTP[147.1]
1905	MDLPTF	4.5	75	723.3383	1	23.224	0.2	87 87 92 77 75 28	MDL[345.2]
1677	FGTSESVGVGLF	9	75	600.3017	2	20.81	1.6	62 69 86 96 96 82 65 66 72 84 86 28	[204.1]TSES[255.2]GL[147.1]
1812	MAQLGGRRPF	7.5	75	1132.603	1	22.25	-1.3	97 96 88 95 94 95 94 28 28 28	MAQLGGR[400.2]
1352	TSELY	3.7	75	612.2889	1	17.264	2.4	87 85 85 86 28	TSEL[163.1]
1617	YAS(+79.97)VPSAKHAGAF	9.7	75	693.3167	2	20.17	0.9	89 90 74 95 73 73 75 77 69 70 70 82 28	YA[167.0]V[648.3]A[147.1]
1919	WM(+15.99)DLEKESMKPAGPF	11.2	75	891.4188	2	23.385	3.7	28 95 94 96 91 90 93 92 92 91 60 43 41 81 28	[186.1]M(+15.99)DLEKESMK[225.1]P[147.1]
1087	SVSDNAF	5.2	75	739.326	1	14.46	0.5	89 91 86 80 72 28 73	SVSD[332.1]
1196	LLEKGKMLF	6.7	75	360.2149	3	15.618	-2.5	96 97 90 90 94 57 52 63 28	LLEKG[519.3]
2382	FGTSEVSGVGLY	9	75	608.2991	2	28.732	1.5	73 75 88 91 92 74 67 65 70 84 84 28	[204.1]TSE[342.2]GL[163.1]
3117	ASM(+15.99)PDPVAGRGDYKNLVY(+79.97)	13.5	75	1024.9585	2	37.548	-2.5	49 53 82 81 36 92 96 93 77 63 75 95 96 59 47 70 93 80	[158.1]M(+15.99)P[115.0]PVA[270.1]DY[355.2]VY(+79.97)
1373	QMGQEDENGSVHYEAF	12	75	920.8777	2	17.508	2.1	44 45 75 69 95 98 90 86 80 83 86 94 83 66 66 28	[444.2]EDENGSVHY[347.1]
1403	VPNGVATAAPGDY	9.7	75	616.3007	2	17.854	-1.1	90 89 87 97 92 82 72 68 78 64 62 56 28	VPNGVA[675.3]
2330	LTENVSFGLHF	8.2	75	632.3206	2	28.103	-2.2	83 87 94 75 73 72 77 89 72 66 28	LTE[447.2]G[397.2]
2529	LTENVSFGLHF	8.2	75	632.3201	2	30.502	-2.9	74 77 89 87 90 86 85 78 62 61 28	[214.1]ENVSF[454.2]
3000	M(+15.99)GTPLVVAGNVDYQNLCY	13.4	75	986.9603	2	36.16	-0.4	31 44 58 93 95 98 97 95 71 55 80 96 94 44 51 66 89 78	[305.1]PLVVA[171.1]VDY[355.2]C[163.1]
1879	SLAAGLW	5.2	75	717.3922	1	22.956	-1.1	28 85 94 95 94 94 28	[87.0]LAAGL[186.1]
2976	GESAATGFQF	7.5	75	507.7302	2	35.872	0.5	87 82 60 58 68 79 91 96 91 28	GE[330.2]GFQ[147.1]
1956	MKSVLAEQEELKVGGFLRLY(+79.97)	14.9	75	1195.6127	2	23.81	-0.4	39 34 34 95 97 97 97 88 98 98 96 91 80 79 82 88 85 33 37 33	[346.2]VLAEQEELKV[57.0]GFL[512.2]
1992	T(+79.97)YGPPPKLKVNLSFVY	11.9	75	951.9934	2	24.208	1.6	72 89 77 98 97 81 62 66 48 48 59 78 94 94 94 28	[181.0]Y[57.0]PPP[695.5]SFV[163.1]
2319	FEPGLVQAGF	7.5	75	532.7728	2	27.967	-2.5	73 70 70 84 87 88 70 84 86 28	[373.2]GLV[128.1]AG[147.1]
2721	TGFT(+79.97)KVAGNVDYKCVKY	12.7	74	986.9631	2	32.826	-2.4	73 78 92 91 81 80 97 86 70 85 94 95 66 48 43 51 28	[158.1]FT(+79.97)KVAG[114.0]VDY[621.3]
1711	MVANKHSF	6	74	933.4603	1	21.182	-0.8	94 87 80 63 65 67 67 67	MVA[613.3]
1484	MLTPHCLLPVALYF	10.4	74	809.432	2	18.725	2.2	85 54 52 64 97 97 94 90 90 82 78 65 60 28	M[311.2]HCLLPV[494.3]

1388	LVDDNVGFLGW	8.2	74	617.808	2	17.679	-1.3	28 28 98 96 87 96 96 93 83 79 28	[212.2]DDNVGFL[243.1]
1386	MSLKADKLKGKTSY	10.4	74	785.4385	2	17.66	1.9	38 37 44 80 94 96 96 98 96 96 91 79 63 28	[331.2]KADKLKGK[351.1]
2642	DMLTPF	4.5	74	723.3381	1	31.869	-0.1	74 77 87 88 90 28	[246.1]LTP[147.1]
1902	MMNQFANALW	7.4	74	613.2798	2	23.201	2.5	94 92 87 80 79 94 57 61 66 28	MMNQ[147.1]A[484.2]
3569	DMLTPF	4.5	74	723.3378	1	42.673	-0.5	85 86 92 81 72 28	DMLT[244.1]
2267	VFTLTMF	5.2	74	858.4438	1	27.372	0.9	70 70 66 92 95 96 28	[347.2]LTM[147.1]
3393	ADSGKDFQF	6.7	74	1014.454	1	40.694	1.3	90 89 81 70 59 88 46 78 65	ADS[185.1]D[422.2]
1491	EAAEEM(+15.99)ASY	6.7	74	1016.3898	1	18.803	2	81 79 73 74 71 73 71 75 67	E[868.3]
1784	QLQNLTTQM(+15.99)M(+15.99)VGF	9.7	74	771.8685	2	21.952	0.4	58 63 67 81 88 98 97 87 78 72 68 73 28	[369.2]NLTTQ[597.2]
2208	LLGLNSADLAKPF	9.7	74	679.8884	2	26.697	1.3	96 95 96 96 93 94 87 85 57 45 35 50 28	LLGLNSAD[556.3]
1986	DEPDVAGPCKYKCVKY	11.9	74	907.9254	2	24.144	-0.9	30 63 72 87 96 97 92 74 70 85 94 74 78 69 70 28	[341.1]DVAG[200.1]KY[621.3]
2439	MEAGMPFALPAW	8.9	74	660.81	2	29.422	0.9	79 79 86 90 96 98 28 78 73 75 75 28	[260.1]AGMP[685.4]
2909	SVDSKSGGMF	7.4	74	507.7302	2	35.086	-2.9	84 85 82 84 84 64 66 75 85 28	SVDSK[201.1]M[147.1]
4172	NPAPLPAYGGVPTMF	11.1	74	511.2579	3	49.886	-1.5	56 49 50 72 73 76 76 72 74 81 86 87 87 90 75	[880.4]GVPTM[147.1]
3955	T(+79.97)LGVAPARGFF	8.1	74	608.2986	2	47.22	-1.8	97 95 94 87 86 59 47 54 73 86 28	T(+79.97)LGVA[381.2]F[147.1]
3398	RSAADLARPF	7.4	74	552.3019	2	40.751	0.8	46 61 77 97 97 97 85 79 68 28	[314.2]ADLA[400.2]
3285	SAEELKGGMW	7.4	74	554.2604	2	39.532	-0.2	53 53 83 96 94 91 79 73 85 28	[158.1]EELK[114.0]M[186.1]
1400	WWPPCDLLDAVQF	9.6	74	530.5875	3	17.813	1.6	28 51 51 51 91 90 95 93 90 87 80 69 80	[566.3]CDLLDAV[128.1]F
2454	LQSDDDMANQRLNF	10.4	74	833.878	2	29.604	-0.1	56 53 74 90 97 99 97 93 83 77 60 47 50 53	[328.2]DDDMAN[658.4]
3392	QNGLGGSM(+15.99)LLW	8.1	74	596.2944	2	40.683	-1	59 57 61 65 75 80 94 96 96 97 28	[469.2]GSM(+15.99)LL[186.1]
2259	GSPSDDDMANKRLNF	11.1	74	833.8789	2	27.275	1	29 46 60 69 64 95 98 96 92 86 94 77 63 68 64	[443.2]DDMANK[530.3]
3414	HVVQSDGVRDLW	8.9	74	705.8587	2	40.94	-1.6	28 96 94 70 87 92 92 87 74 57 58 46	[137.1]VV[128.1]SDGV[570.3]
2819	YTAQSDGVRPVAF	9.6	74	705.8547	2	34.027	0.7	37 42 50 55 87 92 85 84 72 87 88 88 88	[463.2]SDGV[156.1]PVAF
1077	HDVSVTQVPHSY	8.9	74	456.8909	3	14.355	2.8	28 55 59 59 70 71 70 86 95 96 96 96	[766.4]VPHSY
2579	DASDQGFKF	6.6	74	507.7304	2	31.118	0.8	87 89 67 62 55 79 96 97 28	DA[387.1]FK[147.1]
1639	CWAVKNDGGPTDLW	10.3	74	781.3609	2	20.407	2.7	28 95 95 95 92 82 94 93 70 55 57 63 65 41	[103.0]WAVKNDG[669.3]
1116	MLPPTGRSW	6.6	74	522.7696	2	14.764	2.3	73 71 84 83 81 85 78 77 28	[244.1]PPTG[429.2]
1613	SADKVEDFQEAF	8.8	74	693.3167	2	20.133	3.2	39 44 62 85 95 99 98 98 68 69 95 28	[273.1]KVEDF[257.1]A[147.1]
2219	VTFLTMEGKLF	8.1	74	643.3469	2	26.812	0.4	94 95 94 95 95 96 59 51 47 52 28	VTFLTM[574.3]
2537	TGDQVEDFKEAF	8.8	74	693.3151	2	30.608	0.9	45 51 63 56 92 97 97 97 89 71 93 28	[401.2]VEDFK[129.0]A[147.1]
2593	KLHKAKNF	5.9	74	493.3015	2	31.282	1.7	61 68 72 86 88 70 85 56	[378.2]KA[128.1]N[147.1]

2357	SAEELKNMW	6.6	74	554.2612	2	28.434	1.1	63 63 90 99 97 67 60 61 59	[158.1]EEL[559.3]
2735	ASDKVEDM(+15.99)VTGAF	9.6	74	693.3148	2	33.013	-2	37 43 58 70 95 98 99 83 58 55 67 90 98	[401.2]VEDM(+15.99)[257.1]AF
3545	VHVQSDGVYLFF	8.8	74	705.8542	2	42.396	-2.9	28 99 98 85 93 96 96 94 87 46 28 28	[99.1]HVQSDGVY[407.2]
2556	HVVQSDGVGVDLW	9.6	74	705.8546	2	30.838	0.5	28 97 96 76 91 91 91 91 66 62 60 57 44	[137.1]VV[128.1]SDGV[570.3]
2881	MDLTPF	4.4	74	723.3385	1	34.744	0.5	78 77 86 86 84 28	[246.1]LTP[147.1]
2798	QMGKELMNGSVHY	9.6	74	747.3474	2	33.765	0.1	67 76 69 67 81 55 54 69 88 88 80 78 78	[444.2]E[358.2]GSV[300.1]
3623	TGEELKGGMW	7.3	73	554.2609	2	43.293	0.6	59 56 70 99 98 94 75 63 86 28	[287.1]ELK[114.0]M[186.1]
1067	AKEQEQEY	5.9	73	1024.4591	1	14.264	1	65 55 77 70 96 64 89 67	[456.2]E[128.1]E[163.1]
1261	DRVGDSQVAF	7.3	73	1093.5271	1	16.301	-0.2	96 94 92 85 78 77 48 57 60 42	DRVG[647.3]
3309	DMLTPF	4.4	73	723.3377	1	39.806	-0.6	65 77 80 94 92 28	[246.1]LTP[147.1]
1332	VNLVSPSGGGEY	8.8	73	589.7883	2	17.053	0.4	65 61 95 98 88 88 77 50 55 60 80 56	[213.1]LVSP[258.1]E[163.1]
3881	YLGHCM(+15.99)KF	5.9	73	507.7296	2	46.334	-1.5	47 52 61 67 97 86 86 84	[470.2]CM(+15.99)KF
2982	SQVLWLPNF	6.6	73	552.2975	2	35.941	-0.4	69 64 89 90 49 67 76 76 74	[215.1]VL[657.3]
3653	MDLPTF	4.4	73	723.3384	1	43.647	0.3	87 87 90 73 71 28	MDL[345.2]
1045	TTQS(+79.97)PWF	5.1	73	473.6894	2	14.035	0.9	92 92 81 94 94 28 28	TTQS(+79.97)P[333.1]
2501	AHCFDFKF	5.9	73	1014.4527	1	30.178	2.5	28 91 91 91 85 83 83 28	[71.0]HCFDFK[147.1]
2250	CTTSVSVSVGLY	8.8	73	608.2987	2	27.178	-1.9	47 47 82 89 82 78 78 84 88 85 84 28	[204.1]TSV[186.1]SVGL[163.1]
3429	SAEELKNMW	6.6	73	554.2617	2	41.086	2	63 63 89 96 94 63 58 61 67	[158.1]EEL[559.3]
1793	MAKAADRRPF	7.3	73	581.8101	2	22.052	-1.7	93 91 93 97 91 87 90 28 28 28	MAKAADR[400.2]
2111	MMLSLEELPKW	8	73	688.8501	2	25.558	-1.7	94 82 50 50 95 99 28 96 87 88 28	MM[200.1]LE[129.0]LPK[186.1]
3042	MVSKNHSMKPF	8	73	653.3271	2	36.661	2.1	94 94 94 93 63 67 60 60 61 85 28	MVSK[597.3]P[147.1]
1885	MAVGAALLPNF	8	73	1103.5896	1	23.019	-2	92 83 59 55 72 89 93 82 59 60 53	MA[227.1]ALL[358.2]
2845	TESKPGAPAGFPF	9.5	73	653.3268	2	34.317	-0.8	77 87 85 92 79 73 80 89 77 74 71 28 28	[101.0]ESK[154.1]AP[519.2]
2381	MVSQNLALGEPF	8.7	73	653.3281	2	28.723	-1.5	94 93 93 78 59 66 69 69 66 70 84 28	MVS[725.4]P[147.1]
1104	MMGKVKRY	5.8	73	1012.5418	1	14.637	-1.2	98 93 70 55 67 83 85 28	MM[284.2]KR[163.1]
3054	T(+79.97)LRAVVSGFW	7.3	73	608.2993	2	36.804	-0.7	85 81 61 77 78 79 76 76 81 28	T(+79.97)L[569.3]F[186.1]
3810	TYAQSDGVRPVAF	9.4	73	705.8557	2	45.484	2.2	32 36 40 43 90 92 92 93 90 79 81 81 88	[463.2]SDGVR[97.1]VAF
1561	FLGGAGWCGPPLLF	10.2	73	717.8665	2	19.569	1.4	89 86 89 72 64 63 64 74 83 86 71 67 74 28	FLG[474.2]GP[470.3]
3669	RAEAGASDVAF	8	73	547.2665	2	43.828	-1.3	40 47 54 74 77 74 74 80 88 93 92	[642.3]DVAF
2033	ASFPPDVAGGGVDYKNLCY	13.8	73	986.9601	2	24.66	1.1	31 41 53 93 86 86 95 96 92 76 77 89 96 96 63 44 57 58 41	[305.1]PPDVAG[114.0]VDY[621.3]
1776	ADSSVGGFQF	7.3	73	507.7304	2	21.874	0.9	81 82 82 59 55 53 93 97 91 28	ADS[243.1]GFQ[147.1]

2406	WEAVGGAANWVAQW	10.1	72	772.8675	2	29.029	-0.2	84 78 61 60 77 64 69 88 61 75 89 74 77 50	W[484.2]A[300.1]V[385.2]
2100	QLLFLFEKKLSGTALLQHW	13.8	72	1136.6438	2	25.433	-2.1	34 34 38 54 90 77 89 90 90 76 75 71 77 87 92 94 70 77 52	[501.3]L[147.1]EKK[358.2]ALL[451.2]
2163	FTSQSDGVRPVAF	9.4	72	705.853	2	26.16	-1.6	36 37 33 34 88 91 93 92 89 83 84 84 90	[463.2]SDGVRPVAF
2051	MVAKNFPVRPW	8	72	672.8649	2	24.869	-1.5	96 82 77 85 87 92 92 91 32 28 28	MV[71.0]KNFPV[439.2]
1095	VDVFPLPW	5.8	72	486.7649	2	14.537	3.8	99 99 98 98 97 28 28 28	VDVFP[396.2]
3570	VHEQCNSSVHVF	8.7	72	693.3148	2	42.682	-3.1	92 92 78 71 91 76 85 96 98 28 28 28	VH[257.1]C[114.0]SSV[383.2]
2223	VLELTNLLGSKSAF	10.1	72	746.4254	2	26.851	1.2	49 48 44 48 48 68 82 95 87 85 87 88 92 85	[669.4]LLGSKSAF
2325	KVAKCGCWF	6.5	72	521.2554	2	28.043	2.5	47 41 52 66 90 95 86 86 86	[426.3]CGCWF
1176	EAFVGAHLF	6.5	72	495.7581	2	15.418	4.6	28 99 99 97 89 87 91 28 28	[129.0]AFVGAH[260.2]
1849	VVYPEENSSVTMVPRT(+79.97)Y	12.3	72	1025.9602	2	22.632	-3	60 69 66 73 76 92 76 78 73 83 93 95 73 68 49 47 50	[587.3]E[288.1]VTM[696.3]
2115	LGYGGPSVSSGF	8.7	72	564.2729	2	25.597	1.5	51 49 54 66 65 64 87 86 86 84 84 84	[544.3]SVSSGF
1275	GQHFAPLLY	6.5	72	523.2761	2	16.437	-1.5	79 51 65 45 93 92 93 97 28	[469.2]APLL[163.1]
3900	MVSMGRDHLLF	7.9	72	653.3268	2	46.567	1.7	87 87 87 57 55 55 87 67 87 92 28	MVS[344.2]D[137.1]LL[147.1]
2832	VHEQESGALQEAWAFY	11.5	72	932.9264	2	34.172	-2.4	86 86 86 88 96 81 60 57 80 79 92 84 76 41 28 28	VHEQES[128.1]L[128.1]EA[567.2]
1968	KAVVNCVAGGRDYCKCTW	13	72	986.9612	2	23.944	-1.9	51 44 51 50 51 92 95 96 85 73 76 96 81 85 59 69 79 55	[511.3]CVAG[213.1]DYC[518.2]
4128	GTEELKNMW	6.5	72	554.2605	2	49.327	-0.1	52 61 73 93 83 76 74 75 58	[287.1]EL[559.3]
2358	HVVQSDGGTPGPLF	10.1	72	705.8547	2	28.442	0.8	28 97 96 81 93 94 93 87 77 68 60 54 44 28	[137.1]VVQSDGG[612.3]
3954	FVAVPKAFSGCTPEPLKEY	13.7	72	695.0236	3	47.209	-0.3	59 64 67 79 68 61 67 67 60 63 84 92 89 70 64 70 83 84 65	[1003.5]CTP[339.2]KE[163.1]
3992	VSNGTDFQF	6.5	72	1014.4529	1	47.668	0.3	28 87 79 85 85 93 86 71 28	[99.1]S[114.0]GTDF[275.1]
2138	NKLADLWVW	6.5	72	572.8108	2	25.874	-0.5	85 85 95 97 97 98 28 28 28	NKLADL[471.2]
1046	WKLTRGGAKAF	7.9	72	617.8545	2	14.042	-3.1	66 94 85 97 96 83 46 46 57 86 28	[186.1]KLTRG[256.2]A[147.1]
1514	TGEELKNM(+15.99)W	6.5	72	1123.5092	1	19.052	0.3	58 58 75 98 97 59 67 57 74	[287.1]EL[575.2]
1532	GEAALLY	5	72	736.3893	1	19.255	2.4	54 53 77 95 95 98 28	[257.1]ALL[163.1]
4256	TLENGEFPLPF	7.9	72	632.3199	2	50.973	5.7	79 80 89 81 86 88 99 99 28 28 28	[101.0]LENGEFP[357.2]
1178	LTEGGGEF	5.7	72	809.3684	1	15.431	1.1	88 86 83 72 65 69 78 28	LTE[447.2]
4145	DASDQGFKF	6.5	72	507.7301	2	49.544	0.2	88 89 72 52 47 67 98 99 28	DA[387.1]FK[147.1]
2511	DMLTPF	4.3	72	723.338	1	30.284	-0.3	73 76 88 83 79 28	[246.1]LT[244.1]
1603	VRVVAPVGEKLNF	9.3	72	476.6172	3	20.023	0.1	28 28 56 72 78 98 99 95 91 67 61 78 75	[524.3]PVGE[502.3]
2315	MVSQAGPLKDPY	8.6	72	653.3275	2	27.929	-2.4	91 89 89 81 79 59 67 69 60 59 82 28	MVSQ[581.3]P[163.1]
843	YGKAVSYNGF	7.2	72	553.2679	2	11.568	-2.4	85 87 95 89 86 78 50 49 41 52	YGKAV[568.2]
1309	YSNAVT(+79.97)GVWVAQAY	10	72	804.8563	2	16.804	-2.5	56 60 58 88 84 62 59 71 85 86 85 64 75 62	[364.1]AV[337.1]WVA[362.2]

1103	HGTVKFF	5	72	418.2266	2	14.63	-0.1	88 91 95 86 83 28 28	HGTVK[294.1]
1065	EPATGSLKKEF	7.9	72	603.8219	2	14.233	0.1	28 97 96 94 62 54 60 93 64 64 70	[129.0]PAT[257.1]K[404.2]
2876	LQSDDDMAGGQRLNF	10.7	72	833.8788	2	34.681	0.8	44 43 44 67 94 97 93 90 65 69 72 80 66 74 68	[443.2]DDMA[242.1]R[374.2]
1135	SKVAGGNTW	6.4	72	460.2363	2	14.97	2.3	28 96 95 95 92 66 60 79 28	[87.0]KVAG[458.2]
3721	GESNADFKF	6.4	72	1014.4521	1	44.444	-0.5	87 86 83 54 54 72 87 88 28	GES[300.1]FK[147.1]
3356	TGEEKARMW	6.4	72	554.2646	2	40.321	-2.9	70 70 90 88 75 68 65 84 28	[158.1]EE[355.2]M[186.1]
1189	VVKLLEHNYF	7.2	72	631.3504	2	15.543	-0.2	28 74 65 73 87 94 96 73 73 47	[439.3]LEH[424.2]
3749	WMAQGFQF	5.7	72	507.7302	2	44.772	2.8	64 56 55 61 72 72 89 99	[720.3]QF
1969	QLVDYNVTGW	7.2	72	1194.5815	1	23.954	2	56 68 83 95 87 59 68 77 90 28	[241.1]VDY[314.2]G[186.1]
2469	ECYPY(+79.97)	3.6	71	377.6135	2	29.78	5.9	82 79 79 88 28	E[266.1]P[243.0]
2342	WQGNGAGANEGVAKW	10.7	71	772.8669	2	28.248	1.6	76 57 58 58 73 57 71 89 86 74 74 84 86 93 28	[670.3]AN[186.1]VAK[186.1]
1478	MQM(+15.99)NSNPY	5.7	71	1000.3917	1	18.658	5.4	91 87 78 66 72 59 69 46	MQ[722.3]
2447	MVSKPALGENPY	8.6	71	653.3273	2	29.527	-2.6	91 91 91 86 59 47 58 72 63 53 83 57	MVSK[581.3]P[163.1]
1898	MAARKTAALGNAW	9.3	71	680.8619	2	23.156	1	79 79 92 96 81 62 68 92 89 58 40 32 53	[202.1]ARK[172.1]AL[428.2]
1056	NMEAEDLKKF	7.1	71	612.8013	2	14.153	1.9	69 75 94 96 96 75 72 78 28 28	[245.1]EAE[631.4]
937	WWWASWLGM(+15.99)EYW	8.6	71	572.9152	3	12.733	0.4	28 28 90 84 84 67 71 85 90 82 70 70	[372.2]WAS[299.2]GM(+15.99)E[349.1]
4008	VAFDRVGDSQVAF	9.3	71	705.8543	2	47.864	0.2	34 34 45 76 73 74 86 79 77 60 92 95 95	[687.4]G[330.1]VAF
2804	MDLTPF	4.3	71	723.3387	1	33.838	0.8	76 75 88 81 76 28	[246.1]LT[244.1]
3263	SADQVEDFKEAF	8.6	71	693.3143	2	39.282	-0.3	37 43 57 58 93 98 96 96 85 66 90 28	[401.2]VEDFK[129.0]A[147.1]
965	S(+79.97)YNVT(+79.97)CDM(+15.99)DF	7.1	71	457.4615	3	13.087	-1.3	28 86 62 68 67 80 96 74 74 74	[167.0]Y[394.1]CD[409.1]
2270	ALLTYMF	5	71	858.4438	1	27.399	0.9	29 72 82 67 64 87 93	[184.1]L[264.1]MF
3294	ADSNADFKF	6.4	71	1014.454	1	39.636	1.3	91 91 82 50 59 75 81 81 28	ADS[300.1]FK[147.1]
3066	GTDQVEDFKEAF	8.6	71	693.3146	2	36.947	0.2	39 44 52 58 95 98 96 96 85 66 92 28	[401.2]VEDFK[129.0]A[147.1]
1961	YTAKSHGGATSLAF	10	71	705.855	2	23.872	1.2	59 67 77 94 97 90 82 71 74 58 48 52 91 28	[335.1]KSHG[429.2]A[147.1]
4147	MVSQQPGVSLPY	8.5	71	653.3272	2	49.565	-2.8	92 91 91 75 52 58 85 89 89 71 28 28	MVS[353.2]GVS[373.2]
2831	ADSNADFKF	6.4	71	1014.4535	1	34.163	0.8	89 89 73 51 57 74 87 87 28	AD[387.1]FK[147.1]
1495	ESAELQNM(+15.99)AF	7.1	71	578.2538	2	18.851	1.5	35 38 39 86 98 79 76 88 90 78	[287.1]EL[242.1]M(+15.99)A[147.1]
2766	VYCQESQLKEAGAEYF	11.4	71	932.9254	2	33.392	0.7	88 83 83 80 95 89 58 86 67 93 79 52 41 51 56 28	VYCQES[128.1]L[128.1]E[638.3]
2754	TGEELGKGMW	7.1	71	554.261	2	33.253	0.9	74 73 88 98 95 84 81 57 28 28	[158.1]EELGK[374.1]
1832	MAPLKGSVKPW	7.8	71	607.3427	2	22.456	1.5	85 93 95 96 85 72 71 68 54 28 28	MAPLK[654.3]
2292	VHVQSHGGARCLF	9.2	71	705.8549	2	27.661	-2.5	28 99 97 95 96 96 93 85 79 50 37 35 28	[99.1]HVQSHGG[590.3]

3209	LQSDDDMANQRLNF	9.9	71	833.8776	2	38.649	-0.6	43 42 43 63 93 98 94 93 86 68 69 59 68 65	[443.2]DDMAN[658.4]
3486	VSSDNAFQF	6.4	71	507.73	2	41.713	0.1	76 76 79 73 57 62 96 88 28	[573.2]FQ[147.1]
1947	AS(+79.97)PKFGGVRPVAF	9.2	71	706.8564	2	23.698	-2	37 37 54 79 75 81 83 83 83 75 75 75 78	[610.3]GGVR[414.2]
4332	MQGQEDENGSVHY	9.2	71	747.3021	2	51.925	0.6	46 40 71 64 96 97 89 80 73 72 62 63 63	[444.2]EDEN[543.2]
1355	DNGVASVKAGF	7.8	71	1064.537	1	17.302	-0.1	94 87 58 47 52 75 90 85 82 76 28	DN[314.2]VKA[204.1]
3705	MVSM(+15.99)PVGAGRVW	8.5	71	653.327	2	44.247	1.9	92 91 90 88 89 85 83 60 50 47 42 28	MVSM(+15.99)PVG[569.3]
1873	EFLDF	3.5	71	670.3082	1	22.891	-0.1	99 99 99 28 28	EFL[262.1]
1836	SSNALQKCRKPF	8.5	71	689.8669	2	22.499	0.4	55 65 61 83 96 68 70 73 72 83 91 28	[288.1]AL[515.3]KP[147.1]
3777	M(+15.99)SM(+15.99)VAAVTRPVAF	9.2	71	706.3565	2	45.091	-1	51 52 51 55 73 88 66 67 85 85 83 83 75	[551.2]A[200.1]RPVA[147.1]
1842	SAM(+15.99)PDPVAGNVDYKNLVY(+79.97)	12.7	71	1024.9575	2	22.56	2	31 36 40 86 28 95 98 95 78 68 84 93 94 58 45 66 92 79	[305.1]P[115.0]PVA[171.1]VDY[355.2]V[243.0]
3185	KLLDPEATGSKLKEF	10.6	71	559.3135	3	38.361	-0.2	28 31 88 94 96 92 92 94 92 78 64 55 54 54 43	[241.2]LDPEATG[732.4]
2486	EQSQLAGYESLGAF	9.9	71	750.3538	2	29.994	-0.5	56 49 40 39 80 87 91 94 94 61 57 61 87 88	[472.2]LAGYE[257.1]AF
4031	MVSVPGVGGPRCF	9.2	71	653.3263	2	48.145	0.8	93 92 92 94 28 52 77 84 93 65 63 52 28	MVSV[253.1]GG[503.2]
1169	VPVGVKAY	5.7	71	416.7505	2	15.35	1.4	28 28 92 94 95 98 98 28	[196.1]VGVKA[163.1]
3045	SAFT(+79.97)KVASPSNYKNLVY(+79.97)	12	71	1024.9591	2	36.692	-1.1	55 59 85 61 58 58 96 79 69 65 67 94 55 50 74 91 75	[158.1]F[408.2]A[385.2]Y[355.2]V[243.0]
2385	DNGSGLVKAGF	7.8	71	532.7728	2	28.761	1.3	57 64 81 85 82 84 91 83 71 44 28	[229.1]GSGLVK[275.1]
2664	QNGSYPGGLLW	7.8	71	596.293	2	32.135	-0.5	53 57 80 84 84 61 61 74 93 96 28	[242.1]GSY[211.1]LL[186.1]
1605	SLNEAELEGSLKEAVAW	12	71	923.4626	2	20.039	-2.6	35 35 43 49 78 95 98 97 94 92 93 95 95 73 52 38 29	[514.2]ELEGSLKE[427.2]
1916	QLRGGAGVLTLGY(+79.97)RF	10.6	71	844.4395	2	23.348	2.3	41 42 55 57 44 57 85 92 93 97 98 98 72 60 59	[582.3]GVLTLG[546.2]
1632	KLDLAGDAKLLF	8.5	71	435.2592	3	20.335	0.8	57 54 55 59 62 75 93 90 88 89 91 28	[597.3]DAKLL[147.1]
1872	AFFQESGALQEAEYGAF	12	70	932.925	2	22.882	2.2	48 48 53 87 84 69 55 56 95 83 93 86 76 76 76 75 28	[365.2]QE[215.1]LQEA[567.2]
1151	QLSDDDM(+15.99)ANGARLNF	10.6	70	841.8746	2	15.149	-1.1	42 42 42 53 91 96 86 86 85 89 89 66 58 64 61	[443.2]DDM(+15.99)ANGA[530.3]
4202	HVEKEYKTTGSMYEY	10.6	70	932.9249	2	50.277	0.1	78 77 77 88 76 68 81 95 92 80 69 59 53 28 28	[365.2]K[292.1]KTTG[673.2]
1509	QEQEQHGKASSKASLLVKRF	14.1	70	757.7456	3	18.994	1	41 41 33 37 42 77 71 76 84 86 81 81 86 93 93 94 89 83 82 28	[964.4]ASSKASLLVKR[147.1]
1895	TGM(+15.99)PPDVAGGGVDYKCVKY	13.4	70	986.9613	2	23.129	0.6	31 41 44 89 46 88 95 95 90 73 77 90 94 94 71 57 54 71 28	[305.1]P[97.1]DVAG[114.0]VDY[621.3]
3305	WGVKCM(+15.99)QF	5.6	70	507.7297	2	39.767	-1.4	28 54 65 63 84 75 94 94	[470.3]C[147.0]QF
2669	ASDQVEDFKEAF	8.4	70	693.3148	2	32.199	0.4	38 43 64 56 91 98 95 95 79 60 90 28	[401.2]VEDF[257.1]A[147.1]
3962	ASEELKNMW	6.3	70	554.2589	2	47.307	-3	45 49 66 95 90 64 63 71 85	[287.1]EL[373.2]W
1843	FGMNKLEEASFRTS(+79.97)VY	11.3	70	979.941	2	22.569	1.5	30 36 39 63 95 99 99 98 94 92 92 91 54 44 52 40	[449.2]KLEEASFR[530.2]
1272	QM(+15.99)APDDMANKRLNF	9.8	70	833.889	2	16.413	2	34 32 32 65 92 98 97 94 87 94 70 57 63 61	[443.2]DDMANK[530.3]
2347	RVFDMAGNGGVVMALW	11.2	70	861.9279	2	28.308	1.8	37 75 68 90 75 72 76 89 86 71 76 86 74 60 52 28	[402.2]D[259.1]NG[156.1]V[501.2]

1392	KLKNPTNKEVLPGW	9.8	70	812.4629	2	17.726	-1.9	29 70 81 90 96 94 83 82 84 98 49 46 48 28	[241.2]KNPTNKEV[453.2]
2413	MEKMVGVLWMDVVW	9.8	70	861.926	2	29.112	1.9	48 47 58 96 92 79 75 79 58 67 65 93 91 28	[388.2]MV[701.3]VV[186.1]
1273	QTSMLWLQLW	7	70	653.3359	2	16.421	-1	59 66 88 88 88 58 62 48 80 61	[229.1]SML[427.2]L[186.1]
2751	LFAGMTVGNGGVTDVVW	11.9	70	861.9282	2	33.212	-1.7	55 60 62 71 93 66 59 63 71 82 62 67 74 92 92 89 28	[388.2]M[371.2]G[257.1]DVV[186.1]
1181	QKVGRCDLVAHQPEY	10.5	70	581.6262	3	15.465	0	56 57 50 52 52 77 86 96 94 86 81 73 79 79 28	[671.4]DLVAH[517.2]
3684	ADDSQGFKF	6.3	70	507.7304	2	44.007	1	55 55 75 73 54 90 98 98 28	[516.2]GFK[147.1]
1076	TYTGNGEQPRVF	8.4	70	684.8326	2	14.347	2.8	29 52 72 87 87 94 93 84 90 91 28 28	[365.2]GNGEQPR[246.1]
2635	M(+15.99)SMQESGALGAETVYKF	11.9	70	932.9254	2	31.786	-1.1	45 54 54 70 91 81 75 79 92 89 89 94 56 47 53 67 47	[493.2]ES[128.1]LGAE[638.3]
1297	WKAPPFAFLCNCY	9.1	70	780.3637	2	16.666	1.9	49 50 60 63 72 72 91 91 88 84 69 60 55	[726.4]AFLC[380.1]
1987	APHPPDVAGNVDYQNLVY(+79.97)	12.6	70	1024.9601	2	24.152	0.7	29 30 30 91 50 89 95 96 87 74 84 95 94 44 40 59 89 77	[305.1]P[97.1]DVAG[114.0]VDY[355.2]V[243.0]
372	WS(+79.97)CVY	3.5	70	369.1218	2	4.962	-0.2	28 89 78 89 63	[186.1]S(+79.97)[103.0]V[163.1]
2479	YPKMVTGGGGEKDVVW	11.2	70	861.928	2	29.907	-1.8	50 50 50 90 67 57 61 67 67 75 83 93 91 91 90 28	[388.2]M[428.2]EKDVV[186.1]
1340	TPLVSPAPAMY	7.7	70	1146.5842	1	17.135	-1.9	85 86 86 28 88 88 76 60 67 70 28	TPL[99.1]SP[533.2]
1278	LSLKEPEPF	6.3	70	530.2883	2	16.474	-2.5	78 83 97 94 92 95 28 28 28	[113.1]SLKEP[373.2]
2053	MGRVLGRPF	6.3	70	516.7926	2	24.886	0.8	79 65 78 93 96 77 45 63 28	[344.2]VL[457.2]
2739	NYGKSGGVPSQVAF	9.8	70	705.8543	2	33.057	0.2	32 45 51 86 90 89 84 79 84 50 46 72 85 79	[334.1]KSGG[99.1]P[314.2]A[147.1]
1957	MWVGVNSPNKSALDDKRNY	13.3	70	1097.5374	2	23.821	-1.6	43 75 69 97 96 92 97 78 61 77 57 56 74 87 87 58 44 35 35	[416.2]GVNS[610.3]DD[561.3]
3131	GTDQVEDFKEAF	8.4	70	693.3147	2	37.714	0.3	41 48 61 61 88 97 94 94 74 56 89 28	[401.2]VEDF[257.1]A[147.1]
2765	ADSNADFKF	6.3	70	1014.4529	1	33.382	0.3	91 90 80 45 50 75 82 82 28	ADS[300.1]FK[147.1]
2983	GDGGSGLVKAGF	8.4	70	532.7723	2	35.953	0.2	30 52 85 83 83 85 87 93 84 70 49 28	[172.0]GGSGLVK[275.1]
1826	TEFNVPAMY	6.3	70	1071.4825	1	22.391	0.8	28 77 76 60 92 89 87 85 28	[491.2]VPAM[163.1]
2393	KLLDPEATGSKLKEF	10.4	70	559.3138	3	28.87	0.3	30 31 75 87 92 93 92 94 94 80 68 59 50 51 40	[354.3]DPEATGS[645.4]
1946	S(+79.97)FKMFKMF	5.6	70	1145.4923	1	23.688	-0.1	94 95 95 85 53 75 28 28	S(+79.97)FKM[553.3]
2228	KPESTALLGEVGGSVKGGTDY	14.6	70	1033.0275	2	26.913	1.4	72 67 50 57 77 80 92 93 89 80 80 88 85 85 82 74 54 38 36 44 28	[542.3]ALLGEVGGSV[621.3]
3198	M(+15.99)HLNCVAGGGVDYCKVKY	12.5	70	986.96	2	38.508	2.6	50 53 52 61 88 92 94 91 78 80 90 97 91 53 52 46 47 28	[511.2]CVAG[57.0]GVDY[621.3]
2791	M(+15.99)HLNKYDVNGAVDPPTW	11.8	70	986.9619	2	33.684	-2.8	48 52 50 58 87 59 84 75 55 71 93 90 83 71 84 85 28	[511.2]K[163.1]D[270.1]AVD[97.1]PT[186.1]
929	HLDAVAHSHGNFNSY	10.4	70	556.9205	3	12.644	-2.6	56 51 55 58 66 65 66 75 86 89 60 61 76 92 82	[830.4]HG[375.2]SY
1830	KVVDTAYAKPSDDYVEGLRVF	14.6	69	791.4091	3	22.438	-0.2	29 66 81 71 65 69 64 58 57 74 75 87 97 97 95 94 66 62 56 55 28	[227.2]V[833.4]DDYVE[572.3]
2942	SGPSDDDMANKRLNF	10.4	69	833.8781	2	35.458	0	31 43 49 51 50 92 98 97 93 85 93 70 58 62 62	[443.2]DDMANK[530.3]
3059	MDLTPF	4.2	69	723.338	1	36.87	-0.2	82 84 84 75 61 28	MDL[345.2]
2777	SVDVGYGGNF	6.9	69	507.7306	2	33.525	1.3	72 79 78 87 86 87 75 49 48 28	[301.1]VGY[375.2]

2293	Y(+79.97)VFTVGGSSPKKFF	9.7	69	822.3993	2	27.671	2.7	28 92 93 86 77 66 41 63 87 87 89 99 28 28	[243.0]VFT[300.1]SPKK[294.1]
3108	MVSLPAAGGGADLF	9.7	69	653.3271	2	37.447	-2.7	94 94 94 55 56 63 88 90 86 49 45 55 67 28	MVS[281.2]AGG[503.2]
1307	YGQAHGGANGEVAQAF	11.1	69	788.8611	2	16.785	0.7	54 53 72 81 77 69 72 72 55 62 63 84 84 68 89 48	[348.1]A[622.2]VA[128.1]A[147.1]
1797	NHQVVAAAAPTM(+15.99)Y(+79.97)	9	69	734.8199	2	22.09	2.4	52 54 50 68 69 83 81 80 79 80 76 72 49	[577.3]AAA[71.0]P[491.1]
3215	YTAKSHGGATSLAF	9.7	69	705.8543	2	38.729	0.2	34 52 68 94 96 89 77 74 83 70 52 55 92 28	[335.1]KSH[114.0]A[301.2]A[147.1]
1742	VYYMPNVSALKERVY	10.4	69	611.32	3	21.507	2.4	28 62 70 44 61 57 76 86 93 97 89 87 63 89 28	[866.4]SALKE[156.1]V[163.1]
1215	LTTGM(+15.99)CDRF	6.2	69	530.2338	2	15.804	0.6	51 86 85 58 50 88 85 88 28	[113.1]TT[204.1]CDR[147.1]
1063	LLAVDGSQKEF	7.6	69	402.8837	3	14.216	0.2	71 70 55 57 64 78 85 58 58 67 93	[568.3]S[385.2]F
2521	SGPSDDDMANKRLNF	10.4	69	833.8784	2	30.405	0.3	29 45 52 52 46 96 96 94 91 81 92 72 59 63 62	[443.2]DDMANK[530.3]
4201	SADQVEDFKEAF	8.3	69	693.3145	2	50.266	-0.1	45 49 60 53 90 95 94 94 72 54 90 28	[401.2]VEDF[257.1]A[147.1]
2283	AKPFHPY	4.8	69	859.4459	1	27.55	-0.1	41 69 84 28 86 86 86	[199.1]P[147.1]HPY
1563	DPGSGLVAGAGF	8.3	69	1047.511	1	19.587	0.5	39 38 38 92 95 96 95 81 75 61 87 28	[269.1]SGLVA[128.1]G[147.1]
1383	LTLTSNPY	5.5	69	454.7404	2	17.622	1.3	30 30 84 78 79 77 90 80	[214.1]L[302.1]PY
1089	GYKAVCHAAW	6.9	69	553.2675	2	14.475	2.5	88 93 98 98 98 98 28 28 28 28 28	GYKAVC[465.2]
3067	YFSNKYDGVGGAVDPPTW	12.4	69	986.9599	2	36.958	2.6	37 34 34 50 91 77 84 84 74 71 82 92 84 78 69 83 84 28	[511.2]K[163.1]DG[156.1]GAV[212.1]PT[186.1]
3097	DCFKESGALKEEAYQF	11.1	69	932.926	2	37.316	1.3	28 82 81 93 74 86 73 74 90 91 91 56 43 41 43 49	[115.0]CFK[129.0]S[128.1]LKE[638.3]
1333	M(+15.99)YGNGGVEPRLY	8.3	69	686.3225	2	17.061	1.2	84 82 68 58 72 81 73 57 57 78 84 28	M(+15.99)Y[228.1]G[481.3]L[163.1]
1499	DLDLRKDLY	6.2	69	575.8095	2	18.901	1.3	28 28 95 94 86 80 84 93 28	[228.1]DLRKDL[163.1]
2388	QLSDDDMANQRLNF	9.7	69	833.8784	2	28.803	0.3	47 47 43 53 93 99 96 93 79 73 69 53 56 59	[443.2]DDMA[772.4]
2383	DADSQGFKF	6.2	69	507.7305	2	28.741	1.1	55 56 77 60 51 93 98 98 28	[516.2]GFK[147.1]
1886	KSVAEVMLHF	6.9	69	580.8091	2	23.026	-1.9	28 80 77 76 81 81 89 73 73 28	[128.1]S[170.1]EVM[397.2]
2285	AVLTNWDDMEKLW	9	69	810.8907	2	27.58	0.9	31 40 55 87 84 67 82 76 81 81 82 97 28	[283.2]TN[186.1]D[115.0]MEKL[186.1]
2076	LGLFDRVGDASGVAF	10.3	69	762.3972	2	25.155	1.4	34 32 38 66 89 95 95 90 80 68 65 71 86 89 28	[430.3]DRVGD[215.1]VA[147.1]
1629	KCCAKDVGRVRGW	9	69	739.3797	2	20.298	0.5	33 33 96 96 95 95 91 91 89 65 34 43 28	[231.1]CAKDVGR[498.3]
1251	TVDVNGGTYY	6.9	69	544.7498	2	16.191	2.6	28 98 96 93 78 71 62 62 68 28	[101.0]VDV[655.3]
925	QLELGSLRQHF	7.6	69	664.3579	2	12.587	-2.3	59 63 69 85 86 81 74 74 67 67 28	[370.2]LGS[681.4]
2264	LTENVSFGHLF	7.6	69	632.3212	2	27.332	-1.2	68 74 87 62 61 61 83 91 68 68 28	[214.1]E[300.1]FG[397.2]
1518	MLKSEEFGGEQSKPF	10.3	69	857.4123	2	19.101	1.3	47 59 84 96 97 84 78 84 82 51 46 58 59 72 28	[244.1]KSEE[147.1]GG[716.3]
1274	DRARGSDVAF	6.9	69	547.2744	2	16.43	2.7	53 53 43 47 53 73 79 92 96 94	[757.3]VAF
1217	NSNRLKVGTKHW	8.3	69	720.3986	2	15.834	2.4	58 64 73 86 72 65 77 92 82 68 54 28	[315.1]R[340.2]GT[451.2]
2760	FLEFDTVLMAFNLY	9.6	69	574.9545	3	33.319	2.4	71 76 76 55 53 55 76 82 82 84 64 51 80 51	[851.4]LMA[261.1]L[163.1]

4081	EGDSGAGFKF	6.9	69	507.7305	2	48.736	1.1	43 48 67 62 68 76 96 97 98 28	[516.2]GFK[147.1]
2913	SAM(+15.99)PPDVAGNVDYKNLVY(+79.97)	12.4	69	1024.9583	2	35.122	2.7	34 37 46 77 36 80 90 95 85 63 77 93 94 53 44 61 90 74	[499.2]DVAG[213.1]DY[355.2]V[243.0]
446	CCNTS(+79.97)F	4.1	69	377.6002	2	5.941	-0.6	73 73 57 62 69 76	[735.2]
1230	WGVLADWKKKY	7.6	69	697.3854	2	15.972	0.6	28 98 98 98 96 96 94 58 28 28 28	[186.1]GVLADW[547.3]
3915	HRAFYGFAEEYAWAF	10.3	69	932.925	2	46.742	-0.8	44 48 52 64 81 86 81 90 98 98 96 92 34 31 28	[511.3]YGFAEEYA[404.2]
2405	GTDQVEDFKEAF	8.2	69	693.3151	2	29.019	0.9	43 48 59 52 94 98 89 89 74 56 88 28	[401.2]VEDF[257.1]A[147.1]
3296	HVGAEESGALKESRCEY	11.7	69	932.9263	2	39.651	-2.1	28 86 82 86 90 93 85 65 51 67 94 94 74 52 37 45 28	[137.1]VGAEES[241.1]KE[638.2]
3828	SAKTSCLPDW	6.9	69	554.26	2	45.704	-1	58 58 63 60 76 95 93 75 75 28	[474.2]CL[398.2]
2525	M(+15.99)FKLKSGTALLPPAW	10.3	69	559.3134	3	30.46	1	66 56 54 64 70 80 86 89 87 87 83 83 49 37 28	[663.4]SGTALLP[354.2]
1909	APHPPDVAGNVDYQNLVY(+79.97)	12.3	69	1024.9591	2	23.27	-0.2	30 30 30 91 35 85 94 96 71 57 75 94 93 52 47 81 91 74	[305.1]P[97.1]DVA[270.1]DY[242.1]LV[243.0]
1601	TNEKLQKM(+15.99)F	6.2	69	577.7957	2	20.008	-2.9	82 73 93 60 50 44 64 61 86	T[114.0]E[644.4]F
3084	TGEELKACAW	6.9	69	554.2608	2	37.167	0.4	71 68 84 97 94 78 59 47 53 28	[158.1]EEL[559.3]
1955	KWNSAVAMGEELALW	10.3	69	852.922	2	23.802	-2.6	50 71 52 82 82 83 85 83 79 84 75 58 57 52 28	[428.2]SAVAM[57.0]E[612.3]
3505	GTDKVEDFQEAF	8.2	69	693.3179	2	41.926	4.8	46 52 67 72 96 99 96 73 53 45 89 28	[401.2]VED[404.2]A[147.1]
2713	MVSQSPPGKDLF	8.2	68	653.3278	2	32.729	-1.9	93 93 93 54 55 55 90 86 56 52 61 28	MVS[312.1]PG[503.3]
4214	FTGPPDVANGVDYQCVKY	12.3	68	986.96	2	50.43	0.9	36 40 41 88 77 88 94 94 78 83 84 92 88 45 56 54 57 28	[305.1]P[97.1]DVA[114.0]GVDY[621.3]
932	VVLAAKEEAGGDEDCY	11	68	834.8765	2	12.671	2.1	28 43 42 64 95 92 92 92 93 93 91 80 73 54 28 28	[382.3]AKEEAGGD[510.1]
1387	LTNMVCLF	5.5	68	940.4613	1	17.67	-1.9	59 57 74 88 78 77 82 28	[328.2]M[202.1]L[147.1]
3120	LLKDPPSGTAFRARF	10.3	68	559.3138	3	37.59	-0.4	33 52 47 66 91 89 82 84 88 94 83 73 57 52 28	[469.3]PPSGTAF[530.3]
2945	Y(+79.97)LVSKANWVAQW	8.2	68	772.8678	2	35.502	-0.9	63 63 28 93 91 90 60 64 67 71 75 50	[455.2]SKA[784.4]
2029	VHVQSDGTPGPAVF	9.6	68	705.8534	2	24.614	-1.1	28 97 91 77 93 94 92 82 74 60 38 37 45 43	[99.1]HV[128.1]SDGT[568.3]
933	KRNAQEVGGTSSS(+79.97)HF	10.2	68	842.8733	2	12.682	-2.7	82 85 83 88 82 92 81 70 73 79 89 28 28 28 28	KRNAQEV[215.1]S[538.2]
2471	SADQVEDFKEAF	8.2	68	693.3149	2	29.812	0.5	37 41 57 47 94 97 95 95 75 56 91 28	[401.2]VEDF[257.1]A[147.1]
2723	KLLDAPLGTATATKEF	10.9	68	559.314	3	32.859	0.7	30 34 78 85 81 68 61 74 83 92 85 66 68 62 65 51	[354.3]DA[267.2]TAT[576.3]
912	YRVPKVEEFLLTY	8.9	68	552.9725	3	12.422	2.1	29 29 70 92 96 97 98 98 91 83 34 34 28	[418.2]PKVEEFL[377.2]
1019	RARAEEVRW	6.1	68	391.5471	3	13.751	-1.2	30 30 72 80 93 92 92 93 28	[383.2]AEEVR[186.1]
2094	FVLCSHGGASDVAF	9.6	68	705.3282	2	25.361	-1.8	28 82 75 75 76 92 83 80 83 56 53 48 61 57	[147.1]V[303.1]HGGA[519.2]
1147	KLVVDTAPGKTY	8.2	68	431.2465	3	15.101	-0.4	66 53 50 58 70 92 95 87 67 61 84 28	[554.3]TAP[185.1]T[163.1]
2011	LVPAVGFAASDLEWKY	10.9	68	589.3119	3	24.413	2.9	28 38 41 42 59 57 61 76 85 84 88 92 95 73 93 72	[754.4]ASDLE[186.1]K[163.1]
1862	TPEWPSLKY	6.1	68	1120.5704	1	22.773	2.7	28 28 96 97 97 75 70 91 28	[198.1]EWP[200.1]K[163.1]
2700	MFSQESGALGAESLYGAF	12.3	68	932.9236	2	32.582	-1.2	45 42 42 77 93 76 55 56 90 86 88 95 65 57 75 74 72 28	[493.2]E[215.1]LGAE[638.3]

3903	RAQEADSVAF	6.8	68	547.2671	2	46.6	-0.3	37 52 58 77 88 63 63 64 89 86	[484.2]A[301.1]AF
3176	MVSQQPPASTLF	8.2	68	653.3273	2	38.248	-2.7	83 84 84 69 46 54 92 67 62 64 79 28	MVS[353.2]P[519.3]
4154	ADSDNAFKF	6.1	68	1014.4528	1	49.656	0.1	93 93 86 44 41 49 84 89 28	ADS[300.1]FK[147.1]
2897	VSSNADFQF	6.1	68	1014.4537	1	34.935	1.1	89 91 86 55 57 67 74 62 28	VSS[722.3]
2031	EYGLTDLRGPF	7.5	68	634.3204	2	24.63	1.4	66 59 47 52 92 81 74 74 83 89 28	[462.2]TD[269.2]GP[147.1]
1871	M(+15.99)GNMKLEETGFRDSSMW	11.6	68	1017.9399	2	22.874	0.4	31 31 32 42 96 98 99 95 86 82 90 93 53 57 57 79 28	[449.1]KLEETGFR[606.2]
2249	MVSQGGGVVPDLF	8.8	68	653.3278	2	27.168	-2	96 95 95 82 79 69 65 66 63 42 43 55 28	MVSQ[841.4]
1430	FLKMVVGMNGKDPTW	10.2	68	861.9376	2	18.136	-1.6	36 55 68 94 91 81 79 45 42 51 94 90 84 74 28	[388.2]MVV[359.1]KDP[287.1]
1331	KPTPGVPT(+79.97)GMKF	8.2	68	670.3276	2	17.046	0	78 78 78 89 91 28 80 79 73 57 50 28	[326.2]PG[99.1]P[644.2]
2719	LQSDDDMANQRLNF	9.5	68	833.879	2	32.805	1	50 49 50 60 93 98 91 85 80 74 62 47 49 56	[443.2]DDMAN[658.4]
2933	SADKVEDM(+15.99)KEAF	8.1	68	693.3151	2	35.355	-1.6	37 44 62 90 95 98 96 72 52 44 90 28	[273.1]KVED[404.2]A[147.1]
1453	TLYFGRAW	5.4	68	507.2642	2	18.388	0.8	70 70 81 65 80 75 71 28	[214.1]Y[147.1]G[413.2]
3315	QSTFSDGVRPVAF	8.8	68	705.8557	2	39.876	2.1	36 37 56 82 80 71 69 78 75 84 72 72 63	[316.1]FS[427.2]P[317.2]
2057	LSTVTVAGPMGTFKF	10.2	68	778.4122	2	24.934	-1.1	44 43 83 91 82 78 74 73 75 76 64 63 68 69 28	[200.1]TVT[1035.5]
2888	EPRGGPYVF	6.1	68	511.2588	2	34.823	0.3	28 89 85 80 85 90 92 28 28	[129.0]PRGGPY[246.1]
2435	NSKEDFQF	5.4	68	1014.4537	1	29.382	1	28 94 86 86 92 69 54 28	[114.0]SKED[422.2]
3899	SADKVEDFEAGAF	8.8	68	693.3148	2	46.556	0.4	40 42 57 69 93 99 99 28 75 74 83 88 28	[401.2]VED[347.1]GA[147.1]
3007	QLSDDDMANQRLNF	9.5	68	833.8795	2	36.242	1.6	34 34 34 66 93 97 88 86 75 69 72 61 68 66	[443.2]DDMA[772.4]
1068	YRVLTTRGSFTSPF	9.5	68	544.6223	3	14.271	-1	35 42 37 46 62 52 55 59 92 92 94 92 92 90	[946.5]SFTSPF
3197	GTDQVEDFKEAF	8.1	68	693.3153	2	38.498	1.1	42 45 57 49 93 98 96 95 63 50 90 28	[401.2]VEDF[257.1]A[147.1]
867	Y(+79.97)HECGEEY(+79.97)	5.4	68	595.15	2	11.869	-1.3	76 76 81 85 67 65 60 28	[380.1]EC[558.1]
2603	GTDKVEDFQEAF	8.1	68	693.3145	2	31.404	-0.1	43 48 58 79 94 99 97 75 51 43 92 28	[401.2]VED[404.2]A[147.1]
2911	MVSPGGDAAAGLLF	9.5	68	653.3276	2	35.103	-2	89 89 89 35 57 68 69 71 69 61 59 72 85 28	MVS[709.3]L[147.1]
1097	EWALDQMGKVAQW	8.8	68	521.2552	3	14.568	2.7	53 52 59 59 60 45 58 79 80 82 83 87 77	[930.4]KVAQ[186.1]
2859	FSAPPDVAGGGVDYKCVQY	12.9	68	986.9604	2	34.478	1.4	40 37 37 71 60 77 89 95 90 80 79 88 95 93 63 42 40 46 52	[614.3]VAGG[57.0]VDY[621.3]
1411	LTWSGAGKTVNAASVGVLKYF	14.2	68	1085.0889	2	17.935	0.1	62 62 46 67 59 60 83 85 90 95 86 66 61 60 71 66 76 88 65 31 31	[615.3]GKTVN[484.3]L[438.2]
1922	TKNKVPMYAFATVAAF	10.8	68	586.9811	3	23.412	2.3	36 34 34 35 45 69 71 76 93 72 72 83 82 86 92 94	[961.5]A[218.1]TVAAF
4267	T(+79.97)LAATKSLVY	6.8	68	573.7933	2	51.114	-1.1	92 92 91 75 62 62 70 71 28 28	T(+79.97)LA[762.4]
2394	LTENGVGSARPY	8.1	68	632.3198	2	28.878	-0.3	81 84 91 85 82 77 72 71 52 46 34 28	LTENG[730.4]
2586	KSVAPSVVMW	6.8	68	552.2979	2	31.197	-3	28 98 97 84 85 61 59 59 71 28	[128.1]SVAP[602.3]
4261	SAEELGGKMW	6.8	68	554.2609	2	51.039	0.6	60 60 90 98 95 84 81 45 28 28	[158.1]EELGG[445.2]

1883	KSVADLWVW	6.1	68	552.2988	2	23.004	1.9	28 99 98 98 97 98 28 28 28	[128.1]SVADL[471.2]
1920	LVRTTKVSPSKPF	8.8	67	487.2915	3	23.394	-2	41 38 42 43 73 77 82 95 92 87 85 86 28	[698.4]VSPSKP[147.1]
2545	FGKAVCAAHW	6.7	67	545.2695	2	30.705	1.9	39 49 68 94 96 90 89 87 28 28	[332.2]AVCAA[323.1]
1722	KMPVGQLLW	6.1	67	536.3058	2	21.295	2.2	69 76 91 96 82 58 75 28 28	[259.1]PVG[540.3]
3251	KLLGHDSGTLLAKHW	10.1	67	559.3132	3	39.15	-1.6	29 57 61 47 47 60 84 82 80 79 86 89 87 88 28	[663.4]SGT[113.1]LAKH[186.1]
1610	NAKYNPVGASELRDLY	10.8	67	905.4605	2	20.093	0.4	34 39 43 94 85 96 95 93 90 92 94 79 38 36 36 28	[313.2]YNPVGASE[660.4]
1362	STHHF	3.4	67	628.283	1	17.377	-1.3	82 75 75 75 28	S[522.2]
2378	YDSLYGDAAKTPF	8.8	67	724.3423	2	28.678	2.4	28 77 71 76 83 74 68 77 72 67 71 78 28	[478.2]Y[787.4]
2162	M(+15.99)APTLTSANW	6.7	67	554.2598	2	26.149	-1.3	64 63 68 75 91 83 57 54 57 57	[416.2]LT[458.2]
3923	KSVADLVWW	6.1	67	552.298	2	46.845	0.4	28 99 98 97 97 99 28 28 28	[128.1]SVADL[471.2]
2935	M(+15.99)HMAKVAGGGVDYKCVQY	12.1	67	986.9595	2	35.373	2	28 58 43 48 61 92 93 87 67 74 82 94 95 72 58 50 51 51	[614.3]VAG[114.0]VDY[621.3]
2017	S(+79.97)HPNVVAATVNYENLVGW	12.1	67	1025.4727	2	24.485	-2.5	28 90 83 67 74 91 92 60 52 70 82 86 51 45 68 70 67 28	[167.0]HP[213.1]VA[271.2]NY[698.3]
1658	LDKNKDPQVDSVVQLY	10.8	67	930.9875	2	20.608	-1.3	46 39 39 54 89 93 61 57 84 95 95 90 87 46 56 40	[470.2]KD[225.1]VDSVV[404.2]
2882	LTETPVGGGRNY	8.1	67	632.3203	2	34.753	0.5	72 70 87 93 28 77 78 74 71 62 62 28	[214.1]ET[800.4]
3815	EGKSGDFGAF	6.7	67	507.7305	2	45.548	1.1	47 46 60 55 69 87 93 90 91 28	[458.2]DFGA[147.1]
3659	KSVADLVWW	6	67	552.2975	2	43.716	-0.6	28 99 98 97 97 97 28 28 28	[128.1]SVADL[471.2]
1890	MKWLAEKENKQRGFRLY(+79.97)	11.4	67	1139.0719	2	23.068	0.1	74 39 55 57 97 96 96 95 67 51 48 44 75 82 63 49 47	[558.3]AEKE[583.3]F[512.2]
2666	WAGMGHF	4.7	67	403.1755	2	32.155	-1.4	67 67 73 79 74 78 28	[786.3]
2129	KLLDLLATGSGPSKEF	10.7	67	559.3139	3	25.774	0.4	31 40 58 77 77 86 87 93 89 83 67 63 76 50 50 40	[582.4]LATGS[645.3]
3529	KSVADLWVW	6	67	552.2982	2	42.202	0.7	28 99 98 97 97 97 28 28 28	[128.1]SVADL[471.2]
1314	RPAMSAGANGEVAQW	10.1	67	772.8657	2	16.863	-2.1	52 60 62 67 74 81 83 79 52 48 48 88 75 79 51	[542.3]AG[371.1]V[385.2]
2139	QNGPAATSFLW	7.4	67	596.2923	2	25.881	-1.6	53 52 60 63 66 80 76 78 87 89 28	[467.2]A[188.1]FL[186.1]
3303	T(+79.97)KFASVASLGQYQNLVY(+79.97)	11.4	67	1024.9589	2	39.734	-1.3	80 59 39 44 51 90 95 68 59 54 61 94 55 43 73 91 76	T(+79.97)[433.2]VA[385.2]Y[355.2]V[243.0]
3638	MVSQNLATPTPF	8.1	67	653.3276	2	43.459	-2.2	91 91 91 75 61 68 70 62 56 52 56 28	MVS[969.5]
1154	KNFSPAKATNF	7.4	67	408.8835	3	15.179	-0.9	71 64 67 61 60 52 60 70 71 81 77	[944.5]N[147.1]
1553	ETSKNNTGKPVPF	8.7	67	709.8694	2	19.492	2.8	85 89 90 94 74 50 52 74 85 87 28 28 28	ETSK[386.2]KP[343.2]
2187	KPDKGGGPTNKRLLLW	10.7	67	594.0113	3	26.442	-1.8	67 68 44 39 40 47 83 88 89 86 96 91 90 81 28 28	[582.3]GPTNKRLL[299.2]
3819	T(+79.97)LPPKGVHTW	6.7	67	608.2985	2	45.588	-2	97 94 90 59 65 87 90 28 28 28	T(+79.97)LP[225.1]GV[424.2]
3272	ASFPPDVAGGGVDYKNLCY	12.7	67	986.9586	2	39.386	-0.5	29 34 39 79 67 78 91 92 86 78 77 83 92 94 65 41 50 50 37	[614.3]VAG[114.0]VDY[621.3]
2979	SAM(+15.99)PDPVAGNVDYKNLVY(+79.97)	12.1	67	1024.9578	2	35.898	2.3	32 35 40 77 37 94 97 94 71 62 77 92 88 45 41 53 89 73	[517.2]PVA[270.1]DY[355.2]V[243.0]
1221	KDMAEGAELPF	7.4	67	604.2864	2	15.869	-0.7	93 93 95 94 88 74 51 46 41 28 28	KDMAE[614.3]

3195	SFTQSDGVRPVAF	8.7	67	705.8542	2	38.465	0.1	44 43 46 39 51 73 89 91 88 74 75 75 79	[665.3]GVR[414.2]
1993	ATSLKLTLPLHF	8	67	670.8996	2	24.217	-1.3	29 42 52 96 97 93 93 96 92 51 28 28	[259.1]LKLTLP[397.2]
3858	SKVADLWVW	6	67	552.298	2	46.062	0.4	28 98 97 96 96 98 28 28 28	[87.0]KVADL[471.2]
4200	KSVADLWVW	6	67	552.2975	2	50.254	-0.4	28 99 98 97 96 97 28 28 28	[128.1]SVADL[471.2]
3788	SVSDNAFQF	6	67	1014.4512	1	45.224	-1.4	76 78 79 61 61 62 82 69 28	[573.2]F[275.1]
2390	KSVAEVWVW	6	67	552.2976	2	28.825	-0.3	28 92 89 85 85 79 57 55 28	[128.1]SVAE[570.3]
2451	QTGSLGVAGAGF	8	67	532.7726	2	29.563	0.8	46 46 73 78 66 67 81 85 84 71 73 28	[543.3]VAG[275.1]
3041	DADNTGFKF	6	67	507.7305	2	36.652	1.1	46 51 79 62 62 82 93 95 28	[516.2]GFK[147.1]
1266	MVSQNALTDVPF	8	67	661.3247	2	16.353	-2.7	88 87 86 74 73 65 65 85 89 28 28 28	MVS[426.2]TD[343.2]
3594	SKVADLVWW	6	67	552.2977	2	42.953	-0.2	28 98 97 96 96 97 28 28 28	[87.0]KVADL[471.2]
3464	KSVADLWVW	6	67	552.298	2	41.462	0.3	28 99 97 97 96 97 28 28 28	[128.1]SVADL[471.2]
2171	FCRLVSTKAATYCKPFRF	12	67	1069.5579	2	26.263	2.2	28 64 75 89 96 90 89 90 57 59 57 81 79 76 56 52 28 28	[406.2]LVSTK[243.1]Y[778.4]
1265	MVSQNLATTPPF	8	67	653.3273	2	16.346	-2.6	95 95 95 81 64 62 63 50 47 47 69 28	MVSQ[841.4]
2085	SDVS(+79.97)GLLPF	6	67	507.7296	2	25.251	-2.4	63 69 68 71 74 92 80 51 28	[525.2]LL[244.1]
853	WM(+15.99)VSSYY	4.7	67	476.1982	2	11.698	-2.8	28 94 94 94 97 28 28	[186.1]M(+15.99)VSS[326.1]
3204	KTGSDPGKAGF	7.3	67	532.7722	2	38.582	0.1	77 78 64 68 78 75 76 72 64 49 28	[1045.5]
2448	VSDNTGFQF	6	67	507.7303	2	29.536	0.7	69 73 65 51 53 88 91 78 28	[516.2]GF[275.1]
3321	NTVVSLGDGSLPM(+15.99)GY	10	67	763.3659	2	39.945	2.9	59 62 62 62 63 70 76 70 68 74 92 88 59 57 32	[929.4]LP[367.1]
2186	GFTSVGSGVELY	8	67	608.2983	2	26.432	0.2	49 52 69 84 91 85 73 64 61 58 81 28	[305.1]SVG[372.2]L[163.1]
1752	MPLRKLW	4.7	67	472.2815	2	21.619	1.3	99 97 91 88 33 28 28	MPLR[427.3]
4057	SKVADLVWW	6	67	552.2982	2	48.451	0.8	28 98 97 96 96 97 28 28 28	[87.0]KVADL[471.2]
1520	RVFDKEGAGPM(+15.99)MLAW	10	67	862.4176	2	19.119	-0.9	36 74 59 83 71 64 65 70 81 71 73 81 68 68 28	[402.2]D[385.2]G[244.1]M[370.2]
1628	NMAAGLPVGGVNLPY	10	67	736.8804	2	20.289	-2.1	55 55 88 92 78 73 78 95 95 87 43 38 37 49 28	[245.1]AA[267.2]VGG[586.3]
1376	RATGKTVKPVNNDRW	10	67	871.4778	2	17.539	1.6	30 38 42 59 75 95 98 91 85 91 83 73 51 51 31	[513.3]TVKPVN[571.3]
3967	KKVPAKLHLGMMHW	9.3	67	559.314	3	47.372	-0.8	53 59 52 54 65 70 71 79 84 84 87 72 67 28	[901.6]LGM[454.2]
1088	SQAVAGTAAQW	7.3	67	1089.5327	1	14.467	0.2	51 49 80 81 78 65 62 74 73 78 37	[215.1]AV[685.3]
2277	SADQVEDFKEAF	8	67	693.3149	2	27.478	0.5	39 44 58 58 90 96 85 84 69 53 89 28	[401.2]VEDF[257.1]A[147.1]
2589	FLKEAGKDGGAEPAFW	10.7	67	861.9276	2	31.228	-0.4	76 86 93 97 64 50 43 54 61 68 71 79 81 77 28 28	[147.1]LKE[685.3]P[404.2]
3723	GFTSEGAAVTLY	8	67	608.2979	2	44.462	-0.4	52 61 81 94 88 87 74 47 46 51 83 28	[204.1]TSEG[342.2]L[163.1]
3726	SKVADLVWW	6	67	552.2991	2	44.503	2.4	28 98 97 97 95 95 28 28 28	[87.0]KVADL[471.2]
1398	MVTKEELQRGFWYY	9.3	67	925.4493	2	17.795	-1.5	43 40 40 89 98 98 88 60 80 83 90 40 41 35	[331.2]KEEL[128.1]RGF[512.2]

835	SPKNDMMY(+79.97)	5.3	67	533.1913	2	11.478	-2.6	56 55 52 70 86 92 89 28	[426.2]DMM[243.0]
2730	ELGMFATLFY	6.7	67	596.293	2	32.945	2.8	59 61 77 85 88 70 62 64 68 28	[299.1]MF[595.3]
3990	SKVADLWVW	6	67	552.2979	2	47.648	0.2	28 97 96 95 96 97 28 28 28	[87.0]KVADL[471.2]
2473	WGANGGQAGGGEVAKW	10.6	67	772.8672	2	29.833	2	51 54 64 49 53 75 66 78 65 68 73 72 81 85 94 28	[1041.4]VAK[186.1]
1775	SNKEDFQF	5.3	67	1014.4532	1	21.866	0.5	28 78 78 78 93 48 71 55	[458.2]D[422.2]
3139	KPADSSGKAGF	7.3	66	532.7726	2	37.812	0.9	61 70 72 80 93 71 59 62 66 64 28	[296.2]DS[547.3]
2844	MDNRGFQF	5.3	66	507.7297	2	34.308	5.8	61 61 57 63 81 94 83 28	[516.2]GFQ[147.1]
1213	GKNPKSKEVLPGW	8.6	66	720.4019	2	15.79	-2.7	57 79 89 84 70 70 89 89 98 35 35 36 28	[185.1]NP[215.1]KEV[453.2]
4195	RKGKAPLGTAWSKEF	10	66	559.3138	3	50.186	-0.5	28 28 66 70 73 73 66 66 66 67 86 82 78 79 62	[979.6]WS[404.2]
2648	VFFFVPTNKLVLLGW	10	66	594.0109	3	31.935	-0.7	64 64 58 67 67 85 84 86 94 87 57 41 46 61 28	[639.3]PTNKL[568.3]
2587	LQSDDDMANQRLNF	9.3	66	833.8789	2	31.207	1	37 36 36 43 93 98 95 87 76 76 66 57 62 61	[443.2]DDMA[772.4]
4136	ENGTVEDFKEAF	8	66	693.3152	2	49.424	1	47 46 52 56 83 97 93 90 68 50 81 28	[401.2]VEDF[257.1]A[147.1]
1302	YM(+15.99)NGVQVRPPY	7.3	66	670.3256	2	16.726	-1.6	28 80 66 89 85 55 77 76 49 91 28	[163.1]M(+15.99)[114.0]GV[480.3]P[163.1]
1098	SMEACGVPQTVAAQAF	10.6	66	537.2499	3	14.575	0.3	59 58 57 58 64 73 64 58 49 49 49 67 90 87 93 79	[1173.5]AQA[147.1]
4139	HVVQSDASGPAPVF	9.3	66	705.8544	2	49.469	0.3	28 97 96 85 95 88 61 55 56 57 56 60 60 28	[137.1]VVQSD[726.4]
1219	VTDVKELY	5.3	66	483.7596	2	15.85	-2.5	28 28 98 97 80 80 87 28	[200.1]DVKEL[163.1]
1887	SKVVSLMPGW	6.6	66	552.2988	2	23.034	-1.2	28 28 75 75 81 95 92 83 73 28	[413.3]SLMP[243.1]
2753	VHVQSDGTPGAPVF	9.3	66	705.8546	2	33.245	0.6	28 99 98 86 94 95 95 79 59 48 37 36 38 28	[99.1]HVQSDG[669.3]
1622	VRFPSGGSSGCGAGY	9.9	66	701.3136	2	20.225	-1.1	28 28 78 77 75 75 76 64 28 69 68 70 77 83 90	[1162.5]GY
4211	GEDSQGFKF	6	66	507.7303	2	50.397	0.8	46 49 69 68 52 82 98 99 28	[516.2]GFK[147.1]
2963	EGSNADFKF	6	66	1014.4535	1	35.718	0.8	87 87 77 48 49 62 76 77 28	EG[809.4]
1279	QLSDDDM(+15.99)ANGARLNF	9.9	66	841.8736	2	16.481	-2.3	44 44 44 58 88 96 70 59 58 78 83 74 61 65 64	[443.2]DD[389.1]A[530.3]
2571	MSFQYEQLAGSTVEQF	10.6	66	932.926	2	31.014	1.4	48 47 47 78 87 87 55 79 72 72 78 87 68 47 48 51	[493.2]YE[456.2]T[503.2]
2916	WDEAYPAAALATMAW	9.9	66	556.256	3	35.165	-2.2	54 60 43 59 60 72 85 84 78 88 92 70 64 49 28	[761.3]AA[71.0]LA[489.2]
4266	GTDKVEDFQEAF	7.9	66	693.3148	2	51.102	0.4	41 47 58 75 88 96 98 75 51 43 88 28	[401.2]VED[404.2]A[147.1]
2649	T(+79.97)KTTKYDVGGGAVDPPTW	11.9	66	986.9576	2	31.946	1.4	45 46 39 83 87 93 74 72 61 46 67 77 79 68 59 78 81 28	[410.2]TKY[864.4]T[186.1]
2653	LQSDDDMANQRLNF	9.3	66	833.8787	2	31.999	0.7	49 48 46 52 91 98 95 90 58 47 63 57 61 63	[443.2]DDMA[772.4]
2784	SKVADLWVW	6	66	552.2981	2	33.605	0.6	28 98 97 95 94 95 28 28 28	[87.0]KVADL[471.2]
1250	KKTTAGKSELELFAACAMRKY	13.9	66	782.7463	3	16.18	-2.7	39 34 34 59 64 67 71 83 85 93 95 86 83 81 81 81 74 60 52 28 28	[714.4]SELELFAAC[649.3]
3405	RSGTVEDFQEAF	7.9	66	693.3227	2	40.832	3.5	48 47 55 73 90 98 96 72 50 43 87 28	[401.2]VED[404.2]A[147.1]
926	MS(+79.97)MDVM(+15.99)DF	5.3	66	536.1652	2	12.599	-0.1	28 28 28 97 95 88 87 75	[429.1]DVM(+15.99)D[147.1]

2718	KSVAMPLATW	6.6	66	552.2986	2	32.794	-1.7	28 99 98 91 50 49 58 68 68 46	[128.1]SVA[699.3]
2168	DRGTTTPQAF	6.6	66	547.2675	2	26.219	0.3	63 63 49 50 82 80 72 59 91 46	[429.2]TT[225.1]A[147.1]
3397	VSSANDFQF	5.9	66	507.7327	2	40.742	5.4	62 73 48 45 44 74 71 86 87	[720.3]QF
1137	NHKPGMNGDW	6.6	66	578.2524	2	14.988	-2.1	55 60 70 71 74 82 73 71 71 28	[533.3]M[472.2]
1315	SVLLPTNKEVLPGW	9.2	66	776.942	2	16.872	2.2	28 48 48 92 95 91 87 95 98 99 34 34 41 28	[299.2]LPTNKEV[453.2]
2030	NWDDMEKLW	5.9	66	618.771	2	24.622	-0.5	33 33 39 95 88 88 88 97 28	[415.1]DMEKL[186.1]
2126	LWGSDDMSEPRLNF	9.2	66	833.8777	2	25.733	-2.8	40 44 38 40 49 94 87 79 73 78 81 67 76 70	[558.2]DM[313.1]R[374.2]
1925	GRTLKQDPDEVLVAAF	10.5	66	879.9706	2	23.452	-2.6	29 32 36 70 44 39 79 87 90 85 85 87 70 70 68 76	[798.4]PDEVL[388.2]
3110	VHVQSHGGASAKSF	9.2	66	706.3561	2	37.466	-2	28 98 95 94 94 82 73 71 74 50 44 38 37 37	[99.1]HVQSH[705.3]
1007	KRDRLELSKF	6.6	66	323.6924	4	13.609	0	54 41 41 36 46 71 89 91 93 92	[797.5]LSKF
2588	QTGSGLVQAGF	7.2	66	532.7726	2	31.218	0.8	60 60 86 75 69 65 78 54 73 69 28	[229.1]G[759.4]
3770	ASDQVEDFKEAF	7.9	66	693.3143	2	45.013	-0.3	37 43 62 61 92 98 96 96 46 40 84 28	[401.2]VEDF[257.1]A[147.1]
3053	KLLDLLATGSGPSKEF	10.5	66	559.3145	3	36.795	1.4	33 36 51 72 74 85 87 92 93 87 63 58 61 52 54 45	[582.4]LATGS[645.3]
3029	AHCFDFKF	5.3	66	1014.4526	1	36.509	2.4	28 80 80 80 76 75 75 28	[71.0]HCF[537.3]
2363	EMKPALSLGGHASVYY	10.5	66	574.9538	3	28.507	-3	35 35 37 54 60 64 68 89 88 74 72 80 87 87 85 28	[756.4]LG[194.1]ASVY[163.1]
4277	MVSQQPLNELF	7.2	66	653.3271	2	51.238	-2.9	92 91 91 63 50 69 61 49 53 70 28	MVS[969.5]
4293	KCRLAKKNTPLKHGW	9.9	66	594.0114	3	51.429	1.8	31 36 41 69 74 90 91 75 74 75 91 76 64 62 28	[571.3]KK[312.1]L[508.3]
2977	ETSKAATPAWPF	7.9	66	653.3269	2	35.88	-0.7	83 89 89 94 83 73 67 62 58 28 28 28	ETSKA[770.4]
3302	LQSDDDMANAGRLNF	9.9	66	833.879	2	39.723	1.1	40 39 39 46 91 99 93 91 60 58 57 70 61 69 65	[443.2]DDMA[772.4]
984	REPAKEEANGGLFNCF	10.5	66	891.4184	2	13.327	1.1	29 43 62 84 94 95 97 95 89 85 48 43 39 40 45 56	[382.2]AKEEANG[681.3]
2316	T(+79.97)LGVAGGGGRKY	7.9	66	608.2987	2	27.939	1.7	71 74 88 93 91 80 64 57 76 29 28 28	[294.1]GVAG[618.3]
3240	WLNCGFAGF	5.9	66	507.7313	2	39.02	5	28 91 68 75 91 75 71 60 28	[186.1]L[217.1]G[422.2]
2402	EKSQLAGYEAGEAF	9.2	66	750.3543	2	28.974	0.2	44 42 56 40 56 76 93 96 95 75 60 65 85 28	[656.3]GYE[257.1]A[147.1]
2802	GTDKVEDM(+15.99)KEAF	7.9	66	693.315	2	33.818	-1.8	42 47 58 80 95 98 97 69 43 39 86 28	[273.1]KVED[404.2]A[147.1]
3311	SKVADLWVW	5.9	66	552.2986	2	39.837	1.4	28 98 96 95 92 93 28 28 28	[87.0]KVADL[471.2]
2517	DNGSGLAGVKF	7.2	66	532.7726	2	30.354	0.9	61 58 65 74 86 80 63 62 60 77 28	[373.1]GL[502.3]
2660	LTENVSM(+15.99)PPLF	7.2	66	632.3199	2	32.082	3	67 78 88 87 72 72 73 94 28 28 28	[214.1]EN[333.1]P[357.2]
2964	MSFKESGALGAEAYEGAF	11.8	66	932.9252	2	35.728	0.5	41 44 44 94 76 63 51 55 88 77 78 90 79 66 58 64 73 28	[365.1]K[344.1]L[128.1]E[638.3]
1512	LCAELGGEMAF	7.2	65	570.757	2	19.033	0.4	50 48 52 81 90 89 61 55 57 72 61	[287.1]ELG[535.2]
1497	SAEELQNMAF	6.5	65	1139.5049	1	18.87	1.1	39 39 46 97 96 62 68 69 77 56	[287.1]EL[591.2]
3769	TESQLAPGGWLF	7.8	65	653.3265	2	45.003	-1.3	86 90 89 49 50 52 67 79 59 57 74 28	TES[969.5]

3241	MVSQPGAEGGLLF	8.5	65	653.3287	2	39.028	-0.5	92 92 92 71 62 52 51 54 58 57 59 77 28	MVS[969.5]
1584	VVLMHEEPAVRAWPF	9.8	65	890.9649	2	19.823	1.2	28 40 52 59 97 99 94 93 94 70 65 49 39 68 28	[442.3]HEEPA[756.4]
2999	GTDKVEDFQEAF	7.8	65	693.3153	2	36.15	1.1	43 46 57 68 93 98 97 74 47 41 88 28	[401.2]VED[404.2]A[147.1]
3224	KPGGGGGLTMF	7.2	65	511.2589	2	38.83	-3	55 61 53 39 35 86 90 88 88 91 28	[396.2]GGLTM[147.1]
3089	YPQVAPTLGPPAYWY	9.8	65	574.9547	3	37.224	-1.7	67 67 46 56 54 51 61 80 92 92 85 84 51 46 41	[756.4]LGPPA[512.2]
1801	MVDFRGELCGGRW	8.5	65	509.242	3	22.135	5	28 45 45 51 70 76 94 96 92 85 58 74 28	[705.3]ELCG[399.2]
2955	LTENGEAVGARF	7.8	65	632.3203	2	35.615	0.4	70 75 85 77 90 82 75 49 47 42 57 28	[214.1]E[114.0]GE[601.3]
2084	VRVCDMLRKRPVANPF	10.4	65	476.0143	4	25.24	-0.4	28 75 70 71 73 60 49 33 37 41 67 86 85 84 91 87	[1353.7]VANPF
1185	MVGY(+79.97)LGRKF	5.9	65	1150.5459	1	15.498	-1.7	93 93 92 84 53 48 63 28 28	MVGY(+79.97)[601.4]
1166	HKVKSAGGVGGPTCGY(+79.97)	10.4	65	799.3647	2	15.307	1.8	28 71 71 88 82 71 59 55 72 92 86 71 60 52 51 28	[364.2]KS[284.1]GG[601.2]
2211	TTGALLGGLLLSGW	9.1	65	679.8884	2	26.724	1.3	80 82 84 93 95 65 63 57 59 61 46 45 47 28	TTGAL[896.5]
4315	AYELVFKGYLY(+79.97)	7.2	65	723.3407	2	51.71	-0.8	46 46 68 91 91 80 63 60 63 64 40	[363.1]LVF[704.3]
1800	M(+15.99)GMNKKENASTLW	8.5	65	763.3588	2	22.128	-2.3	29 38 42 93 98 91 91 83 72 68 55 53 28	[335.1]NKKEN[558.3]
1833	RLPCVAQDYVTAVNY	9.8	65	856.429	2	22.462	2.1	28 56 84 95 94 85 77 85 77 53 53 45 42 46 50	[269.2]PCVA[128.1]D[810.4]
3107	DADGKSFQF	5.9	65	507.7303	2	37.438	0.8	41 50 63 70 72 77 90 92 28	[573.2]FQ[147.1]
3657	T(+79.97)LGVAMGPVKY	7.2	65	608.2984	2	43.683	4.4	74 80 92 94 84 65 54 71 43 28 28	[181.0]LGVA[675.3]
2851	SKVADLWVW	5.9	65	552.2983	2	34.388	1	28 97 96 92 92 94 28 28 28	[87.0]KVADL[471.2]
2067	KLLDGHSGTAFRVKF	9.8	65	559.3136	3	25.048	-0.9	28 35 74 81 84 86 86 77 77 82 71 60 41 57 28	[354.3]DGHS[158.1]A[677.4]
1441	RTRSEGY(+79.97)AM(+15.99)GAQVTLQNVF	12.4	65	742.014	3	18.26	2.6	30 47 41 56 56 67 50 71 58 93 97 79 71 70 87 58 61 73 62	[1147.4]GA[328.2]L[488.2]
967	KPKGPNHFPFELLF	9.1	65	418.481	4	13.109	-1.7	28 53 55 60 73 61 67 73 92 91 79 81 62 28	[905.5]PF[129.0]L[260.2]
1695	WGPVDTAKPPGKGPDYVLW	12.4	65	1042.0334	2	21.006	-2.5	29 35 38 76 89 95 95 78 63 61 59 50 54 77 87 77 70 68 28	[439.2]DTA[661.4]D[561.3]
3141	LQSDDDMANQRLNF	9.1	65	833.8777	2	37.833	-0.5	39 39 39 61 94 98 92 91 82 67 57 44 46 55	[443.2]DDMAN[658.4]
2034	STKWAM(+15.99)QNMGGTNVGENKLW	13	65	1134.5328	2	24.669	2	29 29 35 37 71 69 81 84 91 91 89 75 66 62 60 70 71 74 81 28	[720.3]QNMGG[742.4]L[186.1]
2867	SADKVEDM(+15.99)KEAF	7.8	65	693.3153	2	34.581	-1.3	36 40 50 78 95 98 96 72 50 42 89 28	[401.2]VED[404.2]A[147.1]
2244	QTGSGLVAGAGF	7.8	65	532.773	2	27.111	1.6	46 46 71 72 63 64 88 84 80 58 76 28	[543.3]VAG[275.1]
1585	MGVRDGPKLVDASLVRW	11	65	633.6816	3	19.831	1.8	54 54 58 55 55 55 58 75 93 97 97 93 87 64 36 36 28	[840.4]LVDAS[554.3]
3149	VHVQSHGSWARF	7.8	65	705.8541	2	37.939	-1.2	28 99 97 97 97 99 28 61 55 54 28 28	[99.1]HVQSH[704.3]
4316	NQT(+79.97)TGCCS(+79.97)ACW	7.1	65	667.1765	2	51.722	0.6	56 54 53 53 61 85 81 74 74 89 28	[581.2]CC[238.0]C[186.1]
3212	GTFT(+79.97)KVAGNVDYKNLVY(+79.97)	11	65	1024.958	2	38.683	-2.1	30 29 30 36 58 57 94 89 78 90 96 96 51 42 66 85 69	[713.3]AG[114.0]VDY[355.2]V[243.0]
2855	LLKDEPATGSKLKEF	9.7	65	559.314	3	34.438	0.5	29 66 64 92 96 84 87 87 88 54 48 45 44 44 37	[354.3]DEPATG[732.4]
3030	NNHQESGALEQLSYGAF	11	65	932.9253	2	36.519	-1.4	36 36 37 79 82 78 66 70 93 90 61 69 66 72 68 62 28	[493.2]E[215.1]LE[766.4]

1653	FFKKPCGGRTHLAVHY	10.4	65	620.9955	3	20.553	1.7	28 58 58 44 49 40 37 50 62 84 90 95 80 75 90 89	[1020.5]THLA[99.1]HY
3399	KLLDPPSGTATATKLY	10.4	65	559.3145	3	40.763	1.5	30 31 60 74 83 76 69 75 84 88 81 73 66 57 53 28	[469.3]P[241.1]TAT[576.3]
3093	HLKFTEPGTGMMYFYF	10.4	65	656.9736	3	37.264	2	75 76 67 64 66 69 64 61 58 59 72 84 28 49 67 67	[1198.6]M[620.3]
4248	S(+79.97)HWGACLLAALRATW	9.7	65	579.276	3	50.87	-0.1	28 83 76 68 72 84 85 68 57 60 71 68 54 50 40	[167.0]H[314.1]CL[882.5]
1353	M(+15.99)GGQGPDAMLLW	7.8	65	646.2949	2	17.271	1.2	41 42 46 51 75 70 69 73 89 93 96 28	[729.3]MLL[186.1]
2245	LAGVGAYGLFF	7.1	65	1114.5927	1	27.12	-0.5	72 73 79 54 53 57 67 66 70 86 28	[801.4]F[147.1]
2811	KAPMAMLF	5.2	65	908.4756	1	33.923	2.6	34 59 68 85 72 74 93 28	[296.2]M[202.1]L[147.1]
1577	KNHLMESGSEEELTLSF	11	65	975.9568	2	19.748	-2.6	52 51 53 79 82 82 70 60 81 93 97 51 50 63 48 49 29	[492.3]ME[144.1]SEE[690.4]
4133	KSVVSLMRAMTERF	9	65	552.298	3	49.393	1.7	28 87 72 72 72 78 79 60 67 54 55 69 75 28	[128.1]S[1420.7]
2373	SYLSALPLGF	6.5	65	1067.5769	1	28.617	-0.2	28 28 86 83 81 83 81 70 73 28	[250.1]LSALP[317.2]
1267	NRVTPDSAAY	6.5	65	1093.5282	1	16.36	0.8	79 88 80 76 67 51 45 45 82 28	[114.0]RV[471.2]A[163.1]
2103	LLELCGAGVAF	7.1	65	546.7914	2	25.463	-0.1	89 89 83 51 47 48 71 62 63 72 28	LLE[718.3]
1631	YSKNHDLTEVHARRY(+79.97)	9.7	65	656.9734	3	20.326	-0.9	48 46 48 48 81 73 75 87 74 67 67 62 59 61 64	[492.2]H[228.1]T[991.4]
1549	LYPPVVGCPVKW	7.7	65	679.3713	2	19.441	1.3	84 83 95 96 77 65 48 46 48 70 28 28	LYPP[868.5]
1524	KQQYEEGKAELEGSLKELKW	12.9	64	798.4155	3	19.166	-1.1	35 39 38 45 43 39 48 48 71 84 94 92 81 81 84 91 87 75 77 28	[1061.5]ELEGSLKE[427.3]
3563	KPEKKAEVPKAGAHW	9.7	64	559.3143	3	42.603	0.4	57 56 54 58 61 68 63 59 46 55 88 90 87 88 28	[1134.7]AGAH[186.1]
3153	QLLPCLRREPKHW	8.4	64	419.7369	4	37.975	2.8	34 35 37 71 73 72 75 64 72 92 88 90 28	[1108.6]PKH[186.1]
1824	KPTAVEDAGAVEGLATPYY	12.2	64	976.4869	2	22.373	0.9	56 56 44 57 72 81 90 75 70 83 73 66 47 49 58 63 73 74 28	[496.3]ED[128.1]A[993.5]
2173	M(+15.99)MAVSTLGGVKPAVF	9.7	64	762.4026	2	26.282	1.2	84 87 96 97 74 53 50 50 56 70 67 58 45 41 31	M(+15.99)MAV[1056.6]
2693	NQQWSLLGEFPQLY	9	64	574.9545	3	32.499	0.2	50 49 55 54 51 68 92 84 69 70 71 59 74 47	[756.4]LG[777.4]
3230	YMAQESQLAGEAYEKF	10.3	64	932.9264	2	38.897	1.8	45 44 51 68 93 91 70 57 49 61 92 81 70 55 46 48	[493.2]ES[369.2]EA[567.3]
3965	GTDKVEDFQEAF	7.7	64	693.3145	2	47.351	-0.1	42 47 60 74 94 98 91 60 42 39 92 28	[401.2]VED[404.2]A[147.1]
1367	LKLNVQATGSLKEQF	9.7	64	838.4708	2	17.437	-2	28 62 72 65 84 69 91 82 67 63 73 45 56 42 61	[468.3]V[128.1]AT[789.4]
2725	LTENVSFGLHF	7.1	64	632.3202	2	32.88	-2.8	74 80 90 54 55 57 85 70 62 48 28	[113.1]TE[300.1]F[454.2]
3245	SKVKVPKVADLLDY(+79.97)	9	64	552.2978	3	39.076	-1.7	28 60 57 47 52 54 71 89 91 91 92 77 57 28	[766.5]VADL[471.1]
3339	ASDQVEDFKEAF	7.7	64	693.3138	2	40.132	-1	48 54 67 59 91 97 64 64 55 50 89 28	[401.2]VE[519.2]A[147.1]
1604	AWLVEECTSAGEAVLW	10.3	64	882.4189	2	20.03	-0.1	40 40 50 89 90 67 60 56 74 81 75 67 56 58 92 28	[370.2]VE[420.1]A[356.2]L[186.1]
2651	DDGYPDVAAVRTMAW	9.6	64	556.2546	3	31.979	-2.2	74 77 56 56 69 72 83 60 56 59 84 69 63 50 28	[662.2]V[241.1]R[489.2]
3877	MTPPKSF	4.5	64	404.2065	2	46.281	-1.4	78 71 69 64 63 51 51	[788.4]
2809	QLSDDDMKGQRPNY	9	64	833.8765	2	33.901	-1.9	44 43 44 56 93 98 93 64 74 57 76 50 49 53	[443.2]DDM[843.4]
3096	SNQEDFKF	5.1	64	1014.4537	1	37.306	1	61 57 71 87 69 68 68 28	[329.1]E[537.3]

1231	SRKGNAASSPF	7.1	64	561.2899	2	15.981	2.4	32 32 43 75 66 67 72 90 97 98 28	[684.4]SSP[147.1]
2724	ASFPLVVAGNVDYKNLDKY(+79.97)	12.2	64	1097.0327	2	32.869	-2.1	47 51 70 70 59 78 96 93 65 52 65 96 96 53 47 65 37 37 34	[614.3]VA[270.1]DY[841.4]
2972	LLHKTAVPRVNY(+79.97)F	8.3	64	546.624	3	35.822	0.6	46 56 51 44 46 55 63 77 85 84 71 72 76	[859.5]RV[504.1]
4173	YATTNDGVRPVAF	8.3	64	705.8541	2	49.898	-0.1	63 52 44 43 45 65 86 86 86 59 61 61 77	[665.3]GVR[414.2]
949	SVFNAARY	5.1	64	464.2379	2	12.884	0.4	78 78 83 51 58 54 80 28	[186.1]F[256.1]R[163.1]
1061	GEAALY	3.9	64	623.3036	1	14.204	0.2	46 46 78 92 92 28	[257.1]AL[163.1]
1064	RERPLEPPPVKGRLPY(+79.97)	10.3	64	662.0214	3	14.223	-1.5	28 49 37 48 56 80 79 71 53 60 76 83 89 90 91 28	[651.4]E[518.3]GRLP[243.0]
3943	YNGLPPF	4.5	64	404.206	2	47.074	1.5	82 80 83 72 73 28 28	YNG[454.3]
1545	FLALGCNGF	5.8	64	471.2315	2	19.395	0.8	28 93 87 77 77 64 68 28 51	[147.1]LA[591.2]
1394	DVEEQPGLGRF	7.1	64	623.8069	2	17.747	0.4	83 82 79 66 47 63 66 64 60 61 28	DV[1013.5]
1032	VKGNDACGSNVF	7.7	64	605.7811	2	13.898	2.4	46 45 45 52 65 72 76 86 85 72 91 28	[687.3]GS[114.0]V[147.1]
1609	VVRGLPLGDKLNF	8.3	64	714.4221	2	20.085	0	28 71 71 76 78 80 59 38 40 44 75 87 79	[524.3]P[526.3]N[147.1]
1299	CHMANGVWGPTHEF	9	64	793.3397	2	16.685	2.9	28 66 59 59 61 81 90 94 92 69 52 46 64 28	[556.2]GVWG[611.3]
2169	NQKVSAELGGHASVYY	10.3	64	574.9536	3	26.229	1	36 35 40 55 53 53 72 89 90 87 82 77 74 74 71 28	[756.4]LGGH[583.3]
1431	RVFDKEGNGTVFPSW	9.6	64	869.9351	2	18.144	4.7	33 72 62 86 90 86 66 48 60 60 84 67 63 50 28	[402.2]DKE[329.1]V[517.2]
2581	T(+79.97)VAELVDLLY	6.4	64	608.2983	2	31.135	-1.2	60 59 58 64 73 84 62 62 88 28	[593.2]V[228.1]L[163.1]
1051	KTALTSTTKHLNAKRY	10.2	64	611.6838	3	14.099	1.6	35 39 49 65 75 58 46 78 91 93 92 71 71 61 63 28	[803.4]KHL[632.3]
950	KKSSAAHLPTTW	7.7	64	442.9092	3	12.893	-2.5	45 31 58 72 72 77 67 67 77 73 73 50	[1307.7]
1953	S(+79.97)EKPPTFPY	5.8	64	573.2504	2	23.769	1.9	82 93 91 97 95 28 28 28 28 28	S(+79.97)EKPP[508.2]
3002	RRDLVPTNKKVKYY	8.9	64	594.0116	3	36.181	-1.3	28 60 40 48 61 83 82 88 97 94 74 53 53 28	[639.4]PTNKK[553.3]
2459	KLLDAPLGTATATKEF	10.2	64	559.3141	3	29.67	0.9	31 31 69 80 75 67 65 73 90 94 85 62 57 47 48 39	[354.3]D[338.2]TAT[576.3]
3132	YAAPPDVAGNVDYQCVKY	11.5	64	986.9597	2	37.724	0.7	29 29 36 86 76 79 89 94 70 55 58 89 94 46 58 58 67 28	[305.1]P[212.1]VA[270.1]DY[621.3]
1059	TRSSTKGY	5.1	64	450.2322	2	14.174	-1	51 56 75 89 71 71 67 28	[344.2]S[449.2]
1940	MLFETF	3.8	64	787.3691	1	23.625	-0.5	28 99 99 99 28 28	[131.0]LFE[248.1]
2318	KPGKGTAVVNKERPLW	10.2	64	594.0117	3	27.957	-1.1	53 58 49 59 60 58 65 86 87 85 94 88 52 53 37 28	[639.4]VVNKE[552.3]
1313	LMAPSKPKKPNRW	8.3	64	518.2983	3	16.855	1.5	92 90 74 70 54 53 66 88 87 52 33 34 29	LM[480.3]KK[553.3]
1338	LLQPCLALKEPKHW	8.9	64	419.7391	4	17.12	-0.4	50 48 44 60 63 71 52 50 52 87 95 92 93 28	[979.6]EPKH[186.1]
2220	MVLRGKTRHF	6.4	64	622.8557	2	26.823	-0.3	28 81 83 83 84 87 59 46 54 28	[131.0]VLRGK[541.3]
2105	MLLPTLDPF	5.7	64	1046.556	1	25.494	-2.9	91 91 81 54 51 53 52 68 28	MLL[670.3]
1927	LKLDWARVGAYDMFVEGLRVF	13.4	64	829.1055	3	23.469	-1.5	29 51 56 56 53 78 59 70 52 52 69 84 76 95 95 88 60 58 59 59 28	[1272.7]D[131.0]FVE[572.3]
1109	MEPVKGW	4.5	64	846.4202	1	14.694	2.8	28 97 97 83 53 56 28	[131.0]EPV[371.2]

2778	MVSLPAAGGQLDF	8.3	64	653.3277	2	33.535	-2.1	92 92 92 36 40 49 89 89 68 41 46 59 28	MVS[281.2]AG[560.3]
3051	TQQALTAGAGF	7	64	532.7731	2	36.763	1.8	50 47 50 71 75 92 86 84 56 56 28	[541.3]TAG[275.1]
3963	FLSKSCGFGHGAHVLY	10.2	64	574.9511	3	47.317	-1.8	56 51 45 49 61 66 76 82 90 81 78 75 75 69 28 28	[722.3]FGH[640.3]
1751	LTRGFPTF	5.1	64	938.5096	1	21.611	0.3	92 91 87 77 75 28 28 28	LTR[549.3]
3163	YMAQESGALQEAYEKF	10.2	64	932.9246	2	38.097	-0.1	35 35 37 79 93 64 52 52 91 84 91 67 63 57 53 57	[493.2]E[215.1]LQE[638.3]
2271	VM(+15.99)VMPAPAACVGHF	8.9	64	723.34	2	27.406	-0.7	64 64 73 95 85 75 55 62 51 50 65 88 28 28	[345.2]MP[512.2]G[284.1]
2789	KLLPPFATVAPAQHW	9.5	64	559.3146	3	33.667	-1.4	31 35 78 64 64 64 83 78 55 52 67 92 62 77 45	[695.4]A[368.2]A[451.2]
2969	HVHKLAACSGMVPTVAYLW	12.1	64	695.0252	3	35.792	-0.2	28 50 41 43 64 68 70 64 51 56 86 80 78 82 54 54 81 86 64	[1003.5]MV[97.1]T[170.1]YL[186.1]
3890	MRKSNSAGVGKPF	8.3	64	460.248	3	46.438	2.4	87 68 54 69 53 66 60 55 57 83 69 71 28	M[799.4]G[372.2]
3961	T(+79.97)CNAAY(+79.97)Y(+79.97)	4.5	64	523.1121	2	47.295	-0.5	71 64 46 51 90 91 28	[469.1]AY(+79.97)[243.0]
2379	FMPAGALAVGWGY	8.3	64	670.3268	2	28.69	-2.9	28 92 87 81 50 44 48 89 90 86 42 44 36	[147.1]MPA[241.1]AVG[406.2]
4209	TLPHALVPPTSSLY(+79.97)F	9.5	64	574.9541	3	50.362	-1.5	30 55 60 58 61 60 61 86 92 92 97 60 60 45 28	[731.4]PPTS[590.2]
1074	RVM(+15.99)DEQGNLKF	7	64	676.8353	2	14.331	0.5	28 94 94 94 70 54 79 56 47 49 28	[156.1]VM(+15.99)D[816.4]
3542	MDAVM(+15.99)VNGVAKLASGALKEY	12.7	64	695.0251	3	42.351	2.3	44 46 48 48 43 36 35 40 75 81 89 94 93 92 87 84 72 55 55 42	[932.4]AKLASGA[533.3]
2079	QNHLCALSSVPF	7.6	63	658.3269	2	25.182	0.3	53 51 58 69 82 77 77 82 76 76 28 28	[492.2]C[184.1]S[430.2]
3822	M(+15.99)VAPQCTSVAKLAGSALKEY	12.7	63	695.0245	3	45.63	1.4	82 68 67 62 45 51 48 50 51 51 90 92 82 68 62 59 62 60 62 46	M(+15.99)[856.4]KLA[748.4]
4212	MVSKGGLGAEPPY	8.2	63	653.3273	2	50.407	-2.5	92 92 92 84 58 53 66 60 62 77 28 28 28	MVSK[841.4]
1381	MQQSQSLEY	5.7	63	1113.4897	1	17.603	1.5	55 51 81 93 56 60 61 81 28	[259.1]QS[328.2]E[163.1]
1371	FMAKTHKF	5.1	63	505.267	2	17.478	-2.1	93 89 61 43 46 57 85 28	FM[437.2]K[147.1]
2633	GESNADFKF	5.7	63	1014.4531	1	31.768	0.4	89 89 80 55 57 55 57 57 28	GES[722.3]
212	QEPHY	3.2	63	337.15	2	2.834	-1.9	28 28 86 86 86	[257.1]PHY
2276	LGPGMSAGAWGGVAQW	10.1	63	772.8677	2	27.467	-2.1	29 30 56 56 55 54 59 65 89 83 81 82 84 66 72 45	[670.3]AWGGV[385.2]
1069	EGATNLQEY	5.7	63	512.7332	2	14.279	1	45 45 57 55 51 59 75 94 84	[713.3]EY
1467	GLNSAPDF	5.1	63	820.387	1	18.544	4.2	66 64 78 73 75 91 28 28	[442.2]P[262.1]
1472	LGNSAMPF	5.1	63	836.3967	1	18.594	-0.5	76 76 81 92 94 28 28 28	[170.1]NSA[375.2]
1513	WRPTTFAKGDGDFHRW	10.1	63	659.6569	3	19.042	2.5	36 47 39 63 65 73 75 56 56 59 91 86 86 58 71 44	[1159.6]GDF[479.2]
4129	M(+15.99)PPKAPLGTCLKKLY	9.5	63	559.3136	3	49.339	-0.7	28 81 84 83 69 56 53 58 71 72 78 83 59 37 28	[147.0]PPK[655.3]K[404.2]
4028	T(+79.97)S(+79.97)ACGGFY(+79.97)	5.1	63	523.1138	2	48.101	2.8	28 69 69 73 74 78 83 28	[636.1]F[243.0]
2197	M(+15.99)PPKALLTGSLKKEF	9.5	63	559.3212	3	26.565	2.4	28 43 75 79 85 87 89 95 88 57 47 45 42 42 37	[469.2]ALLTG[732.4]
1889	TLPNLF	3.8	63	704.3978	1	23.062	0.2	36 81 93 77 28 61	[101.0]LP[374.2]
1317	DLLSSLMGFPPY	7.6	63	447.2248	3	16.887	-0.2	29 40 42 47 78 65 67 82 87 92 92 28	[759.4]GFPP[163.1]

2005	ALLSPGM(+15.99)DAGSLTLY	9.5	63	762.8824	2	24.343	-2.6	54 63 67 70 57 60 80 53 51 72 65 66 70 80 28	[538.3]M(+15.99)[544.2]L[163.1]
1723	EPGSPCGSASNT(+79.97)W	8.2	63	686.7466	2	21.303	-1.1	43 43 51 73 75 71 72 85 88 77 45 54 36	[627.2]SA[568.2]
2744	WEARQANEGVAQW	8.2	63	772.8673	2	33.122	2.1	55 53 61 65 53 84 55 64 66 83 64 69 42	[670.3]A[300.1]V[385.2]
1911	WPMPKYDS(+79.97)CAVVLVVW	10.1	63	986.9608	2	23.291	2.2	28 78 52 68 75 85 50 78 94 92 93 95 28 28 28 28	[639.3]Y[282.0]CAVV[497.3]
1891	GTATAVLVWW	6.3	63	1103.5883	1	23.077	-0.1	64 64 76 72 73 93 99 28 28 28	[401.2]VL[471.2]
2455	KSVSKSATLLPALPY(+79.97)	9.4	63	552.3	3	29.615	2.3	28 93 93 93 74 54 54 70 73 61 60 52 52 53 28	[128.1]SVS[1234.6]
2922	KLLDPEATVAKSKEF	9.4	63	559.3143	3	35.234	1.1	30 35 79 87 92 96 94 91 51 43 51 60 43 43 40	[354.3]DPEAT[789.4]
1322	AKMYTASVLY	6.3	63	1146.5874	1	16.942	0.9	66 67 86 55 66 71 75 82 28 28	[199.1]M[422.2]V[276.1]
4326	DGACCY	3.8	63	316.0966	2	51.85	1.4	83 82 75 79 28 28	DG[440.1]
1153	HRESPPAF	5	63	940.4616	1	15.17	-2	28 98 95 95 98 28 28 28	[137.1]RESP[315.2]
2241	ACHFAGVYF	5.7	63	1014.4529	1	27.068	2.8	28 87 87 86 77 69 71 28 28	[71.0]CHF[537.3]
2041	LANPKGCRAF	6.3	63	1076.5665	1	24.751	-0.3	60 58 69 78 82 67 57 59 65 28	[395.2]K[534.2]
2655	QTGSAVVQAGF	6.9	63	532.7725	2	32.019	0.7	51 51 79 77 55 57 76 57 72 83 28	[841.4]G[147.1]
4247	VFVMPDACRNFF	7.5	63	723.3381	2	50.858	-0.9	28 28 98 96 88 80 79 60 59 53 28 50	[246.1]VMPD[738.3]
3762	ESAELGGKMW	6.3	63	554.2605	2	44.922	-0.1	57 62 75 96 96 79 73 29 28 28	[287.1]EL[559.3]
972	T(+79.97)SPEVEKPRVF	6.9	63	684.8318	2	13.176	0.4	28 73 71 64 70 74 75 82 91 28 28	[850.4]PR[246.1]
3945	M(+15.99)VDVPF	3.8	63	723.338	1	47.095	-0.2	97 97 97 28 28 28	M(+15.99)VD[343.2]
2070	YPGLGSAVGANW	7.5	63	596.2941	2	25.089	1.3	83 88 68 67 57 50 46 52 66 54 56 60	YP[912.4]
3507	MVSQPQEGGLLF	7.5	63	653.3303	2	41.945	2	91 90 89 57 56 52 47 44 52 54 86 28	MVS[709.3]L[147.1]
2675	DVRLLPLRTF	6.3	63	615.3717	2	32.276	-0.3	62 58 58 84 87 65 59 57 63 28	[370.2]LL[614.4]
2583	KPGNAATPTNKRLLLW	10	63	594.0115	3	31.155	-1.4	49 45 39 37 43 48 58 84 84 85 95 93 92 87 28 28	[639.3]PTNKRLL[299.2]
2940	YCPGFACACDGCHGGFNY(+79.97)	11.3	63	655.5476	3	35.438	1.2	44 47 54 51 50 66 75 80 74 68 70 74 77 86 57 45 46 55	[741.3]A[515.1]G[561.2]
2294	YSPAKLHLRKATAGY	9.4	63	419.7371	4	27.682	-0.7	28 81 77 74 50 45 39 39 35 55 68 83 80 82 95	[163.1]S[1014.6]TAGY
2340	SADKVEDM(+15.99)KEAF	7.5	63	693.3144	2	28.226	-2.6	34 38 52 67 86 98 92 64 53 45 88 28	[401.2]VED[404.2]A[147.1]
3559	TWELELMW	5	63	554.2627	2	42.55	0.1	29 76 62 93 51 56 59 73	[416.2]L[559.2]
2121	VVKKANPTNKEVPGLW	10	63	594.0104	3	25.669	2.9	28 49 59 69 67 55 72 74 80 91 87 87 61 49 38 28	[837.5]NKEV[453.2]
1496	FNHMAADVCLVSAAMQRY(+79.97)	11.3	63	1053.9547	2	18.858	2.9	62 42 43 59 59 48 47 55 68 70 72 91 91 93 87 51 41 40	[1200.5]SAAM[527.2]
2640	YGRAAPLQAREF	7.5	63	460.2466	3	31.849	1.9	51 48 58 55 58 62 73 62 76 87 88 28	[927.5]RE[147.1]
2894	EMKVAVVLGHGAEGYY	10	63	574.9546	3	34.895	-1.6	37 36 40 71 52 49 71 94 95 76 66 77 67 63 72 28	[756.4]LG[777.3]
4333	HVVWGDCLHVVF	7.5	63	705.8546	2	51.936	2.2	28 95 86 76 75 84 93 95 28 28 28 28	[137.1]VV[243.1]DCL[482.3]
2947	YTAKSTANTHVAF	8.1	63	705.8547	2	35.522	0.8	36 42 53 73 55 47 48 55 60 82 85 85 85	[937.5]HVAF

2449	T(+79.97)LGVAGGGKRGY	7.5	63	608.2986	2	29.544	1.6	69 72 87 86 83 74 61 48 61 47 28 28	[294.1]GVA[675.3]
4314	CCDLACPVEF	6.3	63	550.2169	2	51.698	0.8	28 75 71 78 80 74 66 60 60 28	[434.1]A[575.2]
1789	CFEETDLHMVPF	7.5	63	734.3189	2	22.007	1.5	28 28 99 97 90 69 69 85 62 45 45 28	[250.1]EET[228.1]H[474.2]
3590	SVSNAAGDFF	6.3	63	1014.4529	1	42.903	0.2	88 88 88 49 62 69 45 45 59 28	SVS[722.3]
1326	DLLTGAVFF	5.6	63	491.7659	2	16.989	0.2	28 30 84 93 69 62 67 96 28	[228.1]LT[227.1]F[147.1]
1675	DEKGLYNY	5	63	1001.4582	1	20.792	0.8	78 74 82 76 43 43 43 58	[244.1]K[610.3]
2066	YLTKLMTARAEKF	8.1	63	524.6238	3	25.038	-2.7	44 46 63 70 62 61 72 88 88 51 45 48 67	[850.5]AR[475.2]
3763	YLVTALM(+15.99)TLLAKHW	8.8	63	559.3137	3	44.932	1.5	28 51 46 46 55 56 57 89 87 85 85 77 78 28	[807.4]TLLA[451.2]
1194	KTDLPVVAFVGRAYTQF	10.6	63	638.0162	3	15.6	0.8	43 42 55 80 94 65 66 65 80 80 86 76 69 41 34 34 44	[344.2]LP[269.2]FVG[766.4]
2279	VKKKAAHLATY	6.9	63	615.3713	2	27.51	-0.9	35 35 60 86 86 68 68 82 68 66 28	[355.3]KA[208.1]L[335.1]
2516	WLKLVPTNKEVGLPW	9.4	63	594.011	3	30.344	1.6	33 33 38 59 62 84 82 85 93 90 88 65 52 38 28	[639.4]PTNKEV[453.2]
1543	LETPAVVPAF	6.2	62	522.2908	2	19.377	-2.6	65 63 73 75 67 70 63 57 57 28	[1024.6]
1359	KQVNGVAAACVPANGNF	10.6	62	830.4151	2	17.336	-2.5	62 53 56 60 53 45 59 76 80 81 87 71 64 62 61 50 33	[767.4]ACV[600.3]
2865	KPDGKGGPTNKRLLLW	10	62	594.0115	3	34.548	-1.5	51 51 41 43 45 57 62 71 74 84 94 89 88 86 28 28	[837.4]NKRLL[299.2]
2022	WELYKAVRPLF	6.9	62	474.602	3	24.54	-1.7	53 52 43 56 66 91 78 66 73 76 28	[719.4]A[612.4]
2401	NTTVGGGVAQW	6.9	62	545.2699	2	28.962	0.1	50 49 67 69 59 53 70 73 67 74 50	[1070.5]
2097	MLPGAKACMW	6.2	62	554.2613	2	25.391	0.4	61 55 61 72 75 53 59 74 82 28	[771.4]M[186.1]
2387	MVWMHGYSKAFYF	8.1	62	556.2548	3	28.795	-2.9	28 28 68 71 54 78 79 73 72 80 60 57 57	[1119.5]A[457.2]
2007	M(+15.99)VALFFTSPY	6.2	62	596.2927	2	24.363	2.3	40 40 40 88 78 75 73 76 80 28	[317.1]L[482.2]P[163.1]
1038	LESTHGKSLF	6.2	62	559.794	2	13.961	-2.8	84 57 61 74 75 75 62 46 42 41	L[986.5]
3146	VMPFLT(+79.97)CCPDGMAEDKY	10.6	62	1000.392	2	37.895	2.9	86 86 86 50 58 42 55 84 87 62 43 43 47 52 60 61 45	VMP[544.2]CP[909.4]
1323	FFHNSAAVGSRY	7.5	62	678.3278	2	16.952	-0.5	28 92 80 60 54 56 89 94 66 54 40 28	[147.1]FH[272.1]AV[463.2]
2591	KLLDAPETGSKLKEF	9.3	62	559.3149	3	31.261	2.2	30 32 74 84 77 65 82 93 87 58 50 49 51 52 41	[354.3]D[168.1]ETG[732.4]
2658	LLKDAPLGTATATKEF	9.9	62	559.3137	3	32.062	0	31 57 52 74 71 64 64 74 87 92 80 57 48 42 50 43	[807.5]TAT[576.3]
2919	MFKCKVKLRTW	6.8	62	480.6049	3	35.196	-0.8	28 28 41 54 60 80 86 90 90 91 28	[637.3]VKLRT[186.1]
2639	LWAMSPHKAGAAPNVAYLW	11.8	62	695.0247	3	31.838	0.7	40 39 45 48 62 68 60 55 60 58 71 72 52 48 63 75 87 93 75	[1601.8]YL[186.1]
4125	ETAMPMTHFLVGM(+15.99)W	8.7	62	556.2538	3	49.285	2.6	53 55 61 59 61 59 63 83 83 93 63 44 56 30	[761.3]HFL[489.2]
2335	FTVLTMF	4.3	62	858.4425	1	28.162	-0.6	43 43 43 91 90 92 28	[347.2]LTM[147.1]
961	LLHSSATPRY	6.2	62	382.2087	3	13.034	0.6	62 62 62 82 49 42 53 85 91 28	[363.2]S[259.1]PR[163.1]
2898	M(+15.99)MSKESGALKESDAFAF	10.5	62	932.9263	2	34.944	-0.1	38 42 42 62 85 81 78 81 93 92 92 55 40 44 47 45 28	[493.2]ES[57.0]ALKE[638.3]
2543	KKKVLTASHAF	6.8	62	615.3711	2	30.685	-1.3	28 44 64 67 76 69 63 67 86 85 28	[855.6]HA[147.1]

4320	YLLFCHERPVY(+79.97)F	7.4	62	556.2553	3	51.774	1.6	29 39 43 65 86 86 68 50 50 74 74 74	[536.3]CH[871.4]
2987	LLKDPEATGSKLKEF	9.3	62	559.3141	3	36.007	0.8	30 41 38 48 92 89 88 87 83 75 64 62 43 43 37	[469.3]PEATG[732.4]
1745	LTMDAKLF	5	62	469.7544	2	21.546	0	96 96 96 41 40 40 54 28	LTM[574.3]
893	KRSLTHGTKNY	6.8	62	435.5738	3	12.196	-0.1	49 43 45 48 84 87 91 76 62 63 28	[484.3]THG[506.2]
1442	RRAAPYGFKVVAEY(+79.97)	8.7	62	569.6174	3	18.269	-2.1	49 51 65 79 78 66 64 64 84 91 59 40 41 29	[918.5]KV[542.2]
2389	RWM(+15.99)GAHLLAPVVW	8	62	517.9465	3	28.814	-0.2	34 63 51 77 62 46 43 85 91 94 96 28 28	[867.4]LAPV[285.1]
2018	QSKRCAAVGVF	6.8	62	583.3119	2	24.493	1.6	44 50 47 60 60 66 66 73 86 94 28	[843.4]GV[147.1]
2624	T(+79.97)CCAMSM(+15.99)Y	5	62	503.1325	2	31.65	-0.8	28 28 28 95 94 94 95 28	[387.0]AMSM(+15.99)[163.1]
1130	LEVRGGAEKLGAW	8	62	693.3788	2	14.915	-2.3	88 73 63 63 69 63 64 65 66 56 47 50 28	L[1253.7]
3246	TTVEVECDPNARFW	8.7	62	556.2552	3	39.088	-1.1	49 54 53 48 46 64 76 78 69 68 87 72 67 28	[1087.4]A[489.2]
1218	TVDVLGTVNNKFF	8	62	485.2619	3	15.841	1.8	42 46 80 84 69 68 77 77 64 55 52 55 28	[200.1]DV[1020.5]
817	SCNPAMF	4.3	62	385.1531	2	11.246	-2.2	57 65 60 91 74 41 41	[304.1]P[349.1]
3261	T(+79.97)VKNAGGGRLY	6.8	62	608.2987	2	39.251	1.7	28 61 65 54 83 72 62 66 74 80 28	[522.2]A[327.2]L[163.1]
2729	MDVLDMTYLPTF	7.4	62	723.3386	2	32.935	0.6	28 28 28 78 71 66 75 83 93 85 71 28	[805.3]YLP[248.1]
3637	SADKVEDM(+15.99)KEAF	7.4	62	693.3143	2	43.448	-2.8	36 39 52 71 82 96 96 71 41 37 84 28	[401.2]VED[404.2]A[147.1]
1779	DVPLGLFGLPF	6.8	62	587.8287	2	21.898	-0.3	28 28 78 69 78 88 75 63 62 76 28	[481.3]L[561.3]
1209	VTKFKLVTKDKY	7.4	62	735.4394	2	15.743	-0.7	46 50 78 92 78 87 53 46 48 48 60 47	[328.2]F[128.1]L[734.4]
3228	SNKEDFQF	4.9	62	1014.4537	1	38.88	1	28 70 70 70 88 77 58 28	[458.2]D[422.2]
4249	WEARQANADVAQW	8	62	772.8669	2	50.881	1.7	62 59 43 46 46 82 55 61 61 83 70 73 52	[670.3]A[300.1]V[385.2]
2672	VEHKEYGAMAFAF	8	62	750.3543	2	32.231	1.8	37 35 46 68 83 64 86 91 79 78 70 28 28	[493.3]E[163.1]GA[567.3]
2450	LRVVCEGALKAVVFLY	9.8	62	594.0114	3	29.553	0.3	56 51 37 37 37 67 68 76 79 79 84 94 97 41 38 34	[1068.6]AVV[423.2]
3540	RVFAGAGPNGKCFVHY	9.8	62	574.9545	3	42.331	-2.5	29 50 41 57 75 69 63 68 67 67 64 60 62 61 72 72	[1703.8]
3547	DVKVRDQLCRF	6.8	62	460.2466	3	42.417	-0.6	34 33 34 68 77 72 64 86 87 88 28	[840.4]LCR[147.1]
3673	YFKFPHRRLAGSAMCLW	10.5	61	695.0248	3	43.877	4.1	28 65 65 38 47 78 88 75 75 82 62 57 60 61 60 67 28	[819.4]R[269.2]A[748.3]
4253	DDAELM(+15.99)AAAPGTFRW	9.2	61	556.2547	3	50.938	-2	65 68 58 46 38 43 62 83 72 67 76 89 92 28 28	[761.3]A[225.1]TF[342.2]
3782	WGCVHGLVLY	6.1	61	573.7933	2	45.152	2.7	64 52 52 61 76 77 83 88 28 28	[639.3]LV[276.1]
3525	M(+15.99)MSKNMVLEAGLHSDW	9.8	61	932.9245	2	42.147	1.4	48 49 49 55 61 63 82 90 89 81 76 72 74 28 28 28	[738.3]VLEA[695.3]
2327	LLKPEARTAEPKHW	8.6	61	559.3145	3	28.076	0.7	34 66 58 65 44 50 63 91 93 61 62 63 76 28	[807.5]TA[677.3]
1796	Y(+79.97)CVMAMGTGGPLPGGLLTWW	12.3	61	1095.4834	2	22.078	-1.2	28 77 68 92 93 68 61 55 58 68 87 91 72 58 51 51 53 32 28 28	[445.1]MA[403.2]PL[910.5]
1434	HLTHGSGCKAFATTLF	9.8	61	564.2849	3	18.183	1.8	61 58 62 63 81 81 77 78 55 48 52 76 74 48 31 28	[488.2]GS[1039.5]
2715	KNRLKPTNKEVGPLW	9.2	61	594.0119	3	32.75	-0.8	42 43 42 43 62 80 81 82 93 86 84 58 50 40 28	[639.4]PTNKEV[453.2]

1572	RAVDTAPQGAPNPDYVLW	11	61	985.4921	2	19.689	0.2	35 37 40 71 95 95 66 43 59 52 44 42 57 78 84 84 87 28	[441.2]TA[776.3]YVL[186.1]
3317	QLLGGARATGPLAPAPW	10.4	61	559.3141	3	39.908	0.1	38 38 46 56 47 47 73 93 92 87 72 74 91 88 32 32 28	[695.4]ATG[210.1]AP[354.2]
1190	SLKNGPVGVFPF	7.4	61	421.2357	3	15.55	-1	30 30 31 34 75 78 90 90 83 80 80 28	[596.3]VGVFP[147.1]
2575	RWTTALYLAHF	6.7	61	460.2466	3	31.066	-0.8	41 66 53 61 64 77 74 70 67 68 28	[1359.7]
1100	CTKAVGKAKAMSTCY	9.2	61	781.3784	2	14.591	-2.7	31 31 33 96 95 91 89 91 49 57 57 56 55 28 53	[332.2]AVGKA[784.3]
2391	MTLGVTSFW	5.5	61	521.2568	2	28.836	-0.9	49 56 63 83 69 66 67 67 28	[345.2]G[620.3]
1640	KYAPPPVWLKNF	7.4	61	487.2747	3	20.416	0.1	36 41 50 70 69 89 94 90 53 40 53 43	[556.3]PVW[502.3]
3049	NTVNGPALVALDLPNF	9.8	61	552.298	3	36.74	-0.2	51 51 52 59 53 56 83 88 91 67 60 52 58 48 53 51	[582.3]ALV[770.4]
4137	QAEM(+15.99)FSQLKEYQAEF	9.2	61	932.9264	2	49.435	1.8	55 60 63 74 54 73 55 92 86 87 72 34 38 39 28	[837.3]LKE[638.3]
1884	KSVLLCPEVYKMAAANLVT(+79.97)F	12.3	61	759.7183	3	23.011	-0.8	37 37 45 52 54 52 66 68 60 59 55 41 48 53 60 80 85 87 88 87	[1603.8]NLVT(+79.97)F
2142	RWLADWKVFSSKEGKAATKAGSLKEALY(+79.97)	17.2	61	1074.2209	3	25.922	-2.2	28 53 40 45 46 57 59 52 65 84 67 67 88 75 76 87 67 59 58 60 60 54 55 84 86 49 48 32	[1201.6]S[215.1]E[185.1]A[628.4]KE[427.2]
4146	T(+79.97)KVCKYDVGNASAPRHF	10.4	61	986.9601	2	49.554	1.6	82 54 39 50 70 82 73 78 58 51 83 56 49 49 55 74 28	T(+79.97)[458.3]Y[385.2]A[695.4]
2880	YATKSTAVASGHAF	8.6	61	705.8545	2	34.734	0.4	94 92 74 54 48 64 68 74 46 46 44 50 68 28	YA[1157.6]
1082	LRKPM(+15.99)RGHERKKSVY	9.2	61	951.0336	2	14.407	-2.6	67 70 45 53 44 86 61 60 79 96 72 29 29 61 61	[641.4]R[323.1]R[605.4]
1157	REEGKAPGATFPF	8	61	703.855	2	15.22	-2.5	28 94 73 67 62 58 79 83 61 60 67 28 28	[156.1]E[482.2]G[563.3]
776	MS(+79.97)FGNCADF	5.5	61	536.17	2	10.686	1.6	28 66 73 84 75 80 84 28 28	[445.1]G[114.0]CA[262.1]
3024	QPLSGALEGSRAM(+15.99)NLY	9.8	61	574.9543	3	36.442	0.3	57 60 50 49 44 47 54 67 78 69 68 81 57 55 79 57	[1095.6]A[537.2]
1242	RTDVYGGNTY	6.1	61	573.2645	2	16.101	-0.4	80 80 94 28 37 63 79 53 54 38	RTD[754.3]
3500	LLKANVGATGPLAGAHW	10.4	61	559.314	3	41.866	-0.1	34 46 46 51 49 50 54 80 84 81 67 71 89 79 58 61 28	[695.4]ATG[210.1]A[451.2]
4339	ACMPNSF	4.3	61	385.1538	2	52.01	-0.4	28 67 67 81 73 79 28	[305.1]P[348.1]
4251	DCSPVLVCGPAQYELLVY(+79.97)	11	61	1024.9586	2	50.903	-0.5	28 28 28 28 28 98 95 70 54 42 51 81 91 69 65 85 84 65	[501.2]LV[328.1]QY[242.1]LV[243.0]
3062	VHAKSRLF	4.9	61	479.2858	2	36.897	1.5	71 63 52 52 67 70 80 28	[678.4]L[147.1]
2912	LWAYNGMF	4.9	61	1001.4579	1	35.113	2.9	53 53 61 83 71 66 70 28	[370.2]Y[449.2]
1643	GKSVLESSNKVHKPTDLLSTF	12.8	61	763.0811	3	20.458	-0.2	72 82 93 96 86 60 54 49 47 76 44 37 43 80 46 40 41 88 55 50 31	[57.0]KSVL[909.5]P[329.2]L[335.1]
1363	WSLDLLCPTKKKEF	8.5	61	854.4604	2	17.384	-0.1	28 86 86 92 86 51 48 56 60 64 80 38 38 35	[186.1]SLDL[542.3]K[404.2]
572	M(+15.99)WECY(+79.97)	3.1	61	414.11	2	7.738	-1.5	28 82 82 82 28	[147.0]WEC[243.0]
1028	LRTFAVGGGGNALY	8.5	61	698.3745	2	13.848	2.7	52 52 48 47 61 79 77 75 61 58 58 68 83 28	[1100.6]L[163.1]
3168	LWLS(+79.97)PVVEKLASGAAYLW	11	61	695.025	3	38.158	-2.9	28 28 28 28 28 85 84 74 75 87 79 72 59 58 71 74 77 53	[676.3]VV[257.1]L[819.4]
4245	LLKSNKGSVF	6.1	61	364.8854	3	50.824	0.7	67 75 67 45 38 41 54 58 71 88	[926.6]F
1602	EES(+79.97)TVLMKFVGVLKW	9.1	61	615.9775	3	20.015	-2.3	28 93 82 56 49 55 48 47 28 96 94 83 66 54 28	[129.0]ES(+79.97)[719.4]VGV[427.3]
1303	LSLTPDF	4.3	61	396.7096	2	16.736	-2.2	28 28 79 81 88 91 28	[313.2]TPD[147.1]

4149	LLPSAGLRTAEPKHW	9.1	61	419.7367	4	49.588	-1.6	28 65 69 56 49 32 32 41 55 83 90 95 92 92 28	[908.5]AEPKH[186.1]
3735	EM(+15.99)QAM(+15.99)SQLEKYKEAF	9.1	61	932.9258	2	44.604	-0.5	28 65 50 53 58 94 83 93 83 83 60 37 37 54 28	[622.2]SQLEK[638.3]
3956	MPLVYATGRKGW	7.3	61	460.2468	3	47.23	-2.9	68 57 57 90 85 68 61 66 87 28 28 28	[341.2]VY[229.1]R[371.2]
1428	FLKVNEPVKHSMMY	8.5	61	574.9609	3	18.119	-1.4	48 56 73 65 45 52 54 58 73 75 75 72 72 28	[1703.9]
1292	MVAPQW	3.7	61	731.3566	1	16.615	2.9	85 78 57 48 46 47	M[581.3]
1735	FDQGLNGLKRLSDF	8.5	61	805.422	2	21.433	2.2	51 61 57 98 95 71 46 44 65 58 44 43 57 56	[390.2]GL[1030.6]
1374	QMQSQEALY	5.5	61	1097.4958	1	17.519	2.4	51 58 60 89 57 61 63 74 28	[387.2]S[604.3]
1345	MTSGGLLF	4.9	61	413.2126	2	17.191	0.4	28 94 92 93 91 28 28 28	[131.0]TSGG[373.2]
2864	TAMKAMEPKPKF	7.3	61	460.2463	3	34.538	1.7	55 59 69 61 64 76 81 82 80 33 33 28	[633.3]EPK[372.2]
1405	CQLGVAPGVAMGY	7.9	61	633.3032	2	17.871	-2.1	70 58 62 62 66 67 75 56 61 64 62 52 28	[1246.6]
1122	STAAPAAGNSKLKW	8.5	61	701.3768	2	14.833	-1.6	36 40 49 77 81 74 65 64 63 78 81 79 28 28	[330.2]P[400.2]K[427.3]
3213	MRPLVVFLGLLSKDDKKPY(+79.97)	11.5	61	767.0815	3	38.695	0.7	54 39 38 41 45 28 83 75 62 66 82 78 75 76 85 76 56 45 38	[695.4]F[283.2]L[330.2]D[596.3]
2840	LDAVRMHAGRHSTVAYLW	10.9	61	695.025	3	34.257	-2.4	40 41 47 51 52 67 54 63 67 79 78 79 68 50 50 72 74 51	[2064.0]
2561	Y(+79.97)CALVKLVSTVGNLY	9.1	61	574.955	3	30.899	-1.8	28 67 55 56 76 86 93 96 28 44 42 43 53 80 54	[629.2]KLV[458.2]L[163.1]
1869	EERQDEEVAEELNQMW	9.7	61	678.9619	3	22.844	0.1	28 45 38 31 34 66 75 75 90 97 96 89 46 45 51 58	[1014.4]AEEL[559.2]
2595	RLLLVFKPSCLF	7.3	61	479.2872	3	31.303	-1.5	40 40 58 53 53 28 81 79 80 91 91 28	[741.5]K[97.1]SCL[147.1]
1254	RCKKAGFGPVELEEHRKY	10.9	61	716.3774	3	16.229	0.1	44 43 59 57 46 43 67 56 53 64 85 89 95 97 90 38 28 28	[1043.6]ELEEH[447.3]
2465	VM(+15.99)VLDS(+79.97)DLLTPF	7.3	61	723.3372	2	29.74	2.6	65 68 68 86 28 28 37 89 90 72 63 28	[345.2]L[397.1]LL[345.2]
3834	SADKVEDM(+15.99)KEAF	7.3	61	693.3151	2	45.78	-1.7	34 36 44 53 84 98 93 64 54 46 87 28	[401.2]VED[404.2]A[147.1]
2091	FFRASFLLLTGTKGY	9.1	61	574.3191	3	25.318	0.4	28 76 67 58 57 64 82 93 90 87 67 37 35 32 28	[755.4]LLLT[506.2]
1685	STPTAPTARGS(+79.97)VLLAYVLW	11.5	61	695.025	3	20.906	-0.8	58 58 51 43 34 37 45 54 72 75 80 66 42 73 77 78 83 88 28	[939.5]S(+79.97)[559.3]VL[186.1]
1680	LKVGKSVLLVGKFGGGGHPVMRVEY	15.1	61	876.4979	3	20.847	-2.3	28 32 36 55 57 64 75 96 81 74 74 72 80 71 59 72 82 91 80 52 41 32 32 33 34	[711.5]LL[284.2]F[171.1]GHP[777.4]
956	KGSSSDT(+79.97)TY(+79.97)	5.4	61	369.1219	3	12.971	2.5	59 50 52 81 81 68 56 60 35	[272.1]SS[640.1]
1838	MNQPVGQPSAEELQNMW	10.3	61	653.6295	3	22.512	0.3	43 41 41 42 43 66 57 67 65 76 95 97 94 48 45 59 41	[1009.5]EEL[559.2]
3071	TRLLPAGQVKF	6.7	60	615.3713	2	37.013	-1	73 70 78 78 74 73 56 39 46 45 28	[1210.7]
1040	QLLVGNEQAF	6	60	373.5317	3	13.979	-2.9	62 62 69 59 63 64 73 50 60 38	[1099.6]
2298	RKALLKFRSEY(+79.97)F	7.3	60	546.6241	3	27.735	1	34 39 43 59 67 68 73 57 76 89 87 28	[1099.7]EY(+79.97)[147.1]
2227	VFLTMF	3.6	60	757.3952	1	26.904	-0.1	28 28 92 91 92 28	[246.1]LTM[147.1]
2384	RALMAPPTNKKLRHF	9.1	60	594.0118	3	28.75	2.6	50 56 61 59 64 81 71 71 81 97 75 41 34 28 28	[542.3]P[198.1]NK[681.4]
1835	MQHLHEVLKPF	6.6	60	460.2473	3	22.492	-1.7	63 43 45 46 78 78 69 67 73 69 28	[1359.7]
1571	LYAFTHLGMGKLGY(+79.97)NW	9.7	60	650.9703	3	19.681	-0.4	55 59 63 60 62 69 44 43 61 76 83 66 61 43 50 63	[1090.5]K[713.3]

1614	YVGLRVDGNQVCY	7.8	60	743.3625	2	20.14	1.5	66 46 44 52 83 77 71 75 66 49 52 53 44	[432.2]R[878.4]
3831	LKLT(+79.97)KSASALLKHW	8.5	60	559.3131	3	45.737	-2.7	29 29 37 39 40 76 75 78 86 87 83 73 77 28	[908.5]ALL[451.2]
1379	MQPSTHATLCASPYY	9.1	60	557.2484	3	17.583	-2.5	55 50 42 38 39 69 75 70 73 80 83 90 78 28 28	[966.5]CAS[423.2]
4135	RRLVCAGLGYASHRY	9.1	60	574.6402	3	49.414	2.7	28 42 37 46 45 53 66 78 89 90 85 84 59 54 40	[868.5]GYAS[456.2]
4190	M(+15.99)VDVPF	3.6	60	723.3382	1	50.122	0.1	92 92 92 28 28 28	M(+15.99)VD[343.2]
882	MKQKAEATTGSRPF	8.4	60	517.9379	3	12.061	2.8	42 38 37 63 80 86 89 86 62 60 67 70 28 28	[515.3]AEAT[645.3]
2119	MLWGVGLCQLW	6.6	60	653.3259	2	25.649	-2.8	36 70 55 74 58 57 53 52 46 88 68	[987.5]L[186.1]
2519	VMAHAPGVAAAM(+15.99)QCFF	9.6	60	556.2547	3	30.385	-2.5	45 46 48 58 64 58 63 69 72 78 84 78 47 57 60 28	[904.5]A[672.2]
278	RLATAW	3.6	60	359.2038	2	3.699	-5.4	68 75 84 54 46 31	[269.2]A[358.2]
3897	KVALGKVLTPKAHS(+79.97)F	9	60	559.3143	3	46.523	-0.5	39 37 42 45 42 43 54 79 75 69 72 87 92 92 28	[1134.7]AHS(+79.97)[147.1]
592	WCS(+79.97)VY	3	60	369.1218	2	7.996	-0.2	28 81 81 81 28	[186.1]CS(+79.97)V[163.1]
2193	WKEDDSGVGSGKLCW	9	60	833.8798	2	26.511	-0.4	29 48 42 89 95 77 75 71 72 69 68 46 43 45 28	[443.2]DD[974.5]
4299	MKARGVGKPRGPLW	8.4	60	518.3	3	51.501	-2.5	86 68 48 46 59 73 76 74 72 71 50 47 39 28	M[1402.8]
2253	SVDTGNM(+15.99)KF	5.4	60	507.7306	2	27.209	-2.2	70 70 71 48 48 50 48 83 48	[720.3]K[147.1]
1208	KDTSGRGKFF	6	60	381.5374	3	15.735	2.2	43 40 43 66 70 78 79 74 77 28	[1123.6]
1580	Y(+79.97)WVQLTTTVMALEANY	9.6	60	991.9512	2	19.774	-0.9	30 40 38 40 82 84 89 69 67 71 65 67 77 49 49 38	[656.2]LTT[992.5]
3889	M(+15.99)YQLGASQESPY	7.2	60	695.3037	2	46.426	0.8	28 94 83 80 64 46 47 60 63 64 58 28	[147.0]YQL[819.3]
2113	MMKGACPTNF	6	60	550.2396	2	25.576	-1.3	91 88 76 43 48 73 61 38 41 37	MM[818.4]
1853	FHERGVLRLF	6	60	637.3613	2	22.679	-0.8	28 28 57 56 67 73 83 85 91 28	[725.4]LRL[147.1]
2981	ETHVAGS(+79.97)AAVRM(+15.99)RW	8.4	60	556.2543	3	35.932	-2.1	49 50 57 53 52 71 78 80 78 78 86 48 28 28	[761.3]A[170.1]R[489.2]
2732	LM(+15.99)GVGVLF	4.8	60	426.2387	2	32.968	0.7	61 60 59 51 56 78 84 28	[572.3]L[147.1]
2659	LHFMTDDVTGGPAREHW	10.2	60	656.9733	3	32.071	1.7	28 28 61 60 69 79 82 69 39 39 58 80 77 64 60 47 73	[744.3]D[314.2]P[679.3]
1664	RPMKLVVAW	5.4	60	367.2204	3	20.671	2.1	55 61 55 57 73 87 59 59 30	[625.4]V[356.2]
3300	NQPSENSLGTRLMLY	9	60	574.9545	3	39.701	0.6	50 36 37 37 47 44 46 77 95 88 85 66 49 79 59	[869.4]GTR[520.3]
1439	AHY(+79.97)PKGYNVKDLLVS(+79.97)FF	10.2	60	540.2514	4	18.243	1.4	29 57 47 48 53 72 53 39 40 82 87 90 92 86 39 59 39	[1109.5]KDLLV[461.1]
2108	LEGALLW	4.2	60	801.4517	1	25.521	1.5	48 53 54 77 78 78 28	[782.4]
3279	KVLVTVPTNKEYLLY	9	60	594.0131	3	39.468	-0.3	38 38 57 58 58 28 86 85 85 92 87 57 38 57 28	[639.4]PTNKE[552.3]
3645	MTAPKSCGVLKPF	7.8	60	460.2468	3	43.54	2.7	44 43 50 65 70 70 78 80 60 57 63 65 28	[718.3]G[584.4]
931	T(+79.97)SPAPGGSHKGVFDTY	9.6	60	567.5829	3	12.66	1.5	28 73 68 61 50 55 58 46 63 67 90 79 67 59 59 28	[999.4]G[625.3]
3891	Y(+79.97)TVALELGKGKGMLY	9	60	574.9547	3	46.448	-2.3	51 40 35 48 50 64 89 91 92 70 50 51 55 61 44	[756.3]LGK[649.3]
2513	VYGGSQEQF	5.4	60	507.7302	2	30.315	0.5	28 63 72 80 74 47 80 62 28	[319.2]G[215.1]E[275.1]

2828	KNHTKPKMMAM(+15.99)NLY	8.4	60	574.9551	3	34.121	1.2	38 37 48 52 45 45 70 78 85 84 60 52 82 56	[964.5]MA[261.1]L[163.1]
1440	RTLCKDSKAEKENTLQTY(+79.97)	10.8	60	736.6822	3	18.251	-2.1	37 39 49 52 56 57 56 58 97 96 90 87 40 41 55 55 56 46	[931.5]AEKE[800.3]
2875	FCKLVGPGVRGCLCHCNY	10.8	60	656.9734	3	34.669	-0.4	55 55 52 49 56 64 63 59 64 56 57 67 70 61 61 65 67 47	[1949.9]
2705	VFPLGQYGAAQLASGAAYLW	12	60	695.025	3	32.646	-1.9	54 54 46 35 35 37 61 64 71 75 60 79 80 51 47 53 76 79 77 54	[1244.7]A[748.4]
3489	KVSAVCY	4.2	60	385.2003	2	41.742	2.8	28 61 57 55 74 77 65	[750.4]
2883	VPLVGVFGTF	6	60	518.2985	2	34.763	2.4	28 28 59 73 87 96 72 58 60 34	[408.3]GV[452.2]
1663	AKPVLGAAMTDY	7.2	60	618.8165	2	20.663	-2.9	28 31 35 99 97 96 91 76 51 44 35 28	[296.2]VLGA[581.2]
2475	TNANEGVAKW	6	60	545.27	2	29.855	0.3	44 43 60 59 53 57 70 86 94 28	[685.3]AK[186.1]
2900	GPKGDVVGTGPASKPKY	10.2	60	829.4488	2	34.966	-0.3	65 67 56 51 43 48 71 59 58 72 58 61 73 68 53 58 45	[1638.9]
2430	HLHFTGTSCGSYSAHKAF	10.8	60	650.9702	3	29.321	2.3	28 28 86 83 77 75 45 44 49 82 86 78 67 59 57 49 45 28	[250.1]HF[449.2]GS[804.4]
4311	Y(+79.97)PKGAS(+79.97)SY(+79.97)HATDPW	8.4	60	607.2104	3	51.652	0	28 69 40 45 49 53 79 86 88 84 64 58 57 28	[850.3]Y(+79.97)HA[499.2]
3597	GLLASSKY	4.8	60	419.7368	2	42.985	-0.7	28 94 75 71 70 80 28 28	[57.0]L[271.2]S[291.2]
2657	HLKALLLVLRLF	7.2	60	479.3214	3	32.05	-0.9	37 49 61 79 82 65 45 48 54 74 89 28	[449.3]L[594.4]L[147.1]
1227	YGAVVYANALLPPY	8.4	60	504.2708	3	15.934	2.5	56 49 44 45 72 80 79 72 77 76 53 49 48 28	[489.3]Y[839.5]
1739	FFM(+15.99)ALELLDMTGNKAW	9.5	60	634.9755	3	21.483	-0.4	28 69 34 34 47 73 74 88 88 58 50 51 85 71 68 28	[867.4]LD[289.1]N[385.2]
2493	T(+79.97)PSQEQSLKETQVYF	8.9	60	932.9234	2	30.075	1.7	28 88 88 81 88 52 47 49 93 90 55 33 33 35 28	[181.0]PSQE[328.2]KE[638.3]
4262	TSKNSGGGGQLW	7.2	60	596.2924	2	51.05	1.9	43 48 59 60 63 50 64 51 55 65 85 68	[873.4]L[186.1]
2231	KSMQSVPLPQAM(+15.99)NLY	8.9	60	574.9565	3	26.958	-0.3	37 34 38 36 54 56 89 88 51 45 74 77 68 85 57	[660.3]PL[557.2]L[163.1]
2645	VSDSGAGFQF	6	60	507.7299	2	31.909	-0.1	40 42 50 70 74 74 86 72 55 28	[516.2]G[422.2]
1773	GKFQAAGCGDAVTMFAY	10.1	60	868.8944	2	21.834	2.6	34 33 57 57 93 75 61 67 83 87 74 63 65 46 46 37 28	[460.2]A[231.1]GD[783.4]
3835	ETSQQGLLWPF	6.6	60	653.3269	2	45.79	-0.7	85 89 87 57 44 51 63 89 28 28 28	ETS[426.2]L[430.2]
872	RRPGRKLHGSRY	7.2	60	741.93	2	11.933	1	28 55 32 32 51 77 75 71 85 86 88 28	[1000.6]GSR[163.1]
2585	S(+79.97)AGRGAPPAASRTMAW	9.5	60	556.2552	3	31.188	-0.5	35 35 39 60 61 66 84 55 65 78 80 92 64 58 45 28	[579.2]P[239.1]SR[489.2]
3005	KLELLLAPFW	6	60	615.3717	2	36.223	5.7	47 44 49 71 94 82 75 73 28 28	[483.3]LL[501.2]
2720	QTGSGLVQAGF	6.6	60	532.7732	2	32.816	1.9	45 38 38 76 84 85 89 51 54 63 28	[373.2]GLV[403.2]
2461	RLVCRGLAKYNF	7.1	60	480.604	3	29.686	2.5	43 45 49 62 75 84 77 59 55 47 53 59	[627.4]G[736.4]
1325	VELTQVFF	4.8	60	328.1792	3	16.983	-1.4	30 41 55 78 61 82 98 28	[570.3]VF[147.1]
2123	QLS(+79.97)KPGASGSSPVDAW	9.5	60	556.2545	3	25.701	1	36 36 34 55 53 58 61 69 67 88 88 88 57 55 57 40	[905.4]SSP[471.2]
1917	KCKFTANDGSAEELKNMW	10.7	60	691.3255	3	23.356	2.2	28 49 51 45 47 57 53 51 58 83 87 94 76 73 59 52 56 43	[964.4]SAE[801.4]
1286	Y(+79.97)HATQPTVPPGPTF	8.3	59	796.8591	2	16.551	-2.2	81 73 69 57 54 83 86 28 75 42 52 48 50 28	Y(+79.97)[437.2]PT[695.4]
2907	WWPNHLKGKVSGPACRHPF	11.3	59	739.7137	3	35.052	-0.9	28 59 41 37 38 61 67 54 45 47 55 66 77 84 82 80 82 87 28	[1486.8]ACRHP[147.1]

3980	ES(+79.97)SKYYLKEYKEAF	8.3	59	932.925	2	47.527	1.4	35 35 53 74 87 62 75 67 87 70 47 45 61 28	[511.2]Y[404.2]E[638.3]
2943	FLKGSLAQTGAMDTPW	9.5	59	861.9284	2	35.469	-1.4	54 65 82 70 52 49 41 38 44 58 58 70 90 82 61 28	[260.2]K[816.4]DT[283.1]
2984	GKNMVVRGYRLF	7.1	59	480.6034	3	35.963	1.2	38 56 55 67 70 57 66 70 88 85 28 28	[841.5]YR[260.2]
2252	KLKLECAFY	5.3	59	557.8005	2	27.198	-2.3	28 59 79 84 77 74 74 28 28	[369.3]L[613.2]
2712	VTTTNGSGMF	5.9	59	507.7306	2	32.72	-2.1	36 36 66 76 75 72 58 67 76 28	[995.4]
2623	FPRVVPNHPKKGHY	8.3	59	419.737	4	31.639	4.9	28 28 28 28 85 85 63 64 62 67 86 73 74 52	[499.3]VP[476.2]K[357.1]
3571	MVSKAPGDTTLW	7.1	59	653.3264	2	42.692	-4.1	86 86 61 58 56 53 67 63 65 46 36 28	MV[1056.5]
2748	FGKNSVARMHLLQRPF	9.5	59	476.0149	4	33.179	2.7	40 48 65 59 74 58 55 58 41 34 53 81 78 81 86 28	[1240.7]L[128.1]RP[147.1]
2288	WALPGPVKEGEAMF	8.3	59	511.2588	3	27.609	0.4	49 47 47 55 58 65 59 61 73 70 60 60 71 49	[1512.7]
1305	LWGSDDSDNKGVNLF	8.9	59	833.8904	2	16.755	1.7	41 44 43 44 63 92 84 77 72 81 53 41 42 51 55	[558.2]DS[229.1]K[530.3]
4023	Y(+79.97)RLLKSFKPF	5.9	59	460.2468	3	48.039	-1.8	38 44 38 69 75 82 91 95 28 28	[753.4]SFK[244.1]
2570	GHCRKY	3.6	59	763.3663	1	31.005	-0.6	28 87 81 65 63 28	[57.0]HC[447.3]
1256	RALGKNKSPKEVLGPW	9.5	59	890.5126	2	16.247	-2.7	67 68 72 74 78 69 53 48 49 56 84 82 41 37 32 28	[1079.7]EV[453.2]
4185	RHKSGPTAAGLCRY(+79.97)	8.3	59	532.9216	3	50.053	2.4	31 31 54 78 77 72 62 60 63 78 70 63 54 28	[1577.7]
1515	LENQVQMGHGDFLLW	8.9	59	596.2925	3	19.062	2.7	51 47 49 36 38 36 48 67 69 81 90 83 79 78 28	[1036.5]GDF[412.2]
1220	TTPPTAGKEVGPLW	8.3	59	727.3894	2	15.859	2.1	44 44 49 72 62 56 60 68 70 83 79 53 53 28	[882.4]V[453.2]
3145	VQSPALTGTGLDM(+15.99)GY	8.9	59	763.3657	2	37.883	2.6	40 39 39 67 71 60 58 58 77 81 91 64 53 49 34	[854.4]GL[482.1]
2514	MVSQNLALADPF	7.1	59	653.3275	2	30.324	-2.3	91 89 88 66 35 36 50 47 45 47 80 28	MVS[725.4]P[147.1]
2334	MDVLMDTYLPTF	7.1	59	723.34	2	28.151	2.5	28 28 73 63 57 51 69 82 89 76 59 28	[805.3]YL[345.2]
1500	HHVRKLPMLNDAKERTLLTPHF	13	59	885.1528	3	18.908	-2.5	28 92 84 84 78 52 51 39 40 39 42 43 74 86 61 80 85 51 44 45 62 28	[137.1]HVR[1010.6]E[156.1]TL[595.3]
1501	VTFGGPPSLLY	6.5	59	384.2087	3	18.916	-2.1	72 73 62 69 77 78 84 33 33 33 28	[558.3]P[476.3]
911	KNKSVSVPGKKPSDW	8.9	59	414.9812	4	12.413	-2.3	56 45 49 64 75 75 59 45 46 60 83 83 84 28 28	[1024.6]KPS[301.1]
2609	KLELLLAWPF	5.9	59	615.3715	2	31.474	5.3	46 44 54 53 94 85 76 76 28 28	[483.3]LL[501.2]
2359	TVLSPGVLGREPHKW	8.8	59	419.7371	4	28.452	-0.6	31 31 34 87 73 67 57 55 66 55 51 68 86 88 28	[313.2]S[805.4]HK[186.1]
4350	SENPGGM(+15.99)PF	5.3	59	476.1986	2	52.148	2.4	38 38 49 60 83 75 76 78 28	[427.2]G[448.2]
1014	RKLGTLNTNKF	6.5	59	646.3775	2	13.689	-0.2	73 74 68 38 37 43 62 57 51 76 65	[1272.7]
2336	SVQVNASAQW	5.9	59	545.27	2	28.171	0.3	37 37 37 83 69 72 72 65 70 43	[314.2]V[657.3]
2727	SYPKPGDTVDDRTFWW	9.4	59	657.3072	3	32.901	-0.5	28 67 52 51 60 66 67 55 45 48 87 86 82 42 42 55	[1059.5]DRT[519.2]
3307	LLKPCPYRKAMLGW	8.2	59	419.7364	4	39.785	3.8	68 79 75 66 62 58 54 34 38 48 49 69 87 28	[1413.8]G[186.1]
4286	RKAKAAEPLVF	6.5	59	615.3714	2	51.346	-0.6	61 58 63 75 90 91 91 28 28 28 28	[483.3]AAE[456.3]
2684	EWCM(+15.99)YPDAATCFWDVF	9.4	59	1000.3922	2	32.384	3.6	55 55 55 36 70 55 65 64 63 65 84 93 29 44 38 61	[1183.4]CF[547.2]

1043	WKLTRGQKAF	5.9	59	412.2389	3	14.019	-2.8	70 84 69 88 68 56 39 38 43 28	[186.1]K[113.1]T[687.4]
2741	VKKKAAHLTAY	6.5	59	615.3716	2	33.09	-0.4	33 33 42 93 93 80 77 65 56 42 28	[355.3]KAA[585.3]
4287	KKSKPLLGLF	5.9	59	377.5803	3	51.357	-2.7	56 55 57 58 61 68 63 67 71 28	[1111.7]
2006	APKKAAVFGGSHRYY	8.8	59	826.4375	2	24.352	-1.6	53 44 44 59 66 67 67 75 69 66 59 51 56 50 48	[1632.9]
1182	KACPPVAGTF	5.9	59	330.8401	3	15.473	-1.8	33 32 32 28 87 88 86 62 59 76	[399.2]PVA[305.1]
1724	YLCHGFQF	4.7	59	507.7303	2	21.312	3.1	28 28 28 28 96 79 90 89	[516.2]G[147.1]QF
2060	DDHVAHSWNPFRW	7.6	59	556.2554	3	24.964	0.4	71 57 60 48 44 59 58 68 63 85 89 28 28	[1061.4]PF[342.2]
2141	LHWCTVMAHLFF	7.1	59	752.8643	2	25.913	-1	29 29 62 81 72 64 57 63 92 95 28 28	[436.2]C[402.2]HL[294.1]
1092	YYGSVGFKTSNSQAVEPRW	11.2	59	726.0189	3	14.512	-1.5	52 51 46 51 52 50 55 67 42 39 39 82 87 97 91 72 59 47 28	[1203.6]SQAV[568.3]
2592	YSCDSAFKGVPLAPTYSY	10.6	59	656.9728	3	31.27	-0.4	91 91 91 69 52 48 48 60 61 72 53 59 72 51 37 32 32 28	YSC[1596.8]
4257	YLPAEPGPVKLW	7	59	457.2563	3	50.983	2.1	42 45 53 90 90 85 72 28 58 53 54 28	[373.2]AEP[680.4]
3696	KLLDGHTHLGAKVTW	8.8	59	559.3127	3	44.148	-2.5	29 38 57 59 61 64 76 89 82 77 68 56 44 43 28	[764.4]HL[642.3]
1915	KWNKDLSYSKPRKF	8.2	59	898.9946	2	23.339	0.7	43 44 46 71 73 71 85 87 76 68 46 42 34 28	[784.4]SY[743.4]
1709	VRDPAM(+15.99)YSNFQM(+15.99)DFKF	9.4	59	1014.4536	2	21.167	0.5	33 32 32 50 72 80 86 54 52 58 79 90 76 48 61 28	[538.3]M(+15.99)Y[476.2]M(+15.99)[537.3]
2337	EKALGSAGYEQEAF	8.2	59	750.3537	2	28.183	-0.7	39 39 76 44 43 44 80 84 88 84 46 54 64 28	[585.3]AGYE[475.2]
1233	KPMVSVSKTRNY	7	59	470.5909	3	16	0.7	44 48 46 64 65 82 69 62 60 65 65 28	[542.3]V[749.4]
3020	VHVESHGSSGRLF	7.6	59	706.356	2	36.393	-2.2	28 98 96 91 91 95 28 28 49 43 40 40 28	[99.1]HVESH[704.4]
920	KKLGCPTCHVTVSF	8.2	59	380.7	4	12.522	1.6	28 52 39 39 51 61 57 54 68 68 28 90 90 90	[1167.6]VSF
1075	LLRASGRKLWPAAGMPF	10	59	468.5183	4	14.339	2.3	47 61 63 68 67 51 44 44 37 34 46 64 79 79 86 89 28	[1476.9]MP[147.1]
4280	LETLTHMTKHSVYY	8.2	59	574.954	3	51.27	-2.5	31 41 45 53 55 68 55 57 67 89 83 71 71 28	[1054.5]HS[425.2]
2495	NKLAHSMAMHAHVLY	8.8	59	574.9568	3	30.109	-0.3	40 39 43 46 59 57 62 74 74 73 80 83 83 28 28	[1120.5]AHV[276.1]
4323	GS(+79.97)YRQAMHHRY	6.4	59	743.3159	2	51.807	2.6	39 40 40 76 59 94 95 95 33 36 33	[671.2]AMH[456.2]
1991	QWKWKCDGGLEAKGM(+15.99)AGSLKELKW	14	59	922.4648	3	24.199	-3.6	42 46 37 42 34 35 39 59 67 88 62 61 44 60 37 46 88 88 88 87 81 65 68 28	[1088.5]L[603.3]GSLKE[427.3]
1435	VRM(+15.99)MQLADEM(+15.99)VPRF	8.2	58	877.9235	2	18.192	0.6	30 30 36 62 55 62 57 58 85 92 92 96 28 28	[960.4]EM(+15.99)VP[303.2]
1662	MADLEQESMKVLAW	8.2	58	825.8979	2	20.654	1.2	54 59 62 96 93 59 61 43 48 66 56 48 40 28	[317.1]LE[1072.5]
1112	AFWPNGCNVAALQW	8.2	58	526.2505	3	14.716	0.3	28 28 75 65 60 62 50 46 68 88 80 52 52 57	[988.4]AA[427.2]
2040	RQTYMQTPWEFRVLTHF	9.9	58	747.3738	3	24.742	0.1	39 38 52 55 46 33 35 42 69 51 52 69 59 87 89 93 76	[1722.8]LTH[147.1]
2240	TFFSVY	3.5	58	763.3656	1	27.059	-0.6	52 52 57 79 79 28	[744.3]
2803	DNVNM(+15.99)KVF	4.7	58	982.4672	1	33.828	0.9	89 82 80 65 38 38 43 28	DNV[635.3]
2647	T(+79.97)VAGNGKGRLY	6.4	58	608.2979	2	31.927	0.3	61 58 60 72 57 41 37 67 76 78 28	[1196.6]
3743	VHVKSTAVLET(+79.97)F	7	58	705.8552	2	44.705	0.3	28 28 28 71 72 83 84 85 80 79 28 28	[550.3]TAVL[457.1]

3201	KPDVTVPTNKRHKLF	8.8	58	594.0115	3	38.537	-1.5	66 65 57 45 45 28 77 77 83 93 94 43 32 35 28	[837.5]NKR[525.3]
3266	FKRNGATTSHLF	7	58	460.2466	3	39.312	2.1	32 61 49 81 78 62 60 72 72 72 28 28	[431.3]N[814.4]
3147	ELLLGKMALAFAY	7.6	58	480.6038	3	37.907	0.1	28 28 77 74 57 63 79 84 79 61 63 28 28	[784.5]A[565.3]
2274	LALGVLDGF	5.2	58	904.5139	1	27.448	0.1	31 39 47 54 84 76 73 87 28	[354.2]V[228.1]G[147.1]
3999	VLLPVF	3.5	58	344.2253	2	47.746	-1	28 89 86 86 28 28	[99.1]LLP[246.1]
1335	HTVAAGGGDGMRPY	8.1	58	694.8217	2	17.078	-1.1	28 42 41 69 75 70 71 51 52 60 73 73 75 28	[1369.6]
2906	WLKPFGRWAYLVGPSTKY	10.5	58	543.0472	4	35.041	1.2	61 54 48 62 62 60 66 64 33 34 48 63 83 81 73 62 56 28	[1516.8]GP[479.2]
1998	T(+79.97)KVCKYDRGGAVRGGYY	9.9	58	986.9597	2	24.269	1.2	42 42 35 51 74 90 70 55 55 65 87 85 73 54 40 34 28	[639.3]Y[385.2]AV[596.3]
2737	HKFTTGAVGGGLLSKKCRLYY	12.2	58	767.0833	3	33.034	-1.1	29 35 32 53 75 65 53 52 55 68 74 77 94 94 94 54 50 51 52 28 28	[1125.6]LSK[826.4]
1013	YSNMTKKMTGFTM(+15.99)PSY	9.3	58	634.9538	3	13.677	1.8	75 72 53 39 38 49 44 39 39 87 93 57 55 71 83 28	[1084.5]GF[345.1]S[163.1]
1725	S(+79.97)RTMQPVNLPLGDNGVDCM(+15.99)Y(+79.97)	11.6	58	1193.4694	2	21.318	0	31 55 32 36 36 66 75 59 75 77 79 86 89 55 55 50 57 56 57 28	[1316.6]GD[878.2]
1344	VVRDPEAGSVMKKLY	8.7	58	564.6445	3	17.183	2.6	28 61 58 60 68 76 81 77 62 57 56 65 48 38 28	[695.4]A[906.5]
2528	KGGSTPSVAPKKPW	8.1	58	480.6038	3	30.49	-2.5	86 86 62 52 59 64 48 45 44 69 70 56 37 28	KG[1235.7]
1239	YTLVSVTNRSVVGKHPF	9.9	58	635.3495	3	16.065	-2.5	69 68 68 64 84 41 40 44 50 84 70 69 67 51 44 39 28	[476.3]S[470.3]S[764.4]
2630	LTEEGVGKAMKKLAVSVDFF	11.6	58	543.0474	4	31.725	2.6	51 54 62 59 59 57 62 66 52 46 45 54 56 46 46 53 80 88 88 28	[1641.9]VDF[147.1]
2025	KFQVVLAKVGVS(+79.97)GTHDHNS(+79.97)W	11.6	58	1185.0521	2	24.564	5.6	34 31 31 52 47 41 50 76 86 70 71 79 82 58 49 62 67 63 46 57	[913.6]V[323.1]G[957.3]
1037	M(+15.99)HLLQLLQAGSAFVPF	9.3	58	596.6556	3	13.953	0.5	41 41 44 46 43 64 57 52 68 75 79 74 72 69 68 28	[1768.9]
794	LVMAWHHWGY	5.8	58	433.8733	3	10.942	-2.8	28 94 59 58 69 28 28 77 78 56	[113.1]V[1068.4]
1443	HAGARSKPDFDSVLGVRCY(+79.97)	11	58	720.0013	3	18.279	-0.3	40 37 39 43 45 53 68 72 73 46 49 62 89 82 64 57 60 87 28	[1268.6]VL[312.2]C[243.0]
1155	RSHAVNGGKVY	6.4	58	594.3166	2	15.189	-1.6	28 88 85 54 54 52 64 52 59 69 28	[156.1]SH[788.4]
3925	ADSNAAGVYF	5.8	58	1014.4533	1	46.868	0.7	90 89 71 47 51 69 51 51 28 28	AD[809.4]
3057	LTRMDVKKSLLVANGGKTT(+79.97)W	11.6	58	766.7385	3	36.836	-1.3	41 37 37 48 44 55 57 84 85 88 63 45 45 63 83 84 70 46 36 39	[843.5]KSL[397.2]GG[596.2]
1490	NKNPAGGLACY(+79.97)	6.4	58	594.2489	2	18.794	-0.7	64 54 50 55 52 62 69 65 65 68 28	[1168.5]
2991	KWDGKMARSLLGLNGTLLYY	11.6	58	767.0812	3	36.047	1.1	41 39 33 44 45 47 46 62 89 93 68 57 79 74 60 56 67 62 60 28	[972.5]SL[1107.6]
1611	RCELPGMPPGGGLFY	8.7	58	797.3809	2	20.101	-0.4	42 41 48 67 81 61 58 63 78 64 69 65 51 43 28	[501.2]P[976.4]
2699	AEEEARYF	4.6	58	1014.4523	1	32.572	-0.3	28 28 28 93 86 83 85 28	[329.1]EARY[147.1]
3631	LLKDAPLGTATATKEF	9.3	58	559.3136	3	43.381	-0.1	30 40 38 48 79 71 60 61 84 92 83 66 60 37 37 34	[807.5]TAT[576.3]
1506	LTY(+79.97)NAMTGTVLEKKKW	9.3	58	654.998	3	18.969	2	70 69 44 37 37 49 53 51 53 64 91 81 81 82 28 28	[1131.5]LEKK[314.2]
1319	RHDVSASVLY	5.8	58	573.7971	2	16.919	-3	30 30 43 71 71 80 95 97 28 28	[594.3]ASV[276.1]
3207	M(+15.99)DS(+79.97)CHNY(+79.97)	4	58	523.1132	2	38.616	0	28 28 28 92 79 79 67	[429.1]C[494.1]
1131	KSDLAWGALLFY	6.9	58	461.9161	3	14.924	2.2	55 54 58 59 65 75 73 69 64 44 43 28	[1364.7]

762	YGPPGAM(+15.99)NY(+79.97)	5.2	58	533.1903	2	10.499	-1.3	30 53 73 66 57 55 54 64 63	[1046.4]
2568	AEEEARYF	4.6	58	1014.4537	1	30.986	1	28 28 28 92 85 83 86 28	[329.1]EARY[147.1]
2145	LAGNWLLPNF	5.8	58	1144.6139	1	25.954	-1	86 79 48 41 39 54 51 57 60 57	L[1012.5]
2527	LHCSDHSTEVKPPFWW	9.2	58	656.973	3	30.479	-0.9	50 50 70 28 28 86 61 54 53 56 83 65 65 57 54 54	[555.2]H[416.2]K[713.3]
2042	WTTRKAPART(+79.97)T(+79.97)CVGVFKW	10.4	58	756.6909	3	24.76	1.5	42 41 48 55 61 66 69 72 62 46 59 79 84 71 51 42 42 37	[1532.6]V[617.3]
3137	TLRLLGKGPQF	6.3	58	615.3716	2	37.79	-0.5	40 39 48 90 78 72 64 62 57 51 28	[370.2]L[727.4]
1446	EESRTSEEKTVERRKT(+79.97)Y	9.8	58	552.7642	4	18.318	2.7	66 58 51 53 58 64 70 73 73 37 35 43 71 48 56 59 56	[2189.0]
979	Y(+79.97)CFCT(+79.97)GACS(+79.97)F	5.8	58	447.741	3	13.262	-55.5	28 28 28 66 67 77 82 84 83 28	[834.2]ACS(+79.97)[147.1]
1921	T(+79.97)Y(+79.97)GDAS(+79.97)MEPCCTDW	8.1	58	606.7988	3	23.403	-39.4	41 41 41 42 59 64 72 49 52 93 82 67 67 28	[1191.3]CC[402.2]
1179	EFAVKPHF	4.6	58	325.5093	3	15.438	4.1	28 88 87 82 87 28 28 28	[129.0]FAVK[381.2]
959	YSNASSVRTSKLSYPSY	9.8	58	637.3133	3	13.011	-1.8	76 70 61 59 61 64 74 73 59 57 72 53 53 55 28 28 28	[1890.9]
992	HY(+79.97)LKFSKAAGPKLGLKHLKYHF	12.6	57	888.4866	3	13.423	3.1	53 51 40 39 39 48 63 69 53 57 76 95 88 69 56 56 51 49 47 42 44 68	[1279.6]KL[1123.6]
1693	MPPAGPPGMF	5.7	57	501.2323	2	20.99	-1	28 28 76 74 84 80 53 51 66 28	[396.2]GP[432.2]
951	DAFQKRY	4	57	309.8274	3	12.904	-0.7	28 90 84 73 68 28 28	[115.0]AF[575.3]
3161	AEEEARYF	4.6	57	1014.4523	1	38.079	-0.3	28 28 28 92 84 82 85 28	[329.1]EARY[147.1]
1568	LRAKGGAMGGGNTLAFLVSW	11.5	57	669.36	3	19.641	0.7	39 44 55 49 40 41 46 56 52 48 67 58 40 40 60 91 93 73 73 73	[1354.7]FL[372.2]
1145	WVPNSKKPCLTKVCKKY	9.8	57	506.2798	4	15.084	-2.6	68 51 54 48 56 57 75 79 60 53 49 57 75 54 55 47 28	[2003.1]
1025	KKVNCPKF	4.6	57	321.8521	3	13.82	-2.8	67 54 47 47 89 93 28 28	[469.3]CP[275.2]
4215	EPKVTAAKRKPKGCY	8.6	57	419.7373	4	50.441	-2.1	61 61 54 56 52 53 43 38 48 49 89 82 72 66 28	[1108.7]PK[323.1]
2120	LTENWFLPPF	5.7	57	632.3248	2	25.659	1.2	69 73 81 73 76 84 28 28 28 28	[214.1]E[300.1]F[454.3]
2627	YVT(+79.97)LNSLVSTRNLY	8	57	574.9546	3	31.694	1.8	28 47 45 51 40 52 79 28 87 74 61 62 83 58	[969.5]S[371.2]L[163.1]
2574	YFRVGSGALAGALHAMYLW	10.9	57	695.0241	3	31.055	-0.1	28 52 44 42 60 60 53 48 45 49 55 70 59 57 68 86 85 59 59	[1470.8]MY[299.2]
687	YGWSYEF	4	57	476.1989	2	9.436	2.4	28 28 28 95 95 95 28	[406.2]SYE[147.1]
2498	VLKSGRTHMKKNHKEVNY	10.3	57	543.049	4	30.137	1.6	37 38 47 47 60 74 67 58 49 47 54 48 57 90 76 57 57 58	[1516.8]K[505.2]
2531	EMCLQVVHGMLW	6.9	57	723.3384	2	30.534	-3	28 68 70 72 42 46 48 64 66 66 67 43	[1426.7]
1039	RKLLSSMGTFRHAHF	8.6	57	894.4796	2	13.969	1.8	73 70 43 32 40 84 77 76 76 81 48 42 51 28 28	[597.4]S[289.1]F[648.3]
2229	LLKDPLKTATLANDY	8.6	57	419.7369	4	26.924	-0.3	37 58 47 50 61 44 43 50 63 84 86 79 54 56 37	[979.6]TL[463.2]
1676	VRSLVLTDVGMAPWEY	9.1	57	612.6492	3	20.801	-1.6	28 61 43 43 51 52 56 65 66 72 72 70 77 67 28 54	[1816.9]
2399	YPCLPMANPVGHF	7.4	57	723.3383	2	28.944	-0.7	69 69 69 96 72 41 44 42 73 77 28 28 28	[363.1]L[950.4]
3156	LENAPAGQALMAFNLY	9.1	57	574.9546	3	38.016	-1.6	39 37 39 53 63 50 43 38 63 80 76 76 72 57 73 46	[851.4]L[739.3]
1808	TLWTLDEPAVLSKPDVRPVY	11.4	57	1150.1179	2	22.205	-2	28 28 29 68 74 95 91 87 63 61 71 64 68 79 64 39 35 30 30 28	[614.3]DEP[1324.8]

3301	WTKGPALGREW	6.3	57	650.8419	2	39.712	-2.3	31 60 51 77 92 72 53 49 52 57 28	[472.2]P[712.4]
1269	NTGGSGATNSLF	6.8	57	563.2621	2	16.377	0	47 43 50 57 53 61 56 46 45 61 72 87	[959.4]F
2346	KLNKLGKDKW	5.7	57	615.3714	2	28.298	-0.8	45 43 53 68 87 78 45 42 60 43	[483.3]L[614.3]
3447	VMADCAGNRGLATMAW	9.1	57	556.2548	3	41.273	0	36 37 41 53 52 56 77 76 59 56 74 89 68 57 42 28	[1087.5]A[489.2]
1562	LMESKVPGVVVCKY	8	57	517.9479	3	19.579	1.3	40 39 36 43 49 66 74 95 94 84 48 47 48 28	[784.4]GVV[493.2]
3092	LWPAGSVPLGEQMF	8	57	511.2585	3	37.252	-0.2	29 37 45 40 46 61 87 48 63 66 73 57 79 58	[611.3]V[802.4]
1703	MRKTALCPNMRVAF	8	57	546.6184	3	21.103	-1.8	29 48 38 47 45 46 52 74 67 70 45 64 83 82	[1400.7]AF
2873	VKKKLGTTHAF	6.3	57	615.3716	2	34.65	-0.5	32 32 47 94 68 63 74 72 56 55 28	[355.3]K[727.4]
989	TLRLLVFVWVEAESRW	9.1	57	501.7832	4	13.391	2.4	53 53 52 48 76 83 28 42 41 40 43 74 87 75 78 28	[596.4]V[731.4]E[429.2]
1734	VTSSKFRVSGLHEY	8	57	537.2839	3	21.426	2.5	28 28 28 72 64 53 32 63 79 79 91 61 61 50	[1048.6]L[429.2]
1556	LPTFVRGKTNAVGRRY	9.1	57	612.3511	3	19.517	-0.5	53 54 62 78 61 61 58 46 47 62 39 39 54 74 86 28	[1496.9]R[163.1]
2124	KLKLGTRSAM(+15.99)ALEKWYF	9.7	57	686.7134	3	25.71	2.7	29 29 55 59 62 65 67 70 52 46 58 62 64 63 47 57 73	[2039.1]
2003	Y(+79.97)LERKAPGFAVRNVQLY	9.7	57	702.0283	3	24.325	-1.7	46 53 42 61 42 50 47 50 55 82 82 80 51 52 56 62 47	[1141.5]AVR[617.3]
2901	TNELQAKNGGLLSKETKGPKW	11.9	57	767.0836	3	34.977	-1.8	46 44 55 45 32 35 35 60 73 62 65 89 94 85 75 72 56 46 41 47 28	[1125.6]LSK[826.4]
4118	MDVCRVHGSTEFTMPLTPF	10.8	57	723.3378	3	49.194	0.7	46 49 63 64 48 45 50 56 50 49 49 54 80 63 66 84 69 58 28	[1361.6]T[228.1]L[345.2]
3912	TTPAMGCEDPRFRW	8	57	556.2545	3	46.712	1.5	65 66 62 67 59 41 39 47 89 80 79 39 28 28	[790.3]DP[645.3]
2210	KLFCLGFDPLVRAKLVEW	10.2	57	712.0665	3	26.713	-1.5	53 53 74 51 50 53 56 57 58 70 52 48 49 44 39 44 80 81	[1800.0]EW
2597	MDVYMTDLLPTF	6.8	57	723.3383	2	31.337	0.1	28 28 28 68 68 68 57 72 91 72 67 28	[968.4]L[345.2]
1682	KDKHGLSHLVTAEGY	8.5	57	552.2913	3	20.865	2.9	44 40 49 67 72 66 63 28 76 60 60 62 57 60 38	[1635.8]
1369	AWLVPELQGFQKLY	7.9	57	846.4636	2	17.457	2.7	43 43 58 89 77 66 45 39 61 88 47 45 59 28	[370.2]V[524.3]F[532.3]
1551	FKYGTTAGVPAQRW	7.9	57	791.4107	2	19.459	-1.9	29 57 43 51 53 76 69 71 80 73 46 41 47 52	[825.4]V[638.3]
4086	WKKAKKGRATRTKELRTLES(+79.97)W	11.9	57	531.4936	5	48.799	-2.2	54 53 40 51 63 44 40 39 35 34 45 76 88 75 58 60 88 92 75 28 42	[1411.9]K[398.2]TL[482.1]
4218	LT(+79.97)HTSRKVLPF	6.2	57	460.2468	3	50.487	1.1	74 74 42 40 49 64 74 74 72 28 28	[1359.7]
2849	CCRLGAGGEVF	6.2	57	556.2554	2	34.369	1	28 76 60 53 55 76 66 58 58 60 28	[1092.5]
1857	VWRYGYLVS(+79.97)GYQFF	7.9	57	622.2855	3	22.716	-2	30 31 43 44 61 67 57 61 55 59 78 86 87 28	[1423.6]QF[147.1]
1952	VYKYTWMRLALPVVNRAPKYRWT(+79.97)Y	13.6	57	1052.2057	3	23.758	-5.9	29 29 40 44 61 46 46 50 47 53 65 83 81 81 62 61 63 74 88 88 59 33 33 33	[1424.8]PVV[438.2]KY[686.3]
2049	WDRSFCKRTAPKLSNKTRKEALY(+79.97)	13	57	720.3701	4	24.838	1.4	30 52 44 64 65 66 64 62 56 39 37 40 49 50 53 82 83 84 82 61 48 47 33	[1789.9]KTRK[556.2]
1731	WKWLGGDNKDYGVTKGKKF	10.8	57	743.0591	3	21.385	-1.2	37 37 34 37 47 61 81 87 94 82 59 47 34 33 38 73 77 77 28	[727.4]DNKD[1008.6]
1339	VGHVSADSVLY	6.2	57	573.7961	2	17.128	5.1	28 28 28 89 73 72 77 83 82 28 28	[293.1]V[273.1]SV[276.1]
2856	KKKVDSCTGS(+79.97)SVNVKY	9	57	608.2982	3	34.447	1.8	28 84 43 42 42 81 84 55 54 52 72 71 62 48 49 28	[128.1]K[342.2]SC[1015.4]
1557	SAALMF	3.4	57	639.3172	1	19.526	0.3	28 69 73 66 71 28	[620.3]

909	MY(+79.97)GCLAECPF	5.7	57	607.21	2	12.378	0	29 29 52 55 78 78 89 94 28 28	[718.2]EC[244.1]
2547	KWWSM(+15.99)GPANGGVGNLS(+79.97)Y(+79.97)	9.6	56	1000.3925	2	30.727	-1.6	42 42 37 77 55 47 53 77 89 89 76 48 47 38 42 55 39	[959.4]NG[850.3]
2772	LWTTLAGNFKPSSGAAYLW	10.7	56	695.0254	3	33.465	-1.4	30 53 44 61 45 43 47 53 65 52 45 45 62 56 61 72 84 84 62	[1601.8]YL[186.1]
232	DDDS(+79.97)VY(+79.97)	3.4	56	437.1	2	3.066	-2.7	28 28 84 84 84 28	[230.1]DS(+79.97)V[243.0]
2937	NLLVTVPTNKKNPRW	8.5	56	594.0112	3	35.394	-2.2	45 45 61 39 39 28 87 86 86 94 78 40 40 41 28	[639.4]PTNK[681.4]
3026	CFKYPLASRGTVPGVMY(+79.97)	9.6	56	656.9733	3	36.464	-2.9	78 77 40 35 46 75 66 65 43 41 42 59 59 70 64 63 28	[1949.9]
3105	WTAFSKLRSHVAVRKYGY	10.2	56	543.0474	4	37.404	-1.7	52 45 45 58 62 60 55 63 65 51 60 47 53 87 71 46 57 28	[1482.8]R[511.2]
4250	T(+79.97)ECCT(+79.97)GAMDCCGY(+79.97)	7.3	56	532.7722	3	50.892	-0.3	36 36 28 85 83 85 69 57 56 76 43 43 28	[413.1]CT(+79.97)G[823.2]
3150	TGEELGKGMW	5.6	56	554.2606	2	37.947	0	38 38 44 95 94 76 76 41 28 28	[287.1]EL[559.3]
938	WY(+79.97)VTGHTFVPMPW	7.3	56	850.871	2	12.744	1	28 28 35 38 44 87 87 83 80 64 59 65 28	[686.3]HTFV[511.2]
2858	YRKMKALTTLEVGFPF	9	56	476.0143	4	34.466	0.1	28 28 37 51 57 56 53 55 74 71 58 63 77 77 79 28	[1882.0]
2822	CPRGRNRY	4.5	56	511.2588	2	34.056	-0.5	28 82 67 66 74 73 28 28	[103.0]P[802.4]
3044	KDALDGANAADVAQW	8.4	56	772.8688	2	36.681	-2.3	44 42 49 58 52 55 62 42 48 54 63 81 67 70 50	[1041.5]V[385.2]
468	NPTKAHDGNY	5.6	56	558.7586	2	6.249	2.8	64 63 46 46 55 63 74 61 57 28	[1097.5]
1771	KSVAYLAHRPFLYGGHRYY	10.7	56	575.3044	4	21.817	1.4	49 54 62 59 65 75 58 52 46 45 38 40 34 39 77 73 73 60 62	[2279.2]
2750	MVVVANRKYGRLF	7.3	56	518.2988	3	33.201	2.4	79 70 68 59 59 51 56 64 59 49 42 42 28	[1533.9]
2133	KYVVSKANRLPGGTW	8.4	56	419.737	4	25.816	-0.8	41 52 65 79 66 41 41 50 47 43 46 81 77 79 28	[1255.7]G[344.1]
1781	WANALVTLLVPLSAPW	9	56	584.3337	3	21.926	-1.3	79 74 36 36 63 48 39 36 44 61 28 83 82 70 86 28	[1177.7]LS[71.0]P[186.1]
2313	KEDKEVSAGGGGGRNPLF	10.1	56	909.4629	2	27.897	2.5	54 43 39 39 67 65 50 46 58 75 46 61 73 83 54 59 63 28	[1171.5]R[471.2]
1201	RKRKGGYRQAY	6.2	56	461.5961	3	15.671	-1.8	33 33 30 32 80 82 94 85 41 61 41	[568.4]GGYR[362.2]
1105	VHKAHMGAGGPNAPCY	9	56	805.3725	2	14.644	0.9	28 75 81 89 71 63 47 40 41 52 50 50 69 78 28 28	[236.1]KA[1155.5]
1207	KLAVGTF	3.9	56	368.2234	2	15.727	-0.6	28 28 28 80 80 82 63	[312.2]VGT[147.1]
1827	Y(+79.97)VQDRNM(+15.99)LLYRGTPF	8.4	56	492.982	4	22.4	1.2	28 55 47 53 58 38 34 64 84 89 58 68 60 70 28	[1115.4]LY[558.3]
4278	LLGATVVRGLEPQHW	8.4	56	419.7375	4	51.248	0.3	66 67 44 41 47 51 32 30 31 32 65 91 78 89 70	[1108.7]P[128.1]H[186.1]
2453	DDYNRVAAPYAEPW	7.8	56	556.2546	3	29.594	0	74 77 44 43 41 61 62 70 90 60 52 47 28 28	[904.4]P[646.3]
3206	YSFANGVGYTDRAYLSW	9.5	56	657.3069	3	38.604	-0.9	58 53 53 58 55 65 46 42 43 62 87 82 82 44 39 36 38	[1059.5]DRA[549.3]
3584	DDPT(+79.97)RPAAVRM(+15.99)RW	7.3	56	556.2541	3	42.833	-2.5	85 85 68 53 48 53 55 47 47 79 45 28 28	DD[1417.7]
4281	VFKGVADLY	5	56	506.2792	2	51.281	0.2	28 75 79 86 60 47 45 51 28	[374.2]G[561.3]
2539	Y(+79.97)LVSAKNGAGVAQW	7.8	56	772.369	2	30.63	0.2	59 59 62 54 43 47 63 56 49 48 50 64 73 51	[1524.7]
2077	CNKLEGPGAAKYGAAVRKY	10.6	56	666.0201	3	25.164	1.4	42 40 50 55 63 48 49 58 62 61 56 56 74 83 88 56 49 36 28	[1288.6]AA[546.3]
1854	MLKPLSSAVTSTS(+79.97)AAYVY(+79.97)	10.1	56	683.6413	3	22.688	2.1	35 36 46 59 56 57 73 63 57 58 74 87 85 45 39 36 62 28	[1114.6]TS(+79.97)[647.2]

1459	VVLQATGFVFY(+79.97)PF	7.3	56	523.2582	3	18.456	0.3	28 76 57 43 46 53 67 76 95 95 28 28 28	[815.5]VF[487.2]
2078	VKFNLVRGYTRTF	7.3	56	534.305	3	25.174	3	28 71 68 56 53 49 55 66 74 63 39 72 28	[1581.9]
3199	WVRSPKSSFVW	6.1	56	460.2472	3	38.519	0.4	28 28 28 54 53 54 74 89 74 74 52	[840.5]S[432.2]
2520	WKSVLPCSAVPKGPW	8.4	56	552.2978	3	30.394	0.9	52 52 28 28 76 75 75 76 74 61 50 48 50 56 28	[1635.9]
1892	HRTKFGRGRTAGYLTPPQY	10.6	56	736.0609	3	23.086	2.5	36 39 45 46 50 56 54 53 54 58 76 75 77 84 61 51 45 46 45	[1487.8]L[586.3]
1244	LPLTVAMVHSLTNLRF	8.9	56	453.7613	4	16.115	2	28 70 65 57 50 51 64 78 28 54 50 48 49 75 89 28	[1489.8]R[147.1]
2652	VMKVRPSCALPYKY	7.8	56	552.2976	3	31.988	-1.5	43 45 56 66 71 78 73 73 73 58 38 36 37 28	[1635.9]
2323	MLRVAGALHTGLKW	7.8	56	518.2983	3	28.021	1.5	67 44 39 47 76 66 47 48 56 63 63 57 72 28	[1533.9]
2559	LETDASPNGGASNFW	8.4	56	783.3456	2	30.867	-1.7	51 52 50 51 67 61 57 48 66 54 58 50 49 50 63	[1546.7]
3222	LHNGYGAFMNDLAHMLF	9.5	56	650.9698	3	38.811	-2	42 41 49 65 64 71 67 58 53 44 58 52 53 56 60 64 43	[1931.9]
2058	EWALTMDALAKWNTPLVW	10	56	715.7012	3	24.944	2.5	37 36 50 70 71 68 68 74 64 68 78 62 39 38 56 47 42 28	[2126.1]
2190	EEDVAM(+15.99)AAAVRTMAW	8.4	56	556.2556	3	26.483	-2.4	28 78 70 45 40 42 47 71 69 69 79 63 57 41 28	[1647.7]
963	WMFTSGWWHKPTKAF	8.4	56	478.2365	4	13.052	1.9	54 49 42 73 52 49 62 28 86 70 65 61 56 54 28	[1081.4]H[672.4]
1507	DKLGDLGLNGKSSKW	8.4	56	539.9584	3	18.977	0.9	35 35 37 55 75 85 75 69 58 59 62 76 51 28 28	[528.3]L[957.5]
2442	YLLAYVVDYLF	6.1	56	460.2469	3	29.464	-2.2	29 44 62 65 68 69 68 67 54 54 28	[1359.7]
1806	VLCGLASRSGVTAKTPDRPW	11.1	56	705.377	3	22.19	-0.5	79 73 58 60 72 64 58 60 62 60 43 42 51 50 46 45 50 49 53 28	[2095.1]
2221	M(+15.99)DPLVVF	3.9	56	836.4226	1	26.832	0.4	28 89 89 96 28 28 28	[147.0]DPL[345.2]
2429	T(+79.97)LNVGTGELGVAGAVVW	9.5	56	574.9545	3	29.312	1.6	53 61 37 49 66 51 49 63 82 69 65 73 64 43 44 40 28	[851.3]L[739.4]
1389	YVRNGVGLGSGVTGKFY	9.5	56	887.4702	2	17.686	2.8	28 58 43 42 46 82 87 42 41 49 87 69 65 65 50 49 35	[589.3]VG[257.1]G[695.4]
2175	RRKPAAM(+15.99)AAPQLFPDLLY(+79.97)	10	56	718.7054	3	26.304	4.2	28 59 45 59 50 52 40 45 56 64 42 43 48 90 82 71 69 49	[1453.8]PD[469.2]
1989	WWKGSGNSKFGKAELDDRQELKW	12.8	56	692.0995	4	24.17	-1.1	28 61 45 55 59 61 58 62 56 49 40 56 61 56 50 54 66 71 74 53 62 63 28	[2746.4]
2468	Y(+79.97)NVVAMAATGSDHANRY(+79.97)	9.5	56	1000.3909	2	29.768	-1.1	41 49 43 83 52 50 51 71 67 54 57 63 55 47 48 57 48	[456.1]V[1425.6]
845	M(+15.99)TES(+79.97)MQMT(+79.97)W	5	56	660.6917	2	11.591	1.1	43 44 36 39 59 80 87 79 28	[675.2]QM[367.1]
4009	CGPTGLLF	4.4	56	404.2066	2	47.874	-1.1	28 83 81 80 84 28 28 28	[103.0]GPTG[373.2]
3543	QNHYPGNGPASGAVKFCGF	10.5	55	650.9698	3	42.362	1.7	61 61 65 65 76 63 51 49 50 47 47 56 44 44 58 55 54 69 28	[1931.9]
1652	DLLVGGALAFY	6.1	55	569.8114	2	20.546	1.2	31 31 51 67 70 66 68 84 81 28 28	[625.3]LA[310.1]
1818	SAM(+15.99)PPDVQPSSGYKAREGWKYKY	12.8	55	887.763	3	22.311	-0.8	39 40 67 73 85 84 58 41 47 52 61 82 67 60 46 48 67 74 43 37 32 28 33	[402.2]PD[498.2]G[1472.8]
1167	RHQGAFDGYPNLF	7.2	55	507.9118	3	15.318	-1.6	45 53 35 48 58 71 84 82 71 39 35 37 57	[696.3]DG[634.3]
3320	GDVANYSLY	5	55	1001.4586	1	39.936	1.2	28 79 54 53 59 81 84 28 28	[456.2]YS[276.1]
1229	WGVLADKWKKY	6.1	55	465.2594	3	15.965	0.7	28 54 59 73 79 80 81 61 33 28 28	[526.3]DK[605.3]
2868	LLKVGAGGRKF	6.1	55	573.3614	2	34.592	0.2	57 56 43 49 69 72 76 82 42 28 28	[638.4]G[431.3]

3102	FYKLMS(+79.97)TAKAPKRYLW	8.9	55	695.0253	3	37.374	0.7	28 49 61 42 53 41 59 49 48 63 61 63 83 59 59 59	[1445.7]R[462.2]
1716	KHDGKGQANETYPY	7.8	55	804.3742	2	21.232	-2.3	32 31 32 47 48 71 48 76 64 69 69 74 79 28	[1588.7]
1235	KKKSRGVPGW	5.5	55	571.8428	2	16.031	-0.7	28 50 59 67 72 83 75 60 28 28	[627.4]G[439.2]
2957	WWNDGVLVSTGVNLY	8.3	55	574.9545	3	35.649	0.3	28 67 52 48 59 63 90 28 50 50 43 43 57 87 59	[757.3]L[557.3]L[163.1]
2418	VLPSADPHW	5	55	511.2586	2	29.177	-0.1	28 28 63 67 69 90 93 28 28	[467.3]DP[323.1]
4327	NKGLCMNKHF	5.5	55	596.2925	2	51.86	1.4	58 62 54 44 44 60 60 69 69 28	[1172.6]
1124	EEVLPPY	3.9	55	846.4222	1	14.852	-2.5	28 89 89 94 28 28 28	[129.0]EVL[357.2]
2365	VVLPLTSAVGPSLS(+79.97)AF	8.8	55	546.6244	3	28.528	2.2	28 28 52 49 49 53 67 78 71 74 79 72 39 38 49 49	[1618.8]
1923	KPVFDRDLRRKALPGWHAF	10.5	55	578.0745	4	23.42	-0.5	50 56 58 66 68 37 31 30 32 39 43 53 54 69 78 85 83 80 28	[1749.0]WHA[147.1]
1346	KPLNAKLSGDTLKLY	8.3	55	554.3274	3	17.201	2.8	33 48 47 52 57 57 63 63 63 68 66 59 54 64 28	[1641.9]
1569	Y(+79.97)QTRRATRY(+79.97)TKVLKRAAHQW	11	55	674.0902	4	19.65	2	43 41 34 43 43 63 68 70 37 36 36 49 63 71 89 82 60 53 55 56	[1925.0]RA[522.2]
2577	KVTPLM(+15.99)F	3.9	55	426.2386	2	31.085	0.6	51 50 73 81 52 38 38	[328.2]P[407.2]
2061	KVSVSLMMS(+79.97)LMMFGLLF	9.4	55	1007.4885	2	24.974	0.7	30 30 30 34 45 57 85 93 53 69 71 95 57 53 44 53 28	[613.4]MM[411.1]M[577.3]
4046	S(+79.97)DS(+79.97)PLFVPGVTKLF	7.7	55	556.2551	3	48.319	-1.3	28 28 28 28 28 92 85 82 81 82 66 59 51 28	[659.2]FVPGV[489.3]
2154	VFLM(+15.99)PMPSSGWAMFVADPWW	11	55	791.0273	3	26.062	-3	28 69 68 50 60 47 54 52 59 65 46 44 46 51 62 40 40 56 77 81	[2166.0]W
1721	RTLLS(+79.97)ASGGNGMKPKGLKEEVTGAFRF	14.9	55	733.6265	4	21.287	-2.3	45 44 61 65 60 60 57 48 42 38 39 48 57 40 34 36 48 59 72 92 77 74 71 67 60 54 28	[2005.0]E[778.4]
2265	KGLKNASLGKYNF	7.2	55	480.604	3	27.341	-2	38 37 45 47 49 61 46 49 83 59 54 66 76	[811.5]G[552.3]
2697	WKKKDDVHKWPVPPVFY	9.4	55	543.0475	4	32.539	1.9	64 64 42 47 47 56 50 44 46 41 43 79 28 83 83 83 28	[1643.9]PVF[163.1]
2481	LLEVSRTKF	5	55	364.8851	3	29.93	-0.3	74 73 76 79 38 43 53 28 28	[1073.6]
2421	KKDGVKVHLFVFVTY	8.3	55	445.7604	4	29.206	2.4	45 43 41 51 77 85 28 28 28 90 90 69 46 63 34	[527.3]K[349.2]FV[510.2]
3921	T(+79.97)DCCT(+79.97)GSSGSSNVY(+79.97)	7.7	55	810.666	2	46.81	-48.4	41 41 52 66 61 62 63 28 28 68 57 56 70 72	[1601.4]
1385	MSLKDAKLGKRHW	7.2	55	523.9619	3	17.652	1.9	37 37 47 46 43 49 70 88 84 82 46 37 46	[773.4]LGK[479.2]
2682	ELYKPPVTRGRGLGNPF	9.4	55	476.0145	4	32.364	-1.5	28 28 44 50 73 37 39 46 54 44 71 83 74 60 55 73 68	[1296.7]G[528.3]
1635	Y(+79.97)TPFVGGHASLGLY	7.7	55	521.2431	3	20.358	3.9	29 29 36 67 70 80 64 64 75 74 56 48 44 28	[687.3]G[798.4]
1645	HLVMHRMRGGRGY(+79.97)MGF	8.8	55	662.3047	3	20.475	1.3	28 78 63 61 30 38 55 64 88 81 78 74 41 36 28 28	[1060.6]GG[791.3]
3277	WPKLVPHKFDLRHSVYF	9.4	55	543.0508	4	39.447	2.7	28 66 51 71 72 58 41 40 35 41 37 38 70 88 81 81 28	[1653.9]SVY[147.1]
3237	LLVT(+79.97)PPDAQTLVKY	7.7	55	546.6247	3	38.98	2.8	39 48 46 57 63 67 52 45 43 68 81 66 61 28	[1115.5]L[390.2]
2096	RTLVEPATGSLMNLLLKPRY	11	55	758.0999	3	25.382	0.3	37 39 45 51 47 48 58 67 65 71 72 75 62 91 86 45 38 34 32 28	[1369.7]LL[657.4]
1608	LGM(+15.99)APVRSGKTSCY	7.7	55	495.9102	3	20.077	-2	57 58 46 41 38 40 89 83 82 63 56 53 28 28	[584.3]RSG[582.2]

APPENDIX M
DE NOVO SEQUENCING RESULTS FOR TRYPSIN

De novo summary report (generated by Peaks DB software)

1. Notes

2. Result Statistics

Figure 1: The distribution of de novo ALC score: **(a)** histogram of score **(b)** The plot of error vs. score

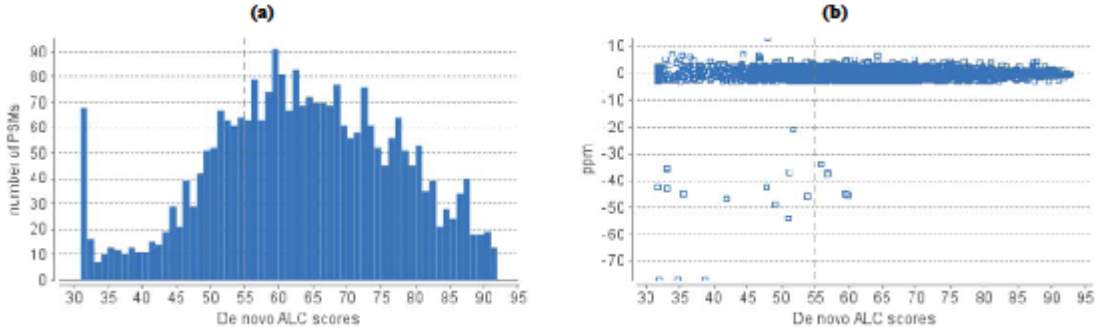

Table 1. Statistics of data and result.

# of MS Scans	816
# of MS/MS Scans	3782
Peptides after filter	1990

Table 2. Result filtration parameters.

De Novo ALC ≥55%
De Novo TLC ≥3

3. Other Information

Table 3. Search parameters.

Parent Mass Error Tolerance: 3.0 ppm
Fragment Mass Error Tolerance: 0.5 Da
Enzyme: Trypsin
Variable Modifications:
Oxidation M: 15.99
Phosphorylation-STY: 79.97
Max variable PTM per peptide: 3
Report # peptides: 2
Data Refine dependencies: 8

Table 4. Instrument parameters.

Fractions: TR.RAW
Ion Source: ESI(nano-spray)
Fragmentation Mode: CID, CAD, IRMPD (y and b ions)
MS Scan Mode: FT-ICR/Orbitrap
MS/MS Scan Mode: Linear Ion Trap

Peptide results for trypsin digested myosin – derived by De novo sequencing with PEAKS DB software

Scan	Sequence	TLC	ALC (%)	m/z	z	RT	ppm	local confidence (%)	tag (>=80%)
208	M(+15.99)YTGAAK	3.9	56	379.18	2	2.639	-2.8	31 50 51 73 79 74 31	[738.3]
287	CASLEK	4.9	82	325.6625	2	3.599	0.1	97 96 89 88 89 31	CASLE[128.1]
293	NSLAHVGGSAAR	8.1	67	380.5354	3	3.674	0.1	84 92 62 50 49 72 92 75 59 68 71 31	NS[420.2]G[442.2]
294	YPYAAGNSGAKPEQSGK	11.6	69	862.9133	2	3.684	-2.5	31 56 57 83 91 91 87 94 79 79 57 58 59 67 60 75 31	[423.2]AAGNS[882.5]
299	VGPLKAGNPAGCGALS(+79.97)MK	13	72	875.922	2	3.751	-0.6	68 52 53 70 75 92 92 86 91 90 90 88 83 63 61 53 51 31	[494.3]AGNPAGCG[610.3]
300	KGLAHAAGNER	8.1	74	562.3019	2	3.762	-0.1	73 81 83 96 97 89 70 60 55 56 45	[128.1]GLAHA[527.2]
301	LATSSRNEALHK	9.6	80	442.9095	3	3.772	1.1	71 70 70 70 96 93 85 87 93 93 94 31	[372.2]SRNEALH[128.1]
304	QVNDLSAQR	7.1	79	515.7675	2	3.816	0.1	31 96 86 92 94 96 95 89 31	[128.1]VNDLSAQ[156.1]
305	KKPNFR	3.8	63	395.2402	2	3.825	0.4	31 63 63 73 77 68	[770.5]
308	WT(+79.97)PGDVALPYR	6.6	60	452.2123	3	3.858	2.4	32 44 40 52 56 78 68 68 67 80 71	[1016.4]Y[156.1]
323	CM(+15.99)FNAHGR	5.1	64	476.1986	2	4.039	-2.6	54 54 61 67 90 75 72 31	[511.2]A[350.2]
330	SHCCGTPDS(+79.97)AR	6.9	63	607.2104	2	4.124	0.9	31 31 67 75 75 79 76 69 65 65 48	[1194.4]
343	T(+79.97)GMHSHGHR	5.1	56	550.2175	2	4.275	2.3	60 36 35 31 31 93 89 93 31	[593.2]HGH[156.1]
407	HLLGFHAPPK	5.6	56	558.8198	2	5.07	0.9	31 31 75 88 94 31 31 69 69 31	[363.2]GF[530.3]
415	KVVGSK	3.6	59	309.2031	2	5.175	1.3	31 76 71 71 73 31	[598.4]
419	CATLDK	3.6	60	325.6622	2	5.215	-0.9	31 89 63 62 77 31	[103.0]A[457.3]
433	HDVVS(+79.97)HK	4	57	451.2	2	5.398	0.1	31 92 71 71 69 31 31	[137.1]D[630.3]
454	YAGLLLGVLTR	6.5	59	588.36	2	5.653	-1.6	52 52 45 45 35 82 80 60 58 77 58	[517.3]LG[469.3]
457	VGNESLYK	6	75	455.2373	2	5.695	-0.3	96 94 77 86 94 85 31 31	VG[114.0]ESL[291.2]
459	T(+79.97)LHANCGR	5.2	64	476.1981	2	5.717	2.4	32 32 64 90 84 88 91 31	[431.2]ANCG[156.1]
499	MCVKNALLPK	5.8	58	558.8163	2	6.238	-1.2	90 81 37 36 34 72 72 59 59 31	MC[863.6]
520	TPNCY(+79.97)CEAGS(+79.97)R	6.5	60	680.71	2	6.499	2.2	79 79 45 50 32 88 85 65 50 44 31	[658.2]CE[451.2]
523	VGNEYVTK	6.4	80	455.2374	2	6.542	-0.1	97 97 88 91 85 84 31 62	VGNEYV[229.1]
568	LLTLYANT(+79.97)K	5.4	60	558.7896	2	7.118	1.6	31 31 31 47 61 94 86 87 65	[603.4]ANT(+79.97)[128.1]
585	MEGCM(+15.99)SNVGR	5.6	56	550.22	2	7.337	-0.1	49 49 67 31 89 75 57 50 60 31	[420.1]M(+15.99)[513.3]
595	VGNEYVTK	6.3	78	455.237	2	7.466	-0.9	97 96 88 92 88 80 31 50	VGNEYV[229.1]
616	KVVGSK	4.3	71	309.2032	2	7.725	1.9	31 92 90 90 90 31	[128.1]VVGS[128.1]
618	HDCNSPAK	5.3	66	436.1901	2	7.745	0.3	31 96 91 76 67 67 63 31	[137.1]DC[497.3]

626	GY(+79.97)STLHK	4.4	63	443.1978	2	7.876	2.1	31 31 77 80 92 96 31	[387.1]TLH[128.1]
657	CCMVPDGAR	6.2	69	476.1973	2	8.274	2.9	31 75 79 79 81 79 78 84 31	[436.1]P[172.0]A[156.1]
664	S(+79.97)S(+79.97)DAVPK	5	71	432.15	2	8.367	-2.3	31 91 91 84 84 83 31	[167.0]S(+79.97)DAVP[128.1]
671	M(+15.99)YEKY(+79.97)NR	3.9	56	550.2178	2	8.454	0.4	31 31 83 83 54 73 31	[310.1]EK[513.2]
687	KVVGSK	4.3	72	309.2033	2	8.658	2.2	31 94 92 92 91 31	[128.1]VVGS[128.1]
718	NS(+79.97)LVNK	3.5	58	377.679	2	9.118	1.7	56 57 58 76 69 31	[735.3]
747	T(+79.97)PGCEYPPR	6	67	550.2169	2	9.493	-1	34 41 41 71 93 93 97 97 31	[438.1]EYPP[156.1]
754	VMSMQPAQPK	6.1	61	558.78	2	9.591	-1.1	32 32 34 56 54 86 86 73 85 70	[576.2]PA[128.1]P[128.1]
766	HDGYEHK	4	56	443.1973	2	9.739	2.8	92 89 50 47 51 31 31	HD[614.3]
767	HDCSGKTR	4.5	56	452.21	2	9.75	2.9	31 31 31 77 76 81 84 31	[499.1]KT[156.1]
774	WST(+79.97)S(+79.97)Y(+79.97)HAK	4.4	55	610.1855	2	9.85	1.2	31 31 31 31 97 87 97 31	[621.1]Y(+79.97)HA[128.1]
785	QASPSPER	5.3	67	436.217	2	9.998	0.1	57 49 49 59 94 94 94 31	[383.2]SPE[156.1]
788	RPLEAGNSQS(+79.97)LMGRR	8.5	57	876.4227	2	10.028	0.6	32 43 50 83 91 82 66 62 58 52 41 40 58 55 31	[366.2]EAG[1109.5]
795	QNEWGSPTK	5.2	58	523.75	2	10.111	2.4	65 67 86 75 31 54 53 54 31	[242.1]E[656.3]
797	YMVVCT(+79.97)R	4.5	64	476.1983	2	10.145	6.9	31 69 78 75 75 87 31	[595.2]T(+79.97)[156.1]
814	M(+15.99)ANNCS(+79.97)K	4.8	68	432.1441	2	10.351	2.7	70 70 63 76 82 84 31	[446.2]CS(+79.97)[128.1]
819	NLNDLSAQR	6.5	73	515.7679	2	10.412	1.1	31 90 88 90 93 85 77 64 31	[114.0]LNDLS[355.2]
821	KT(+79.97)TFADT(+79.97)R	4.9	61	550.2175	2	10.434	5.1	71 65 50 31 80 74 80 31	[557.2]A[115.0]T(+79.97)[156.1]
831	QGT(+79.97)NNR	3.6	60	385.1534	2	10.56	0.9	73 71 74 76 31 31	[750.3]
836	HDMDDLR	4.9	70	451.1953	2	10.627	0.2	31 88 57 57 83 90 79	[137.1]D[246.1]DL[156.1]
839	WVYQGLSHNK	5.7	57	616.3127	2	10.658	-3	31 47 39 38 51 87 84 78 75 31	[633.3]LS[379.2]
850	WLY(+79.97)PT(+79.97)CDR	4.5	56	607.2097	2	10.791	-2.3	76 76 55 31 72 52 52 31	[1194.4]
854	MPHEAGNSELHCGLKK	10.6	66	875.9218	2	10.844	-0.1	31 31 31 97 96 94 86 90 78 78 69 66 67 53 51 31	[365.2]EAGNS[908.5]
866	QEAAMVER	6.4	80	467.2263	2	10.982	-0.6	56 58 82 94 94 84 84 83	[257.1]AAMVER
868	ELTGCK	3.7	61	325.662	2	11.005	-1.6	66 61 67 68 69 31	[631.3]
875	TT(+79.97)PGFNGHHR	6.6	66	602.2556	2	11.089	-1.3	31 51 62 82 80 62 60 65 80 84	[379.1]GF[308.1]HR
878	VGNEYVTK	6.6	83	455.2365	2	11.131	-2.1	98 97 90 93 90 92 31 69	VGNEYV[229.1]
879	CNCQST(+79.97)K	4.7	68	432.1443	2	11.142	3	53 60 67 82 72 90 45	[320.1]Q[87.0]T(+79.97)[128.1]
881	RYAWCDNKNR	6.1	61	663.3132	2	11.164	1.9	33 33 34 31 97 90 87 76 78 46	[576.3]CDN[398.2]
883	MDLER	4.6	91	332.16	2	11.198	-0.3	97 97 90 94 77	MDLE[156.1]
884	AVGNDLSAQR	7.2	72	515.7673	2	11.207	-0.1	40 47 50 82 91 94 96 93 86 31	[227.1]NDLSAQ[156.1]

886	M(+15.99)DLER	3.4	68	340.1574	2	11.225	-0.5	31 31 94 96 83	[262.1]LER
887	M(+15.99)M(+15.99)SDAYGHR	5.2	58	550.2169	2	11.234	-2.8	40 40 45 66 66 82 73 73 31	[567.2]Y[350.2]
892	VQTGAAGAYR	8	80	497.2593	2	11.3	0.2	81 69 92 94 96 97 85 72 74 31	V[128.1]TGAAG[390.2]
898	LM(+15.99)TNLR	4.3	71	382.2099	2	11.371	-0.6	31 96 81 73 82 61	[113.1]M(+15.99)T[114.0]L[156.1]
901	HDM(+15.99)ANKR	4.9	70	444.21	2	11.415	-2.7	93 93 64 64 55 70 49	HD[616.3]
902	KALQLEAK	5.8	72	450.779	2	11.426	-0.6	90 89 95 55 62 63 86 31	KAL[370.2]A[128.1]
905	YQRGELHSNK	6.4	64	616.3123	2	11.456	-0.5	68 43 43 55 63 81 91 67 75 46	[633.3]LH[329.2]
908	RSALHNGAADK	6.4	58	380.5355	3	11.501	0.3	35 41 43 64 57 57 87 88 64 63 31	[678.4]GA[314.2]
914	NTVADLM(+15.99)R	5.9	73	468.234	2	11.573	-0.8	68 75 94 95 94 93 31 31	[215.1]VADL[303.1]
916	VGAAGAAGAYR	9.7	88	482.254	2	11.591	0.1	88 87 93 97 97 97 98 94 91 92 31	VGAAGAAGAY[156.1]
917	NALAHRQDAK	6.7	67	562.3015	2	11.601	-0.9	53 53 88 97 97 88 50 42 68 31	[185.1]LAHR[442.2]
920	NTPAVPR	4.5	64	377.7144	2	11.641	1.1	31 79 76 76 76 74 31	[735.4]
921	RNSHAGNSKGHGCNRR	11.6	72	875.9216	2	11.652	-0.8	63 56 62 73 92 83 77 92 96 90 75 73 80 50 55 31	[494.2]AG[114.0]SKG[194.1]C[426.2]
932	LQLEAK	3.6	59	351.213	2	11.787	-0.7	31 86 87 87 31 31	[113.1]QLE[199.1]
933	FEDKHLGK	6	75	325.1748	3	11.796	-0.2	31 78 74 82 88 81 84 76	[391.1]KHLG[128.1]
934	KNLEVTVK	6	75	465.7848	2	11.806	0.5	96 91 96 91 88 64 31 38	KNLEV[328.2]
937	LYDQHLGK	7.3	92	487.258	2	11.849	-1.4	97 96 97 74 94 91 94 88	LYD[128.1]HLGK
943	QSYEDTALKR	8.1	81	605.8065	2	11.923	-0.4	50 54 95 98 94 94 96 95 95 31	[215.1]YEDTALK[156.1]
944	QSYETDALKR	6.6	66	404.2068	3	11.933	-0.1	43 40 40 46 73 93 96 97 98 31	[608.2]DALK[156.1]
947	NRS(+79.97)NTLSLEPR	6.1	55	456.2198	3	11.964	-1.7	46 46 49 55 45 45 87 88 82 31 31	[765.3]SLE[253.2]
949	SKYENCALGVK	8.5	77	606.3084	2	11.997	0.6	83 83 95 79 68 74 90 91 78 70 31	SKY[346.1]AL[284.2]
950	RT(+79.97)WTDALKR	5.8	64	409.5387	3	12.007	-2.2	45 40 37 62 71 94 95 96 31	[739.3]ALK[156.1]
952	QNYGM(+15.99)S(+79.97)ALQR	6.7	67	421.8441	3	12.025	-0.7	53 39 40 49 77 85 85 89 78 72	[609.2]S(+79.97)AL[284.2]
953	LLDTQEER	7	88	502.2564	2	12.035	0.2	95 96 96 93 68 74 84 89	LLDT[257.1]ER
955	T(+79.97)AHPPPTGTKR	7.1	64	414.8701	3	12.068	-2.7	47 47 63 46 50 61 77 89 92 97 31	[781.3]GTK[156.1]
956	RMQYNNVQTEVPR	9.1	70	545.6067	3	12.078	-0.8	32 47 41 63 66 88 92 83 93 89 89 89 31	[692.3]NVQTEVP[156.1]
957	SSGYETDALRK	8.5	77	613.8045	2	12.089	0.6	31 69 70 76 93 96 94 94 80 79 56	[394.1]ETDAL[284.2]
958	KNLHELEEAEER	7.4	61	499.5826	3	12.099	-0.4	38 37 40 65 85 96 31 31 31 96 96 86	[492.3]EL[329.1]EER
959	TAHMFLCTLR	5.7	57	398.2032	3	12.109	-1.2	32 35 36 49 31 90 87 75 76 49	[587.3]LC[370.2]
961	WTPCHCGCRVR	6.5	59	439.8642	3	12.142	1.5	58 51 63 52 31 51 81 80 63 78 31	[727.3]GC[411.3]
962	T(+79.97)SNAKEEAEQPEK	10.2	78	770.8289	2	12.152	-1.3	88 88 86 96 94 94 98 96 91 53 42 54 31	T(+79.97)SNAKEEAE[482.2]

963	KALQLEAK	5.9	73	300.8551	3	12.163	-0.5	63 63 79 73 90 88 93 31	[440.3]LEA[128.1]
964	VVKSGK	3.5	59	309.2032	2	12.173	1.9	31 31 92 82 83 31	[198.1]KSG[128.1]
967	WFYHVLFAEER	7.9	71	374.9385	4	12.214	0.2	31 31 78 78 78 61 60 80 97 97 89	[992.5]AEER
968	HM(+15.99)CPMLR	4.8	69	452.2029	2	12.225	-1.5	31 31 96 93 85 86 57	[284.1]CPML[156.1]
969	KVQHELEEAEER	8.5	71	748.8698	2	12.234	-1	63 64 61 97 98 99 31 31 31 94 94 80	[355.2]HEL[329.1]EER
970	HDLAPER	4	57	419.2138	2	12.245	-1.1	31 88 68 66 82 31 31	[137.1]D[184.1]P[285.1]
973	KEM(+15.99)EEEQEAK	6.8	68	633.7778	2	12.289	-2.6	49 49 41 31 99 96 88 91 95 31	[533.2]EEQEA[128.1]
974	ELTYQTEEDKK	9.6	88	692.3353	2	12.299	-0.4	64 68 89 93 87 95 96 95 94 95 82	[242.1]TYQTEEDKK
975	Y(+79.97)LLLM(+15.99)T(+79.97)GPSGPAGRRR	10.3	64	640.968	3	12.309	-1	32 32 37 36 49 59 95 93 92 95 87 79 79 57 57 45	[910.3]GPSGP[596.4]
980	VQELTYKTEEDKK	9.4	72	537.6138	3	12.375	-0.1	54 50 50 61 72 77 81 93 95 74 72 85 67	[733.4]KTE[244.1]K[128.1]
982	SQVADLM(+15.99)R	5.7	71	468.2342	2	12.398	-0.3	72 65 92 95 92 85 31 31	[215.1]VADL[303.1]
983	CPGM(+15.99)EQMKEAK	7.2	65	634.2794	2	12.407	2.8	32 42 42 73 94 72 93 67 82 83 31	[404.1]E[128.1]M[128.1]EA[128.1]
986	ET(+79.97)LAAGNSQLGPSGQLK	12.1	71	875.9214	2	12.448	-0.9	31 48 43 85 96 95 90 95 86 94 91 74 68 73 46 47 39	[423.1]AAGNSQLG[610.3]
989	KTGTDAPAPNK	6.9	63	367.1959	3	12.476	-0.8	75 75 62 45 42 48 56 78 90 80 31	[741.4]PN[128.1]
991	GFLGSDTHDK	7.1	71	538.754	2	12.509	0	78 83 94 94 92 90 58 50 39 31	[57.0]FLGSD[481.2]
992	CCPPAGCLR	5.4	61	460.2002	2	12.519	-1.7	31 31 31 90 88 74 75 88 31	[303.1]PA[160.0]L[156.1]
994	HDNEANGDVLGKGGVNR	10.5	62	876.4225	2	12.539	-2.4	68 67 66 63 59 45 46 62 68 90 82 78 67 56 44 43 38	[951.4]LG[611.4]
995	LY(+79.97)KRPGFGAAPAGGDNHK	10.9	61	645.9804	3	12.549	2.2	37 55 41 41 61 68 61 72 77 71 49 66 72 92 77 50 52 38	[1365.7]G[494.2]
997	EFDKHLGK	5.6	70	325.1747	3	12.584	-0.7	31 72 69 76 85 70 76 75	[519.2]H[298.2]
998	AAPSEAAAAAGTSPTK	12.5	78	700.8541	2	12.594	-0.5	31 61 60 60 65 85 95 97 98 95 94 95 94 84 92 31	[455.2]AAAAAGTSPT[128.1]
999	YETDALQR	7.4	92	498.2428	2	12.604	-0.8	94 95 96 94 94 94 87 81	YETDALQR
1001	VQDPAGSSGPSGPQGSR	11.5	67	792.3734	2	12.627	-0.8	37 37 46 49 56 92 96 96 90 81 80 89 65 57 60 74 31	[510.2]GSSGPSG[525.3]
1003	FLTY(+79.97)TVSSKFR	6.8	62	476.9013	3	12.661	-2.1	36 36 44 38 39 67 97 92 82 86 55	[804.3]SSKF[156.1]
1004	EKEHNHPMR	5	56	393.1884	3	12.671	-2.2	38 36 38 72 66 93 91 31 31	[637.3]HP[287.1]
1009	WRLFNYEVKCPR	6.8	56	403.462	4	12.738	0.3	34 34 48 52 52 50 42 60 83 92 93 31	[1107.6]KCP[156.1]
1010	QNDSGSSNVFR	8.4	76	605.7758	2	12.749	-0.3	59 55 91 97 98 97 94 88 93 31 31	[242.1]DSGSSNV[303.2]
1011	VVWT(+79.97)RTPACNHVR	8.2	63	540.259	3	12.759	-3.1	44 44 39 39 48 51 94 92 90 76 83 84 31	[822.4]PAC[114.0]HV[156.1]
1013	EY(+79.97)PFWNNLR	5.3	59	330.3959	4	12.782	0.4	31 31 31 31 69 78 73 96 85	[1030.4]LR
1015	QFAGDDAPR	7	78	488.7281	2	12.815	0.7	63 86 95 98 98 96 96 31 31	[128.1]FAGDDA[253.2]
1018	LY(+79.97)NFKGTAGGPGSPNAQR	11.5	64	638.9659	3	12.845	-1.3	31 38 36 36 56 92 94 87 74 62 67 82 91 73 67 52 61 39	[745.3]GTA[211.1]GS[566.3]
1021	KSTKSTECAEER	8.7	72	456.8844	3	12.889	-2.7	32 32 33 40 57 86 97 98 98 98 98 90	[531.3]TECAEER

1022	FQAGDDAPR	6.3	70	488.728	2	12.897	0.5	55 57 81 91 94 92 91 31 31	[275.1]AGDDA[253.2]
1024	VQHELEEAEER	8	73	684.8228	2	12.917	-0.4	73 68 95 98 99 31 31 31 94 94 81	[227.1]HEL[329.1]EER
1025	M(+15.99)DNM(+15.99)MCPR	5.7	71	515.1833	2	12.927	-2.5	68 65 63 88 87 80 80 31	[376.1]M(+15.99)MCP[156.1]
1029	Y(+79.97)CKM(+15.99)VRYQSWNASLQMGPR	11.2	59	805.3587	3	12.977	0.5	32 57 34 35 37 31 42 45 62 68 90 77 78 89 74 85 74 72 31	[1440.6]N[158.1]L[128.1]M[310.2]
1033	KLAEQDEEMEKLKR	10.7	76	582.9733	3	13.029	-0.1	84 64 67 75 65 90 95 31 95 91 91 86 73 55	K[441.2]DE[129.0]MEKL[284.2]
1035	RRWWEMGVMDLKR	7.4	57	588.3045	3	13.048	-0.1	31 32 31 47 74 75 81 77 74 55 53 62 42	[944.4]G[742.4]
1036	KVVGNEYVTK	7.7	77	379.5482	3	13.057	-1	31 85 89 88 86 93 91 96 31 76	[128.1]VVGNEYV[229.1]
1037	KLAEKDEEMEQLKR	10.6	76	873.9559	2	13.064	-0.5	74 79 89 95 96 97 98 31 95 92 50 59 52 45	[241.2]AEKDE[129.0]ME[525.3]
1039	WEHSSKGAVCR	6.9	62	315.6548	4	13.095	1.8	50 53 53 57 49 45 53 59 85 91 85	[882.4]VCR
1040	RLST(+79.97)AM(+15.99)CLLR	6.4	64	420.5373	3	13.102	-2.2	34 39 40 83 58 60 94 94 96 31	[356.2]T(+79.97)[218.1]CLL[156.1]
1041	HQGVMVGMGQK	9.1	83	586.2885	2	13.11	-1.1	92 90 96 96 96 96 92 88 61 62 38	HQGVMVGM[313.2]
1042	M(+15.99)HHFVGNTTK	5.7	57	396.5262	3	13.117	1.3	31 31 31 31 97 93 72 75 76 31	[568.2]VG[444.2]
1043	RMLS(+79.97)TSLLCR	6.2	62	630.3022	2	13.126	-2.3	50 46 58 59 84 82 90 81 33 31	[567.2]TSLL[259.1]
1046	T(+79.97)SNAQEEANNAR	9	75	692.777	2	13.166	-1.4	97 97 93 97 92 98 97 89 37 33 33 31	T(+79.97)SNAQEEA[455.2]
1047	CAQDDPTGGQSVAR	12.1	86	702.8106	2	13.176	-2.3	70 75 72 96 98 97 94 80 83 87 93 92 93 72	[302.1]DDPTGGQSVA[156.1]
1048	Y(+79.97)YFEVGSPTGDTRARK	10.3	64	642.9645	3	13.185	2.4	31 31 35 41 41 76 88 95 94 96 89 87 87 58 37 35	[838.3]SPTGDTR[355.2]
1051	LLAPEPR	4.9	70	398.2395	2	13.228	-0.6	98 98 97 98 31 31 31	LLAP[382.2]
1052	FTQVLHHGNMK	6.6	60	328.6709	4	13.235	-0.5	45 45 38 40 56 91 89 86 57 61 41	[588.3]HHG[373.2]
1053	RHT(+79.97)LHAPGTTR	6.1	56	442.8869	3	13.242	2.7	31 31 31 67 53 81 85 67 66 61 31	[724.3]AP[415.2]
1054	TFQVLHHGNMK	8.8	80	656.3344	2	13.25	-0.7	72 72 66 96 98 98 95 80 67 73 53	[376.2]VLHHG[373.2]
1055	T(+79.97)TTLLASLGTKR	7.9	66	447.9084	3	13.26	-2.2	32 32 48 65 71 74 89 93 83 84 85 31	[680.3]SLGTK[156.1]
1059	WLYWFDGGKR	6	60	332.6693	4	13.307	-1.9	32 32 35 37 52 79 82 81 84 83	[910.4]GGKR
1060	HHLQEMALLEQNK	9	69	530.9395	3	13.317	-1.1	31 91 86 56 69 84 73 74 95 90 50 55 40	[137.1]HL[257.1]M[184.1]LE[370.2]
1061	LHSQLTGSGLNSK	8.9	69	671.3593	2	13.327	-0.6	31 98 93 70 69 70 78 44 44 49 82 91 67	[113.1]HS[656.3]NS[128.1]
1063	KAEPAPEPVAAPAPK	10.8	72	736.9088	2	13.359	-0.3	92 92 94 31 31 31 93 86 86 88 95 81 54 85 31	KAE[265.1]EPVAAP[71.0]P[128.1]
1064	NAEPTASPLR	7.5	75	528.2776	2	13.368	0	68 72 90 92 91 91 92 84 31 31	[185.1]EPTASP[269.2]
1065	SPLGSPSDDDFANKR	10.3	69	803.3801	2	13.376	1.7	31 81 83 92 94 97 93 77 97 31 72 49 44 46 39	[87.0]PLGSPS[115.0]D[731.4]
1066	TLKSGECDPTK	8.9	81	589.7896	2	13.387	-0.2	84 90 97 97 90 76 73 92 78 78 31	TLKSG[232.1]D[326.2]
1067	KYSSHFSASPK	7.5	68	413.5424	3	13.396	-3	38 38 41 93 93 88 83 80 77 81 31	[378.2]SHFSA[87.0]P[128.1]
1069	WRWLTPAEAAGDSARR	9.7	61	461.4888	4	13.428	-1.3	34 33 32 46 51 51 46 51 65 77 85 92 92 89 91 31	[1181.6]GDSAR[156.1]
1071	HLKT(+79.97)Y(+79.97)RGQRELK	6.8	57	422.9552	4	13.447	-2.5	32 33 42 44 44 58 65 86 87 66 88 31	[1015.4]QR[129.0]L[128.1]

1076	RKMQEMPESKAQR	7.9	60	540.275	3	13.509	-2.9	33 35 35 37 86 94 94 88 75 45 53 48 55	[543.3]EMPE[570.3]
1077	RFPVKWCSSAGFR	7.9	61	385.9527	4	13.516	3.2	33 36 34 37 41 64 71 94 86 86 85 86 31	[916.5]SSAGF[156.1]
1078	NSM(+15.99)QTVSSQFR	9.2	84	650.8007	2	13.526	-0.6	55 56 60 86 96 97 99 95 94 97 82	[348.1]QTVSSQFR
1079	LTENADFGR	7.3	81	511.7485	2	13.533	-0.4	97 97 97 91 93 94 88 31 31	LTENADF[213.1]
1082	LNMKWFPGHYWR	6.9	57	545.6062	3	13.569	-0.4	77 36 36 36 35 54 73 78 83 53 80 42	[973.5]H[163.1]W[156.1]
1083	LAEKDM(+15.99)NGAEQLGVK	11.4	76	809.9083	2	13.578	-0.7	54 65 80 72 97 70 83 86 88 92 86 89 75 67 31	[184.1]E[128.1]D[147.0]NGAEQL[284.2]
1084	LQDLVDK	4	58	415.7339	2	13.587	-1.5	31 88 93 94 31 31 31	[113.1]QDL[342.2]
1085	KHQWRRLRCDDGFAR	8.5	57	486.7536	4	13.596	2.2	37 38 38 58 56 32 43 46 73 82 91 81 71 63 31	[1263.7]DDG[374.2]
1087	HDCDLLR	4.2	60	436.208	2	13.626	-0.4	31 31 31 95 95 98 31	[355.1]DLL[156.1]
1088	T(+79.97)PRDWATVPQPTSGTK	10.8	68	607.9549	3	13.633	-1.5	31 44 36 50 52 86 96 96 94 84 90 89 83 59 55 31	[735.3]ATVPQPTS[286.2]
1089	T(+79.97)Y(+79.97)RRVPALSAVPM(+15.99)R	7.9	57	598.2841	3	13.642	2.7	31 31 31 31 62 50 46 47 71 92 92 81 90 31	[1203.5]AVPM(+15.99)[156.1]
1090	GSPLGMSGPR	6.6	66	479.7424	2	13.652	0.1	31 31 94 94 96 92 82 57 43 31	[144.1]PLGMS[310.2]
1093	MLTNLR	4.7	78	374.2127	2	13.689	0	88 88 90 73 74 53	MLT[383.2]
1094	RFEM(+15.99)RWKYEEVAR	7.5	57	454.7302	4	13.696	1.6	33 33 31 85 33 37 37 44 82 79 89 90 65	[432.2]M(+15.99)[633.3]E[129.0]VA[156.1]
1095	MCPGPVPKR	5.9	65	492.7608	2	13.703	2.6	89 89 89 90 91 31 35 33 34	MCPGP[480.3]
1099	TGEKTEELANMK	7.7	64	450.8902	3	13.751	-0.5	37 43 49 42 41 42 93 96 90 83 84 61	[645.3]ELANM[128.1]
1100	LDEAENLAM(+15.99)K	9.2	92	575.2762	2	13.758	-0.3	94 95 97 98 96 86 92 93 97 71	LDEAENLAM(+15.99)[128.1]
1101	ASETEKELANMK	10.6	88	675.8317	2	13.765	-0.5	62 67 88 97 97 97 96 97 95 92 93 74	[158.1]ETEKELANM[128.1]
1102	LLKDPEATGSLKK	8.1	62	467.2762	3	13.772	-0.9	34 46 44 58 81 96 95 91 60 48 52 63 31	[469.3]PEAT[513.3]
1105	NAGEVAQWR	7.8	87	515.7569	2	13.807	0.1	56 62 92 94 97 98 92 97 90	[185.1]GEVAQWR
1107	NLEVTVK	5.1	73	401.7369	2	13.821	-0.3	31 99 96 96 90 31 61	[114.0]LEVT[227.2]
1108	QY(+79.97)NLWLMTLEK	6.5	59	380.4313	4	13.827	-1.8	55 58 57 50 46 40 48 70 92 93 31	[1129.5]LE[128.1]
1111	FLKVMNY(+79.97)SSNHDAVKPK	9.8	58	686.6672	3	13.863	-0.4	31 42 50 87 58 54 41 55 92 83 73 62 56 56 52 51 31	[388.2]V[575.1]SN[775.4]
1112	ANGEVAQWR	7.5	84	1030.505	1	13.872	-1.8	72 73 87 88 94 94 79 88 72	[185.1]GEVA[128.1]W[156.1]
1113	NAGQVAEWR	6.7	74	515.7562	2	13.881	-1.3	36 37 55 58 91 96 97 97 95	[370.2]VAEWR
1114	LAEKDEEMEQLK	7.3	61	488.2408	3	13.888	-1.1	37 35 37 37 64 67 31 97 91 76 87 61	[814.4]ME[128.1]L[128.1]
1115	GQGLAANLDK	7	70	493.7662	2	13.895	-1.3	50 58 90 94 95 54 50 78 92 31	[185.1]GLA[298.2]D[128.1]
1117	AEPAPELGPAAPPK	8.6	61	672.8615	2	13.923	-0.1	31 31 31 31 31 95 83 66 61 91 91 84 89 31	[465.2]EL[154.1]AAPP[128.1]
1118	AGRGNYSAGTYPR	8.5	65	457.2248	3	13.93	-0.5	63 45 37 38 47 85 66 62 67 72 93 93 78	[455.2]Y[316.1]YP[156.1]
1119	M(+15.99)T(+79.97)VAGTSKTPGRKR	9.6	68	793.3996	2	13.937	2.5	44 67 56 93 94 94 96 96 84 63 46 42 39 35	[427.1]AGTSKT[594.4]
1120	LMAENGAGVGPTSSTSR	12.3	72	817.8937	2	13.946	0	48 54 82 90 89 92 91 96 97 93 78 73 88 31 59 31 31	[244.1]AENGAGVG[198.1]S[431.2]

1121	Y(+79.97)KPAKSDR	4.8	60	522.7463	2	13.956	-1.8	63 62 50 92 66 55 56 31	[468.2]A[486.3]
1123	KMM(+15.99)RCPRPFAGLVR	8.5	61	420.2283	4	13.986	3.1	35 34 33 49 51 61 56 78 76 87 85 83 84 31	[1162.6]AGLV[156.1]
1124	KGKAYTQQVEELQR	10.1	72	559.9685	3	13.993	-0.4	31 87 58 53 56 64 59 73 95 96 92 83 85 66	[128.1]G[719.4]VEELQ[156.1]
1125	KNCVWVPLYR	6.4	64	426.566	3	14.001	0.9	32 39 41 80 89 91 81 74 76 31	[345.1]VWVP[432.2]
1126	M(+15.99)TQKVEELKR	7.6	76	639.3458	2	14.008	-3	84 84 60 71 95 97 91 67 68 41	M(+15.99)T[256.2]VEE[397.3]
1130	QVS(+79.97)PPTVSSKFR	9.4	78	471.5697	3	14.055	0.9	50 50 50 85 79 70 99 99 97 92 94 71	[394.1]P[198.1]VSSKF[156.1]
1131	KGGSMQTVSSQFR	11.9	92	706.8507	2	14.062	-0.6	96 91 88 87 87 88 96 96 98 93 91 96 81	KGGSMQTVSSQFR
1132	LLDPEATGSLKK	9.2	77	636.3634	2	14.069	-0.7	96 97 97 98 87 68 68 78 60 59 75 31	LLDPE[685.4]
1135	RWPLY(+79.97)Y(+79.97)KKY(+79.97)RQHLSAKR	9.7	57	507.442	5	14.103	-0.4	34 37 35 45 37 43 45 39 41 41 60 61 93 94 91 92 71	[1958.8]LSAK[156.1]
1137	NLPDLGDNR	6.4	71	1013.501	1	14.12	-0.2	67 76 82 91 97 80 64 44 31	[227.1]PDLG[385.2]
1138	GSNAMKTVSSQFR	9.6	74	706.8511	2	14.126	0	37 42 41 44 50 93 94 95 98 94 89 96 79	[460.2]KTVSSQF[156.1]
1141	RRHYSEVDNEQR	8.4	70	530.2571	3	14.163	-0.5	31 33 45 45 67 75 95 97 89 86 87 86	[828.4]VDNEQR
1142	RVDLESEVDNEQR	11.2	86	794.8818	2	14.171	0.2	91 90 95 96 95 92 92 95 96 69 63 66 75	RVDLESEVD[527.2]
1144	SFACAVK	5.6	80	363.1862	2	14.189	0.1	90 90 97 83 82 82 31	SFACAV[128.1]
1145	LRMDLER	4.9	71	311.5042	3	14.197	-0.1	32 32 72 78 91 97 89	[515.3]LER
1147	HDM(+15.99)FPER	6.1	87	474.2076	2	14.224	4.1	96 96 96 96 96 96 31	HDM(+15.99)FPE[156.1]
1148	NSVGGSSGCMR	6.1	55	1054.443	1	14.232	2.8	31 95 93 92 84 42 31 35 33 33 31	[114.0]SVGG[621.2]
1149	KVAEQELVDASER	11.7	90	737.3809	2	14.239	0.2	95 95 97 98 91 97 98 99 98 92 77 73 49	KVAEQELVDA[372.2]
1150	KKDFETSQLLSK	10.3	85	712.3934	2	14.246	0.3	98 97 96 97 94 92 68 59 71 90 91 68	KKDFET[328.2]LS[128.1]
1151	S(+79.97)PNSSGRNR	7	78	527.7253	2	14.253	0.8	93 94 89 95 94 76 63 58 31	S(+79.97)PNSS[483.3]
1153	LLAEEKNVDASER	11.3	87	737.3815	2	14.281	0.9	90 94 94 97 97 95 90 96 98 87 72 68 50	LLAEEKNVDA[372.2]
1154	QSEEYKKALLSK	7.2	60	356.7002	4	14.288	0	37 37 39 47 32 32 59 82 93 94 94 74	[892.4]ALLS[128.1]
1155	EYVTTLR	4.5	64	441.2399	2	14.296	-0.1	88 88 77 70 50 38 33	EY[570.3]
1156	GPAGPLGATGM(+15.99)SGPAGR	13.3	78	735.3608	2	14.303	-1.4	83 91 92 97 98 96 94 94 96 94 94 34 41 45 67 71 31	GPAGPLGATGM(+15.99)[525.3]
1157	ELTALASLECK	8.7	79	589.3104	2	14.312	0.2	73 81 93 95 97 97 94 93 78 31 31	[129.0]LTALASL[360.1]
1160	WRGRELVDASER	8.2	69	491.9232	3	14.345	-0.2	39 38 36 40 44 68 98 99 95 90 90 81	[797.4]VDASER
1161	VLADWK	3.8	63	366.2079	2	14.352	0	31 97 93 93 31 31	[99.1]LAD[314.2]
1165	NTVADLMR	7	88	460.2368	2	14.392	-0.2	70 77 95 96 95 94 94 76	[215.1]VADLM[156.1]
1166	VLADWK	3.8	63	731.4083	1	14.398	-0.4	31 95 94 94 31 31	[99.1]LAD[314.2]
1167	SPLGSPSDDSVMNKR	9.1	61	795.3829	2	14.405	-0.1	31 68 67 73 74 90 92 31 95 78 42 41 38 48 36	[441.2]PS[115.0]D[715.4]
1168	SQVADLMR	6.6	82	919.4656	1	14.412	-1	74 62 76 89 93 93 94 74	[314.2]ADLM[156.1]

1169	LMVMAEK	4.1	58	411.2163	2	14.419	-0.7	31 31 94 94 91 31 31	[244.1]VMA[257.1]
1171	LLWM(+15.99)YPVAVHKK	7	58	500.9521	3	14.446	1.5	31 52 31 31 31 96 94 91 92 80 31 31	[722.3]PVAVH[256.2]
1173	SQVADLM(+15.99)R	5.4	68	468.2341	2	14.462	-0.5	72 64 94 86 86 76 31 31	[215.1]VAD[416.2]
1175	KAEPAPEPVAVPAPK	11	73	750.9243	2	14.476	-0.4	90 89 92 31 31 31 87 84 86 87 93 95 83 82 31	KAE[265.1]EPVAVPAP[128.1]
1179	HNYLACQEQANSYLSK	11	69	623.6251	3	14.522	0.6	57 63 48 41 37 37 40 90 71 97 91 92 92 88 88 62	[829.4]E[128.1]ANSYLS[128.1]
1180	Y(+79.97)NTVLLTWM(+15.99)PR	7.8	71	745.347	2	14.53	-2.7	70 76 74 90 97 97 94 79 31 31 31	[458.1]VLLT[586.3]
1181	KFAYSNAQEEAEEQPK	12.5	78	934.9341	2	14.537	-2.6	62 46 74 96 97 94 97 90 96 97 96 93 67 43 56 38	[346.2]YSNAQEEAE[482.2]
1183	LYVHMELLALK	8.7	79	443.9255	3	14.566	1.5	31 91 91 91 95 93 89 79 79 91 31	[113.1]YVHMEL[184.1]L[128.1]
1184	HGVKMNGPR	5.2	58	498.2631	2	14.573	-1.5	31 86 86 88 67 48 48 33 31	[137.1]GVK[555.3]
1185	LSAKSPSM(+15.99)DAK	8.9	81	575.7905	2	14.581	-3	98 98 97 97 96 70 70 65 89 31 71	LSAKS[331.1]D[199.1]
1186	NRCSPDDKDRQR	7.7	64	745.3486	2	14.588	-1.6	64 54 55 31 76 79 81 87 90 59 54 31	[672.3]DKD[440.3]
1187	KKEEEELLALK	9.1	83	665.3848	2	14.595	-0.1	98 97 97 99 31 89 93 94 88 85 31	KKEE[129.0]ELLAL[128.1]
1189	VFMGKM(+15.99)HTVM(+15.99)GAELR	9.7	65	580.2858	3	14.625	-0.5	31 39 38 38 37 38 42 91 95 93 92 91 87 87 68	[846.4]TVM(+15.99)GAEL[156.1]
1190	MSADAMLK	5.8	72	433.709	2	14.632	-0.3	98 96 94 86 61 52 48 37	MSAD[443.3]
1191	DGLLSKDDLR	6.5	65	377.8715	3	14.639	-0.2	34 34 47 69 63 67 86 87 87 69	[613.3]DDL[156.1]
1192	EVGLSKDDLR	7.3	73	566.3035	2	14.645	-0.4	36 36 51 59 87 86 86 93 98 92	[398.2]SKDDLR
1195	FFRFYTWVAGLVR	7.6	58	416.2304	4	14.68	2.9	31 34 34 33 36 83 66 88 84 85 76 70 31	[760.4]T[186.1]VAG[368.3]
1196	QGQAFTKQVEELKR	9.3	66	554.6375	3	14.687	0.7	51 43 42 55 79 69 55 55 85 87 91 77 78 51	[888.4]VEE[397.3]
1197	QPLAANLDQK	8.7	87	549.3017	2	14.695	1.1	65 81 87 98 97 95 95 94 80 77	[128.1]PLAANLDQ[128.1]
1199	SLNSADMLK	8.1	90	489.7499	2	14.707	0.1	89 89 88 96 94 92 91 92 71	SLNSADML[128.1]
1201	LWSLNFAPY(+79.97)TLRR	7.4	57	572.9611	3	14.734	3.9	31 31 59 59 47 54 55 48 67 77 78 94 31	[1385.6]R[156.1]
1203	KGQAFTQQVEELKR	10.9	78	831.4519	2	14.75	-0.2	39 52 49 97 98 97 85 83 94 97 92 76 77 48	[313.2]AFTQQVEE[397.3]
1204	SLNSADLMK	6.8	76	978.4919	1	14.757	-0.5	85 85 82 91 90 87 63 59 36	SLNSAD[372.2]
1205	NLELTVK	4.1	59	408.7448	2	14.765	-0.3	31 92 74 71 66 31 41	[114.0]L[570.3]
1207	LDEAENLAMK	9	90	567.2798	2	14.792	1.5	95 95 98 98 96 91 95 95 96 31	LDEAENLAM[128.1]
1208	SSREPAEQARHHRR	9.3	67	858.9393	2	14.799	-2.1	31 92 90 85 67 72 88 76 87 72 71 34 31 31	[87.0]SRE[168.1]E[128.1]A[742.4]
1209	EGNGTVMGAELR	9.5	79	617.2985	2	14.807	0.4	34 34 49 90 93 96 97 95 94 93 93 79	[300.1]GTVMGAEL[156.1]
1210	LDEAENLAMK	7.2	72	1133.551	1	14.813	0.2	86 87 94 92 83 76 61 54 51 31	LDEAE[557.3]
1213	LGNSADMLK	7.8	87	474.745	2	14.849	1	79 79 89 96 94 93 90 90 67	[170.1]NSADML[128.1]
1214	YMLDSLTYK	6.7	74	1133.552	1	14.855	-2.4	91 86 71 93 88 78 64 59 31	YM[113.1]DS[505.3]
1215	GLNSADLMK	6.1	68	948.4825	1	14.862	0.7	65 63 76 89 88 84 55 50 33	[284.1]SAD[372.2]

1220	ELDEQSLGAQLKQK	10.8	77	793.9225	2	14.913	-0.3	61 61 78 83 89 97 97 93 93 69 86 60 73 31	[357.2]EQSLGA[128.1]L[384.2]
1223	FVKALNSS(+79.97)R	5.4	60	551.2749	2	14.939	-2.3	31 61 63 71 78 78 93 31 31	[672.4]S[323.1]
1225	SNMQTVSSQFR	9.1	83	642.8033	2	14.967	-0.5	49 48 50 86 96 97 99 97 96 98 87	[332.1]QTVSSQFR
1226	LLTRAENGEFGR	6.9	58	454.9086	3	14.974	-0.8	33 33 33 36 51 72 89 95 95 88 31 31	[683.4]NGEF[213.1]
1227	RALMTKPWM(+15.99)GR	8.2	75	681.8593	2	14.981	-1.4	94 94 92 90 92 94 96 31 55 31 43	RALMTKP[546.2]
1228	VAVLHSQNTSLLNSKK	10.9	68	869.9937	2	14.988	-0.5	32 34 35 53 99 97 89 80 58 56 77 94 84 81 83 31	[382.3]HSQN[301.2]LNSK[128.1]
1229	NCNETVSSKFR	8.6	78	642.8033	2	14.996	-0.5	44 48 46 68 96 98 99 98 93 94 71	[460.1]TVSSKF[156.1]
1231	VAEQELVDASER	10.8	90	673.3336	2	15.024	0.5	68 72 89 88 96 96 97 99 97 94 94 87	[170.1]EQELVDASER
1233	NSM(+15.99)QTVSSQFR	8.4	76	650.8011	2	15.042	0.1	49 49 50 82 95 97 99 95 71 85 61	[348.1]QTVSS[128.1]F[156.1]
1234	RRLCAAMM(+15.99)AEELKK	9.2	66	555.957	3	15.05	-1.8	31 55 36 40 45 74 84 93 96 96 80 74 77 31	[670.4]MM(+15.99)AEE[369.3]
1235	WTTEKELANMFHSYSR	9.2	58	667.3141	3	15.057	-2.7	40 40 46 45 44 56 64 66 59 91 85 51 67 63 70 31	[1072.5]MF[630.3]
1237	AADYLAAGAQEPVER	11.6	78	520.9278	3	15.087	2.5	81 80 56 59 79 93 82 62 70 61 74 89 90 89 90	AA[391.2]AA[385.2]PVER
1238	SSPDLKEQAAMVER	12.1	86	780.8879	2	15.094	0.1	64 64 72 94 96 83 97 78 97 97 95 88 88 87	[271.1]DLKE[128.1]AAMVER
1239	DEKLAALVR	5.9	66	338.8695	3	15.102	-0.1	38 37 41 57 90 98 98 99 31	[485.2]AALV[156.1]
1240	DEKLAALVR	8	89	507.8008	2	15.108	0.2	94 91 93 97 98 96 94 97 31	DEKLAALV[156.1]
1241	ALLGSPSDDDMANK	11.4	82	717.3321	2	15.115	-0.5	32 86 94 97 97 98 98 31 90 89 89 87 88 61	[71.0]LLGSPS[115.0]DDMAN[128.1]
1243	WQLKELLDASER	8.7	73	496.6005	3	15.144	1.2	52 36 38 38 56 89 98 97 96 92 91 83	[684.4]LLDASER
1244	FYRKPS(+79.97)PAFVER	8.1	67	526.2592	3	15.151	-2.4	31 38 38 40 60 80 92 91 92 80 80 79	[691.4]S(+79.97)PAFVE[156.1]
1245	KVAEQELLDALCR	11.4	88	744.3958	2	15.16	-2.8	96 95 97 98 92 97 98 98 97 89 75 69 31	KVAEQELLDA[372.2]
1246	DHRHKSVGNHWR	6.7	56	510.2583	3	15.167	-1.6	31 33 33 32 31 87 83 82 72 62 68 49	[673.3]SVG[593.3]
1247	NRDLEEKAAMVER	11.4	87	780.8947	2	15.175	1.6	49 67 81 94 97 96 95 96 96 94 88 88 87	[270.1]DLEEKAAMVER
1249	TDLAAALAK	6.9	77	437.2562	2	15.204	1.3	95 95 97 96 89 85 57 40 31	TDLAAA[312.2]
1250	QVLELNKLQK	6.4	64	404.9155	3	15.21	1	54 61 62 74 86 81 59 63 51 45	[469.3]LN[497.3]
1251	FALPNRR	4.4	62	873.5052	1	15.217	-0.1	31 93 92 95 59 31 31	[147.1]ALP[426.2]
1252	VSKYSNNDAVR	6.8	62	418.2148	3	15.223	1.3	31 46 40 46 59 72 75 82 80 84 58	[792.4]DAV[156.1]
1253	ARCYLEQTR	6	66	570.285	2	15.229	0.1	65 66 90 80 95 57 45 54 41	[227.1]CYL[514.2]
1255	DAQLHLDDAVR	9.2	84	626.818	2	15.259	0.7	85 77 62 95 97 97 97 93 81 83 49	D[199.1]LHLDDAV[156.1]
1256	KTTAAAMTPLK	8.3	75	378.2181	3	15.265	0.3	31 75 85 89 95 94 90 86 71 72 31	[229.1]TAAAMT[338.2]
1257	AVLTLK	3.7	61	322.7207	2	15.272	0.1	31 31 95 88 88 31	[170.1]LTL[128.1]
1258	KDFETSQLLSK	10.2	93	648.3456	2	15.278	0	96 96 98 98 97 93 82 92 94 94 75	KDFETSQLLS[128.1]
1259	YLSGQEGGAAELEGSLK	12.7	74	854.9232	2	15.284	0.1	86 76 68 70 78 83 81 80 91 95 94 92 87 52 45 46 31	Y[385.2]EGGAAELE[385.2]

1261	LAENHLDDAVR	8.1	73	626.8175	2	15.313	-0.1	37 51 59 84 96 96 97 92 74 76 41	[313.2]NHLDD[326.2]
1262	LQEAEEQLEAVNSK	11.9	85	794.3963	2	15.32	-0.5	67 63 91 93 97 89 84 97 97 96 95 76 88 48	[241.1]EAEEQLEAV[114.0]S[128.1]
1263	RQRVFS(+79.97)TGSGYPR	7.5	58	398.443	4	15.328	-2.1	48 41 35 39 45 36 37 47 65 79 91 96 86	[1155.5]YPR
1265	DTLAAALAK	6.7	74	873.5033	1	15.347	-0.8	80 85 90 92 95 93 62 33 31	DTLAAA[312.2]
1267	RSTEPSVTMK	8	80	1135.575	1	15.375	-2.8	88 88 93 96 96 96 79 63 64 31	RSTEPS[459.3]
1268	RPSAPGQVLSEK	9	75	634.8512	2	15.382	-0.5	31 97 96 95 76 70 62 87 92 72 72 43	[156.1]PSA[282.1]VL[344.2]
1269	AEPAPEPVAVAPPK	9	65	686.8773	2	15.39	0.2	31 31 31 31 31 85 83 85 88 94 96 89 90 31	[465.2]EPVAVAPP[128.1]
1270	WTFCDNPGLREPR	8	62	530.9222	3	15.397	2.4	31 37 35 56 73 47 52 85 85 88 88 90 31	[863.3]GLREP[156.1]
1271	Y(+79.97)KKGFLYALTNTNM(+15.99)LKMVR	10.9	57	1194.101	2	15.405	-2.7	73 64 46 41 41 56 40 46 55 58 77 82 87 59 65 51 53 50 31	[1378.7]TN[774.4]
1273	LLTENGEFGR	7.3	73	568.2912	2	15.438	0.9	98 98 97 83 55 62 79 87 31 31	LLTE[300.1]F[213.1]
1277	KHSARSK	4.1	58	407.2392	2	15.48	2.6	31 80 77 77 48 50 39	[128.1]H[529.3]
1279	LLTENGEGFR	7.9	79	1135.575	1	15.509	0.3	94 94 94 95 92 90 88 74 31 31	LLTENGE[360.2]
1282	SGCPEAKEKADSYPCK	11.6	73	856.8842	2	15.538	-0.3	58 68 84 93 59 54 54 80 91 89 82 85 81 65 81 31	[144.1]CP[328.2]EKADSY[97.1]C[128.1]
1285	QLEAEEQLEAVNSK	12.3	88	794.3971	2	15.579	0.5	68 73 94 97 99 96 89 96 97 97 96 81 92 52	[241.1]EAEEQLEAVNS[128.1]
1287	NEELEAMVK	7	78	1062.514	1	15.598	0.1	66 71 93 96 94 87 70 86 31	[243.1]ELEA[131.0]V[128.1]
1288	NEELEAMVK	7.4	83	531.7609	2	15.606	0.8	66 71 97 97 95 94 92 96 31	[243.1]ELEAMV[128.1]
1289	EEQYPFAATNRGLSK	10	67	570.9527	3	15.613	-0.5	41 41 41 53 57 41 81 92 90 88 88 89 82 82 31	[793.3]AATNRGLS[128.1]
1291	FEELLTR	5.1	73	454.2482	2	15.642	0.9	31 31 96 97 92 89 72	[276.1]ELLT[156.1]
1292	QAYTAGQVEELK	9.4	79	668.8413	2	15.649	0.8	70 82 90 93 89 88 84 88 96 95 31 31	[128.1]AYTAGQVEE[241.2]
1293	VLDSPGPPVNVK	8.4	70	611.3458	2	15.656	0.5	31 31 31 31 95 94 94 87 87 81 94 80	[414.2]PGPPVNVK
1294	SM(+15.99)M(+15.99)EQSQLKEYK	10.4	87	767.3484	2	15.663	-1.8	94 94 94 98 90 95 74 96 88 95 87 31	SM(+15.99)M(+15.99)EQS[128.1]LKEY[128.1]
1295	VVVAPM(+15.99)YSVAPPK	10.8	83	687.3793	2	15.671	1.2	66 79 80 92 96 94 85 90 89 92 89 90 31	[198.1]VAPM(+15.99)YSVAPP[128.1]
1297	LVDSM(+15.99)QATLDSEVR	12.8	91	790.3858	2	15.7	0.8	70 78 91 97 96 88 97 97 98 97 94 89 89 88	[212.2]DSM(+15.99)QATLDSEVR
1298	QSEEAEEQANSYSLK	10.9	73	856.884	2	15.707	-0.1	47 48 76 90 31 98 96 89 96 91 93 77 58 55 39	[344.1]E[71.0]EEQANS[491.3]
1299	DPDSFKATLDSEVR	11.6	83	790.3858	2	15.716	2.9	51 50 56 72 75 95 97 97 97 97 94 89 89 88	[561.2]KATLDSEVR
1304	KGQAM(+15.99)TQKVEELK	9.1	70	753.4042	2	15.771	1.2	54 68 61 96 94 91 49 52 86 94 93 31 31	[313.2]AM(+15.99)T[256.2]VEE[241.2]
1305	KGKMSNDKVEELK	7.8	60	502.6051	3	15.778	1.1	31 78 40 38 40 64 81 83 87 88 79 31 31	[645.3]DKVE[370.2]
1306	LVLVGHGHK	5.1	56	959.5801	1	15.785	1.7	31 31 84 83 85 55 50 52 31	[212.2]LVG[459.2]
1311	LEDEQSLGAQLQK	11.6	89	729.8746	2	15.833	-0.9	82 81 95 96 88 94 94 96 96 86 91 78 75	LEDEQSLGAQL[256.2]
1313	EGAVDSMLPAQK	8.6	72	623.3103	2	15.849	-0.7	38 45 71 88 96 94 92 93 77 66 63 31	[257.1]VDSML[424.2]
1316	LDEANELALK	8	80	558.3004	2	15.885	-0.7	96 96 98 95 50 51 89 94 90 31	LDEA[243.1]LAL[128.1]

1318	TGLSNMGSYNSSHLQK	12.1	75	862.4061	2	15.899	-1.1	34 36 45 86 91 97 97 92 70 64 93 98 94 72 76 53	[271.2]SNMGS[277.1]SSH[369.2]
1319	GYSFVTTAER	7.6	76	1130.547	1	15.907	-0.9	74 73 89 92 93 93 87 59 60 34	[220.1]SFVTT[356.2]
1321	M(+15.99)TANEEVKAALKR	8.8	67	492.9318	3	15.937	-2.1	33 33 34 43 84 92 93 95 95 81 70 71 46	[433.2]EEVKAA[397.3]
1322	ELTALAALECK	8.5	77	581.3128	2	15.944	0	65 76 90 95 97 98 94 89 76 31 31	[242.1]TALAAL[360.1]
1323	FDELLGR	4.9	69	425.2271	2	15.95	0.6	31 31 96 98 98 96 31	[262.1]ELLG[156.1]
1324	KAM(+15.99)TQQVEELKR	9.4	78	738.8939	2	15.957	-2.3	51 63 61 95 87 83 85 94 94 79 80 56	[346.2]TQQVEE[113.1]K[156.1]
1325	WLHHTFYNELR	8.1	73	505.9212	3	15.964	-0.1	37 37 62 91 91 93 79 82 63 89 75	[436.2]HTF[163.1]N[129.0]L[156.1]
1327	MVSLLQEK	6.8	85	474.2655	2	15.993	0.8	99 99 99 31 96 83 92 80	MVS[113.1]LQEK
1328	EALVSQLTR	6.3	70	1016.574	1	15.999	0.1	94 92 93 90 81 46 45 45 37	EALVS[498.3]
1329	EALVSQLTR	7.6	85	508.7907	2	16.005	0.7	55 70 84 97 94 85 94 96 86	[200.1]LVSQLTR
1330	MVSLLQEK	6.3	78	947.523	1	16.011	0	93 93 93 31 93 70 84 63	MVS[113.1]L[128.1]E[128.1]
1331	LQDAEEQLEAVNSK	11.9	85	787.3887	2	16.017	-0.2	52 48 89 96 98 97 90 97 97 96 95 80 91 53	[241.1]DAEEQLEAVNS[128.1]
1333	MVSLLQEK	6.4	80	474.265	2	16.046	-0.3	97 97 97 31 93 73 76 69	MVS[113.1]L[385.2]
1334	ELTALAPSTMK	8.6	78	1161.617	1	16.052	-1.4	92 91 89 91 97 97 83 74 55 56 31	ELTALAP[447.2]
1335	QALVSENKK	6	66	1016.572	1	16.06	-1	78 92 93 95 82 43 38 38 33	[128.1]ALVS[499.3]
1336	KLTANAAMWR	6.7	67	581.3125	2	16.066	-1.8	63 73 89 93 95 94 45 38 38 39	[241.2]TANA[544.3]
1337	QAFTEQVEKNKR	9.2	77	739.3947	2	16.073	4.2	68 80 89 94 85 60 61 90 88 70 79 55	[128.1]AFTE[227.1]EK[398.2]
1339	EYEGQAELEGSLK	10.3	79	726.8455	2	16.101	-1	31 98 97 96 90 97 98 97 94 70 66 61 31	[129.0]YEGQAELE[385.2]
1340	LLTEDGEFGR	7.5	75	568.7823	2	16.109	-0.9	95 97 96 94 75 68 76 83 31 31	LLTE[301.1]F[213.1]
1341	YTAGDPAK	5.3	66	822.3978	1	16.115	-1.6	69 69 86 86 84 67 31 31	[264.1]AGD[296.2]
1342	TTKDPMM(+15.99)CLVQVR	7.2	55	513.257	3	16.122	1.9	64 69 52 44 45 63 56 55 55 60 45 64 42	[1518.7]
1343	YLVDDNVGMR	7	70	591.2838	2	16.129	-1.4	31 31 31 98 95 90 96 94 94 31	[375.2]DDNVGM[156.1]
1345	QVTEEMASQDESVAK	11.5	76	826.3782	2	16.157	0.7	48 50 88 96 98 98 98 97 91 97 93 61 47 47 31	[227.1]TEEMASQDE[385.2]
1346	SEVSSPMASQDESVAK	11.7	73	826.3782	2	16.165	0.7	56 59 88 75 74 79 95 97 94 83 95 92 58 42 42 31	[216.1]V[271.1]MASQDE[385.2]
1347	SPTDAAMLFSELQK	9.5	68	769.3835	2	16.173	2.1	46 48 54 74 90 93 90 72 60 63 77 67 66 49	[400.2]AAM[845.5]
1349	YEEGQAKDEKTR	9.2	77	727.3478	2	16.19	-2.3	31 99 97 94 75 91 79 92 93 65 67 35	[163.1]EEG[128.1]A[128.1]DE[385.2]
1352	LLTEPADM(+15.99)GR	7.2	72	559.7777	2	16.226	-2.5	97 97 97 97 38 36 42 78 79 54	LLTE[643.3]
1355	NSPLYDK	5.1	72	836.4146	1	16.249	-0.2	64 71 86 90 79 81 31	[201.1]PL[163.1]D[128.1]
1357	RHWRVNTSLLNSK	8.6	66	537.6339	3	16.277	-0.2	33 33 32 71 61 82 93 94 91 83 62 77 45	[734.4]NTSLL[329.2]
1358	AVVLHSQNTSLLNSK	10.6	71	805.9462	2	16.285	-0.5	38 38 38 31 99 95 84 78 83 82 86 93 73 87 49	[382.3]HSQ[114.0]TSLL[114.0]S[128.1]
1359	VAEQELLDASER	10.8	90	680.3406	2	16.293	-0.8	63 68 88 88 96 97 98 97 97 94 95 90	[170.1]EQELLDASER

1361	YFAPKKNTSLLNSK	10.9	78	805.9462	2	16.306	-3	31 31 92 91 94 91 84 86 91 92 88 72 87 52	[310.1]APKKNTSLL[114.0]S[128.1]
1363	SPEDKLSELKAK	9.6	80	672.8718	2	16.335	-0.4	85 85 92 97 94 66 58 72 92 92 93 31	SPEDK[329.2]LKA[128.1]
1364	Y(+79.97)EHLPVLWKAPSGESKGK	10.9	61	702.6874	3	16.344	2.7	78 37 35 36 54 57 83 56 39 40 50 72 88 89 85 76 76 31	[818.3]L[569.3]GES[313.2]
1366	EQM(+15.99)EEEQEAKAELKR	12.2	81	932.4387	2	16.361	-2.7	56 60 60 71 99 97 89 95 97 97 97 94 75 76 44	[533.2]EEQEAKAE[397.3]
1367	HHGSEGTLLVSQNERQWK	13.6	75	1053.527	2	16.369	-0.1	70 78 82 94 92 84 89 98 99 94 92 63 79 73 52 36 38 37	[274.1]GSEGTLLVS[969.5]
1369	KPEVAAY(+79.97)R	5.6	70	1013.479	1	16.398	-2.6	63 62 62 97 91 78 71 31	[354.2]VA[470.2]
1370	SPPGAANLDK	6.7	67	969.4993	1	16.404	-0.6	31 32 71 71 97 97 87 75 76 31	[338.2]AAN[356.2]
1371	ALQDETVELKAK	8.4	70	672.8719	2	16.41	-0.2	37 36 37 92 88 84 77 82 93 91 90 31	[312.2]DET[99.1]ELKA[128.1]
1373	MFFSPANKR	5.2	58	549.2812	2	16.425	-0.9	31 31 31 97 97 91 55 53 32	[425.2]SPA[398.2]
1375	QFM(+15.99)ELPAWDEANLQR	8.9	59	621.9625	3	16.453	1.9	36 36 41 73 55 52 62 49 50 66 88 82 68 69 53	[1262.5]AN[397.2]
1376	VTVSLLTTK	5.5	61	481.3002	2	16.461	0.4	31 31 31 31 98 96 96 97 31	[386.2]LLTT[128.1]
1377	GPPCVAQGER	6.8	68	507.2439	2	16.467	-2.7	31 31 91 94 94 97 79 48 80 31	[154.1]PCVA[185.1]E[156.1]
1378	MRFVCLSNK	5.1	57	366.5236	3	16.474	-3	31 31 44 45 49 52 83 86 84	[749.4]SNK
1381	Y(+79.97)YRKRTVMGAELR	8.6	66	574.9548	3	16.51	-0.4	33 31 32 37 51 74 92 96 89 86 84 84 66	[947.4]VMGAEL[156.1]
1382	CALEKMNGTREVCLR	10.9	73	861.9282	2	16.517	2.6	53 55 73 84 91 94 97 95 95 96 90 46 43 41 31	[287.1]EKMNGTRE[471.3]
1383	FVWGEGNGHGHKELR	10.6	70	861.9282	2	16.525	1.9	31 37 48 53 67 97 91 85 78 84 84 73 72 85 65	[618.3]GNG[137.1]GH[257.1]L[156.1]
1387	YNDKRPNANMKECTTSMKK	11.4	60	753.6929	3	16.571	-1.5	59 50 46 45 41 40 44 58 64 87 94 94 90 82 55 51 49 54 31	[1072.5]MKECT[575.3]
1393	LLYADFK	5.4	78	869.4783	1	16.639	1.9	97 97 96 94 94 31 31	LLYAD[275.2]
1394	VAFPSLVGRPR	9.1	83	599.8574	2	16.645	1.6	56 56 93 99 99 98 96 93 90 94 31	[170.1]FPSLVGRP[156.1]
1395	KGLM(+15.99)DGLAAGPK	8.2	69	587.3167	2	16.652	-2.9	90 91 79 63 59 62 77 74 69 59 63 31	KG[969.5]
1396	YVRLNVHK	4.8	60	514.8043	2	16.66	1.4	31 61 56 52 62 89 90 31	[645.4]VH[128.1]
1400	YELLGFK	5.1	73	869.4764	1	16.707	-0.3	31 83 86 91 92 95 31	[163.1]ELLGF[128.1]
1401	HHLEEAMM(+15.99)AAKLLR	10.4	75	555.9564	3	16.714	-1.1	31 93 80 80 73 72 75 84 85 85 83 84 81 31	[137.1]HLE[331.1]M(+15.99)AAKLL[156.1]
1402	Y(+79.97)FRFVRVMGAELR	8.8	68	575.2884	3	16.722	0.3	31 39 39 35 31 92 92 95 89 87 88 88 70	[792.3]RVMGAEL[156.1]
1403	SHEVAEWR	7.1	88	1013.48	1	16.73	0.1	83 83 89 95 93 88 88 84	SHEVAEWR
1405	MDVTKQVEELQR	9.3	78	738.3778	2	16.759	-2.6	31 68 74 87 84 79 97 98 96 75 78 57	[345.1]TK[128.1]VEE[397.2]
1408	WYVYLPTKSAM(+15.99)R	7.2	60	510.9313	3	16.784	1.3	49 49 49 60 50 51 66 78 79 63 83 41	[1208.6]M(+15.99)[156.1]
1411	WRRFSLLGLNPNDDLR	11	69	658.0199	3	16.821	-3	35 35 40 55 70 94 94 92 91 76 51 49 71 86 87 67	[732.4]LLGL[440.2]DL[156.1]
1412	WHYSYHWLGRAKVLR	9.4	62	493.7668	4	16.829	0.1	31 54 54 60 62 62 51 76 75 78 81 67 66 81 31	[1385.6]A[227.2]L[156.1]
1415	WM(+15.99)LLHTAGVLEGLR	9.4	67	537.9616	3	16.856	1.7	31 38 38 55 74 81 88 89 95 90 83 61 75 38	[696.3]TAGVLE[326.2]
1417	LLYADFK	5.3	76	435.2421	2	16.885	0.2	98 98 96 86 85 31 31	LLYAD[275.2]

1418	GQLELEDLK	7.1	78	522.7822	2	16.891	0.1	54 49 85 97 97 97 96 96 31	[185.1]LELEDL[128.1]
1419	MLEDDLSSNM(+15.99)EAVSK	11.2	75	842.8737	2	16.898	-0.2	40 39 51 91 97 97 98 94 70 75 80 81 82 87 31	[373.2]DDLSS[261.1]EAVS[128.1]
1420	YEAGPSYVDLR	9.2	84	635.3089	2	16.906	-0.4	31 95 94 94 94 84 84 84 89 92 73	[163.1]EAGPSYVDL[156.1]
1423	RRTWAMMAEELKK	9.7	75	550.6251	3	16.944	-0.2	31 57 58 57 87 95 97 97 97 89 82 84 31	[599.3]AMMAEELK[128.1]
1424	QGTVPKVLDWSAPSK	10.1	67	806.9363	2	16.951	-2.4	44 43 57 88 94 94 94 86 83 57 61 57 52 59 31	[286.1]VPKVLD[656.3]
1425	KALTDAAMMAEELKK	13.6	90	825.4331	2	16.959	-0.7	91 92 95 97 97 97 98 98 97 95 96 91 86 87 31	KALTDAAMMAEELK[128.1]
1426	VFY(+79.97)ERVRMGAELR	9.4	72	569.2783	3	16.967	-2.4	31 31 31 89 87 74 75 95 94 87 83 84 69	[489.2]ER[255.2]MGAEL[156.1]
1427	GKTVPQVLDWSAPSK	9.3	62	806.9363	2	16.975	-2.4	38 41 41 68 83 71 91 95 96 64 53 49 47 52 31	[385.2]P[128.1]VLD[656.3]
1429	T(+79.97)RAM(+15.99)SLVTAK	6.6	66	391.8608	3	17.004	-1.5	46 48 43 89 92 91 84 67 65 31	[408.2]M(+15.99)SLV[300.2]
1431	GM(+15.99)LGLKGGMEGHK	10.1	78	665.8343	2	17.019	0.6	52 56 89 91 92 95 86 82 84 81 80 84 31	[204.1]LGLKGGMEGH[128.1]
1433	MPSNPFVTGLLR	7.6	64	444.5765	3	17.034	0.7	33 57 53 60 59 59 71 92 82 83 76 31	[772.4]TGL[269.2]
1435	VQLELNQLK	7.1	79	542.822	2	17.062	0.7	60 55 79 95 97 84 79 90 65	[340.2]ELN[128.1]L[128.1]
1437	EAM(+15.99)TLLDKNR	9	90	603.8093	2	17.077	-2.8	86 89 88 96 97 98 89 87 90 70	EAM(+15.99)TLLDKN[156.1]
1438	QAFTQQVEELK	8.2	75	660.8431	2	17.084	-0.3	70 82 73 95 72 74 96 97 96 31 31	[128.1]A[147.1]T[256.1]VEE[241.2]
1439	YWFFWAFQELQLSHANR	10.6	62	748.3684	3	17.091	3.9	43 43 39 31 42 60 43 60 66 95 88 95 94 86 60 60 43	[1304.6]LQLSH[341.2]
1441	QVLELNQLK	6.4	71	1084.635	1	17.12	-0.7	63 66 93 96 95 64 49 65 42	[227.1]LEL[483.3]
1442	DVEDKLSELKAK	9.9	83	687.877	2	17.126	-0.5	93 93 95 90 90 95 91 67 67 83 92 31	DVEDKLS[242.1]KA[128.1]
1443	EPLKNDKLK	6.4	71	542.822	2	17.133	0.8	31 94 86 84 68 71 85 88 31	[129.0]PLK[229.1]KL[128.1]
1444	YLQVLRHR	5.7	72	1084.635	1	17.14	-2	92 93 65 85 91 81 31 31	YL[128.1]VLR[293.2]
1445	TLEKKHGKDYR	6.2	56	458.9204	3	17.147	-1.4	36 39 42 39 38 62 88 86 83 66 31	[736.4]GKD[319.2]
1447	FHYVM(+15.99)HLKHPCTAAALR	12.4	73	671.0118	3	17.177	2.7	31 62 62 70 86 76 76 88 95 85 83 87 94 89 76 36 31	[546.3]M(+15.99)[250.1]KHPCTAA[340.2]
1448	T(+79.97)TELGKNR	4.8	60	998.4672	1	17.185	0.6	91 85 67 74 50 41 35 33	T(+79.97)T[697.4]
1450	SGAELELSELKAK	10.5	81	687.8775	2	17.2	0.2	52 59 75 89 92 94 94 94 93 92 90 88 31	[215.1]ELELSELKA[128.1]
1455	ACPLEESTLKHEATAAALR	14.1	74	1006.015	2	17.252	-2.8	31 69 84 83 90 97 94 93 93 95 95 93 76 63 55 61 58 41 31	[174.0]PLEESTLKHE[654.4]
1456	VFDKEGDGTVMQELR	11.6	77	862.4194	2	17.26	-0.2	50 65 64 91 93 90 90 94 86 58 58 61 82 91 74	[361.2]KEGDGT[358.2]EL[156.1]
1457	LSLFPK	3.9	65	352.7206	2	17.268	-0.3	31 98 98 98 31 31	[113.1]SLF[225.1]
1459	VQLELNKLQGEVDKR	11.3	75	884.9996	2	17.296	0.3	47 45 87 93 92 88 74 95 72 93 90 73 56 58 57	[227.1]LELN[128.1]L[128.1]GE[498.3]
1460	DRKSSPFDARSYR	9.5	73	792.8986	2	17.304	1.5	46 45 57 96 98 95 95 92 92 91 78 31 31	[399.2]SSPFDAR[406.2]
1461	DDEEQSQLKEYK	9.1	76	756.347	2	17.312	0.5	43 43 84 96 86 90 71 95 86 94 86 31	[230.1]EEQS[128.1]LKEY[128.1]
1462	ARY(+79.97)LNKLKWTLRK	8.3	64	885.5009	2	17.319	0.3	31 31 51 69 69 90 95 95 80 53 45 59 52	[697.3]KLKW[498.3]
1463	YRY(+79.97)AKAEATEANLQR	8.9	60	621.9623	3	17.327	-1.4	32 31 31 35 47 69 58 56 70 92 91 83 69 69 53	[1133.5]EAN[397.2]

1465	WRREEALVSQLTR	9	70	548.6364	3	17.357	-1.8	33 33 32 31 56 83 90 96 96 87 92 92 76	[756.4]ALVSQLT[156.1]
1466	QLEEQEALVSKLTR	11.5	82	822.4509	2	17.365	-1	61 63 83 95 86 94 93 94 97 94 89 76 73 46	[241.1]EEQEALVSK[370.2]
1467	YAMEAGSQLQEYK	10.4	80	759.3501	2	17.374	-0.7	62 57 58 88 94 94 95 82 94 90 96 92 31	[365.1]EAGSQLQEY[128.1]
1468	QM(+15.99)HRT(+79.97)RRWCPLLHTK	8.4	56	515.5062	4	17.382	1.9	52 52 41 40 40 43 50 31 59 79 91 84 70 69 31	[1447.6]LL[366.2]
1469	ALEDQLSELK	8.8	88	573.3052	2	17.391	-1.3	85 89 96 96 89 97 97 96 98 31	ALEDQLSEL[128.1]
1472	ALEDQLSELK	7.5	75	1145.604	1	17.426	-1.1	75 80 90 96 87 91 69 63 64 31	[71.0]LEDQL[457.3]
1473	RYLREALKYYLGDVFWHT(+79.97)R	10.7	56	856.0954	3	17.434	-1.4	31 31 48 52 64 60 59 62 56 59 59 77 80 81 80 53 44 31 31	[1525.8]DVF[660.3]
1474	QAHAPVLADQVSK	8.3	64	455.2499	3	17.442	1.8	60 52 46 52 70 81 97 96 89 46 47 57 31	[504.2]VLAD[442.3]
1475	SPKDELSELK	8.5	85	573.3057	2	17.45	-0.5	86 87 81 89 89 96 97 96 98 31	SPKDELSEL[128.1]
1477	KMSGQEGAKELAPCDK	10.8	67	846.4092	2	17.478	1.3	60 56 55 71 82 96 92 60 60 77 94 87 83 32 31 31	[403.2]QEG[328.2]LAP[346.1]
1478	ASFPPDVAGNVDYK	10.4	74	740.3593	2	17.485	-0.1	34 45 58 96 98 98 96 95 91 80 85 92 31 31	[305.1]PPDVAGNVD[291.2]
1481	MVAELEELR	8.1	90	545.2842	2	17.513	0.3	98 98 97 97 97 31 97 98 91	MVAEL[129.0]ELR
1483	VVREDVCARTSHK	8.5	65	500.5964	3	17.541	0	31 46 40 40 69 85 74 74 88 86 87 91 31	[598.3]V[174.0]RTSH[128.1]
1484	LLGSLDVPHEEYK	8.8	68	750.3903	2	17.548	-0.4	82 82 71 74 91 97 31 31 83 83 83 31 31	LL[144.1]LD[196.1]HEE[291.2]
1485	AKVSECAHK	5.3	59	486.75	2	17.556	-0.4	33 33 35 95 91 92 80 31 31	[298.2]SECA[265.2]
1486	CWTWLY(+79.97)MELKLSHVNK	10.4	65	711.0015	3	17.562	-0.2	50 50 50 35 35 42 70 74 95 96 95 95 87 54 59 39	[1192.4]LKLSH[341.2]
1487	HHKWWTGVVVSR	7.5	62	497.9365	3	17.572	-1.2	31 51 50 40 77 91 92 85 69 65 61 31	[774.4]TGV[441.3]
1489	VTSTELFK	6.3	78	462.7556	2	17.6	0.4	31 93 95 94 93 90 96 31	[99.1]TSTELF[128.1]
1490	SLSTELFK	6.1	77	924.5031	1	17.606	-0.6	31 90 90 91 90 88 96 31	[87.0]LSTELF[128.1]
1491	AKENGLHR	5.3	66	924.5031	1	17.612	2.3	70 67 81 75 68 66 69 31	[199.1]E[577.3]
1492	VVSTEVYK	5.2	65	462.7556	2	17.618	0.4	89 89 86 68 55 50 51 31	VVS[620.3]
1493	LLGSLDVPEHEYK	9.5	73	750.3901	2	17.624	-0.6	66 60 54 58 85 97 98 98 90 86 86 31 31	[370.2]LDVPEHE[291.2]
1496	HHRRDVGAVAVNR	7.9	61	496.275	3	17.659	0.4	31 57 57 44 42 51 79 86 88 64 59 61 66	[857.4]AV[440.2]
1497	QSKLEDDLVALQK	11.2	86	743.9086	2	17.666	-0.7	62 67 89 97 97 98 97 94 92 90 86 72 68	[215.1]KLEDDLVAL[256.2]
1498	LVDSMQANLDSEVR	12.5	89	788.8846	2	17.674	-1.1	71 79 92 95 95 91 96 83 91 96 94 86 86 85	[212.2]DSMQANLDSEVR
1499	RRRCFMTSLKTGR	7.6	58	537.9609	3	17.683	0	31 31 31 31 54 76 88 92 86 74 58 58 40	[849.4]TSL[442.3]
1501	FFHARDLEEPTPLRR	9.7	64	628.669	3	17.712	2.6	31 31 45 53 61 76 81 91 96 92 67 55 69 78 31	[773.4]LEEP[623.4]
1502	VKGPVSRWR	5	56	542.8211	2	17.72	-2.2	64 59 59 54 31 31 66 66 66	[1065.6]
1503	DTSLDDMLPAQK	8.6	71	667.3182	2	17.727	-0.8	56 60 67 70 91 92 89 90 72 66 63 31	[416.2]DDML[424.2]
1504	SPETMVTNLKK	9.1	83	624.3365	2	17.735	-0.6	83 83 89 94 94 82 79 83 91 93 31	SPETMV[101.0]NLK[128.1]
1505	STELFK	4.7	78	724.3877	1	17.743	0.2	86 77 83 89 98 31	S[101.0]ELF[128.1]

1510	APAT(+79.97)LNPTAELEGSLQEVK	13	68	683.3358	3	17.798	-0.8	31 71 75 83 36 34 35 42 83 94 96 94 63 57 59 80 91 93 72	[239.1]T(+79.97)[425.2]AELE[257.1]QEV[128.1]
1511	RWKKWEM(+15.99)SAGGVGPLSHK	10.1	56	690.6935	3	17.806	-1.9	31 39 37 37 41 40 50 72 80 83 87 78 65 67 70 59 31 31	[1147.6]AGG[718.4]
1513	T(+79.97)VNQVLSSGDLLR	8.8	68	494.5846	3	17.836	2.2	83 44 43 38 40 92 31 94 94 94 95 96 31	T(+79.97)[440.2]L[87.0]SGDLL[156.1]
1514	LRTLDVFTDEYKFGHTK	11.1	66	1035.537	2	17.843	0.8	34 38 46 75 93 98 82 79 90 95 64 61 55 67 51 47 31	[483.3]DVF[101.0]DE[861.4]
1515	SSLLDGSSLHYFR	9.2	71	741.373	2	17.852	0.3	31 82 82 91 84 84 92 31 95 89 48 64 42	[87.0]SLLDGS[87.0]LH[466.2]
1516	KNDDRHNLVLHQLR	8	57	586.6542	3	17.861	-2.2	36 36 37 54 55 49 50 89 95 92 54 49 53 43	[879.4]LVL[534.3]
1517	KLWYM(+15.99)WTLVVFQK	7.5	58	440.2427	4	17.869	2.4	38 34 40 42 45 50 58 45 63 89 75 89 74	[1236.6]V[147.1]Q[128.1]
1520	FGLSDLPQSDR	8.9	81	617.8065	2	17.906	-0.3	79 84 92 97 95 73 71 82 87 94 31	[147.1]GLSD[210.1]QSD[156.1]
1522	SPTDAAMFAEELK	9.1	70	705.3364	2	17.921	2.9	61 64 68 82 91 95 95 96 95 31 62 31 31	[285.1]DAAMFA[499.3]
1523	LATDAAM(+15.99)MAEELKK	12.2	87	769.3832	2	17.929	-0.5	68 77 91 95 96 97 96 94 92 93 95 93 94 31	[184.1]TDAAM(+15.99)MAEELK[128.1]
1525	VGMNYQLTYLLPK	9	69	770.4169	2	17.959	1.7	52 58 65 92 77 71 89 92 93 87 52 34 31	[287.1]N[291.1]LTYL[338.2]
1526	VGAGEYLELR	9.3	93	553.7953	2	17.967	-0.6	93 90 89 91 95 96 94 87 97 89	VGAGEYLELR
1527	HRFFVYT(+79.97)CEANLKR	8.3	59	621.9619	3	17.974	-0.7	31 31 53 63 88 51 42 60 71 91 79 60 63 39	[587.3]V[576.1]A[511.3]
1528	LLFVVGGPGSGK	7.8	65	565.8319	2	17.982	-0.1	31 31 31 99 97 97 94 67 33 80 82 31	[373.2]VVGG[154.1]SG[128.1]
1531	DFETLSQLSK	6.7	67	584.2984	2	18.021	0.4	31 31 98 95 49 48 48 94 95 79	[262.1]ET[328.2]LS[128.1]
1532	VFT(+79.97)KECKHEATAAKVLK	9.5	56	661.6765	3	18.027	0.8	31 74 40 36 36 51 50 60 59 72 85 88 83 56 47 38 31	[1252.5]TAA[468.3]
1533	DFETNTLLSK	6.4	64	1167.589	1	18.035	0	31 31 97 93 80 84 81 53 52 37	[262.1]ETNTL[328.2]
1535	YSLELTNEAK	6.7	67	1167.589	1	18.051	0	31 96 96 85 72 74 60 50 66 31	[163.1]SLE[656.3]
1537	HHWENKMELQELQLK	9.4	63	655.0014	3	18.079	2.2	31 31 65 39 39 44 92 92 91 71 88 80 58 68 45	[831.4]MEL[128.1]EL[369.2]
1540	CNHTNLR	4.8	68	429.2065	2	18.105	1.3	54 59 66 84 74 78 57	[354.1]T[383.2]
1541	ENLGKLMTNLR	10	91	644.8564	2	18.112	1.1	93 88 95 97 98 94 94 94 86 87 65	ENLGKLMTNL[156.1]
1543	QLDLVDQLKMK	6.3	57	444.2516	3	18.14	0.2	51 45 46 55 97 93 59 53 47 49 31	[469.3]VD[628.4]
1544	WYM(+15.99)VKHLLTEAPLNPK	9.1	57	652.686	3	18.147	1.2	40 40 34 35 34 37 51 93 95 95 94 50 47 48 65 47	[973.5]LTEA[549.3]
1545	LLGTLEEMR	8.3	92	531.2866	2	18.155	0.1	93 93 92 96 96 97 91 93 75	LLGTLEEM[156.1]
1546	KKFYDGSVVQLYEK	8.2	58	568.637	3	18.164	-2.3	31 31 31 37 48 57 76 90 95 87 94 68 31 31	[825.4]VVQL[420.2]
1547	ELDPLNDWVKLYQK	11.3	81	880.9621	2	18.172	-2.8	78 87 95 96 95 91 96 78 89 96 94 50 31 49	[129.0]LDPLND[186.1]VKL[419.2]
1551	KEYFQTSVVQLYQK	8.8	63	587.6443	3	18.217	-2	41 38 36 43 56 68 70 98 96 87 94 55 31 55	[883.4]VVQL[419.2]
1552	RHKLKMDQYK	5.7	57	449.5828	3	18.225	-1.6	34 47 40 66 84 84 76 45 57 38	[534.3]KM[534.2]
1553	Y(+79.97)NCWPAVMFGVLEKFLK	10.1	59	709.0066	3	18.232	0.1	42 39 37 38 47 41 42 65 84 94 92 91 87 59 48 64 31	[1044.4]FGVLE[516.3]
1555	TVSTELFK	5.2	65	462.7548	2	18.261	-1.5	31 31 94 88 79 74 89 31	[200.1]ST[242.1]F[128.1]
1557	FVVPDLK	4.1	59	409.2441	2	18.276	-1	31 31 31 94 93 96 31	[345.2]PDL[128.1]

1558	KNDPLNGSVVQLYEK	11.6	77	852.4506	2	18.282	-1.3	87 78 94 70 67 82 93 93 95 90 83 92 65 31 31	K[114.0]D[210.1]NGSVVQL[420.2]
1559	VSFQLPDER	7.2	80	545.7794	2	18.291	-1	94 95 93 84 96 95 94 31 31	VSFQLPD[285.1]
1561	LLSLNSADM(+15.99)LK	9.3	85	610.8315	2	18.319	0.3	95 95 95 96 94 94 95 92 68 72 31	LLSLNSAD[388.2]
1562	SLSTELFK	6.2	78	924.5034	1	18.326	-0.3	31 90 89 92 92 92 97 31	[87.0]LSTELF[128.1]
1563	VVDTAPKGTYDDYVEGLR	13.8	77	999.4945	2	18.334	0.2	46 48 50 61 87 96 96 96 95 95 96 95 84 75 77 60 76 37	[414.2]APKGTYDDY[554.3]
1565	QLDLVDKLQM(+15.99)K	8	73	673.8715	2	18.35	0.7	69 77 89 95 96 96 72 47 42 49 65	[241.1]DLVD[644.4]
1567	Y(+79.97)FTPFRRVFMVEGLR	8.4	56	666.6654	3	18.379	-0.1	31 46 46 44 45 58 44 31 31 99 96 88 65 76 37	[1293.6]MVE[326.2]
1568	MNRAFGSWKGS(+79.97)LPKK	8.6	57	596.2988	3	18.388	-0.2	76 36 35 36 46 36 36 39 85 85 88 88 66 66 31	[949.4]KGS(+79.97)L[353.2]
1569	WWLPKGTFMDYVEPTK	11	69	999.4943	2	18.395	-0.7	31 83 86 94 94 74 65 70 71 95 64 63 58 58 55 31	[186.1]WLPK[436.2]D[717.4]
1570	MFFSPANK	5.6	70	471.2308	2	18.404	-0.6	31 31 31 97 96 96 90 82	[425.2]SPANK
1571	VKRLHASDLGR	7.5	68	626.369	2	18.41	2.2	40 53 64 90 75 90 94 88 51 65 34	[383.3]L[137.1]ASD[326.2]
1573	LEELEEELEAERAAR	11.3	75	893.9443	2	18.439	-0.1	58 59 78 74 55 79 94 92 91 77 77 80 91 87 31	[742.3]ELE[200.1]RAA[156.1]
1574	CAKASYEETLDHLETRMK	13.9	77	1063.006	2	18.447	0.1	74 74 90 77 73 75 94 88 96 96 96 96 95 92 55 37 38 31	[174.0]K[321.1]EETLDHLE[516.3]
1575	M(+15.99)ELDDLSSNMEAVSK	11.6	77	842.8731	2	18.456	-0.9	95 95 94 95 93 92 94 90 60 62 68 60 61 61 31	M(+15.99)ELDDLSS[759.4]
1576	WKKARKPGNSVELHR	10.1	67	602.679	3	18.465	-1.1	42 42 45 62 59 60 52 58 81 91 92 94 94 98 31	[951.6]NSVELH[156.1]
1577	TGLDYNPEPFK	7.9	71	640.8112	2	18.473	-0.4	40 43 71 90 89 85 94 81 78 78 31	[271.2]DYNPE[372.2]
1579	RTWDATASPSR	7.3	66	624.3085	2	18.502	-2.4	38 33 50 53 81 93 91 86 85 83 31	[558.3]ATASPS[156.1]
1580	GFKLSTCGTRVWK	8.5	65	741.8981	2	18.511	0.2	33 42 52 88 92 83 66 70 84 83 59 39 48	[332.2]LST[160.0]TR[413.2]
1581	TLEDQLSELK	7.3	73	1175.613	1	18.519	-2.3	74 82 92 96 84 91 60 55 58 31	[101.0]LEDQL[457.3]
1582	VDEDLKSELK	8.5	85	588.3104	2	18.526	-1.6	94 94 95 91 77 77 94 94 97 31	VDED[241.2]SEL[128.1]
1583	MTKLSNDGVACLKK	8.8	63	503.2708	3	18.532	0.5	72 55 35 33 35 58 73 86 84 85 82 72 67 31	[789.4]GVAC[369.3]
1585	ALTDAAMMAEELKK	9.3	66	507.9273	3	18.562	1.6	39 40 47 53 78 82 83 91 90 92 71 60 63 31	[471.2]AMMAE[498.3]
1586	LATDAAMMAEELKK	12.3	88	761.3865	2	18.57	0.4	73 81 93 96 97 98 98 97 97 97 90 85 86 31	[113.1]ATDAAMMAEELK[128.1]
1587	M(+15.99)CNYEEKANSYLSK	11	79	848.3708	2	18.577	-0.6	80 72 67 84 76 84 95 96 92 96 88 66 61 37	M(+15.99)[217.1]Y[129.0]EKANSY[328.2]
1588	LATDAAMMAEELKK	10.6	76	761.3865	2	18.585	0.4	42 44 55 58 70 95 96 96 95 97 93 89 89 31	[471.2]AMMAEELK[128.1]
1589	KFWPQAELEELR	7.8	65	515.9398	3	18.593	-0.7	32 32 31 80 68 87 91 96 31 77 91 63	[461.2]P[128.1]AEL[258.1]L[156.1]
1591	KVRMFSLAGDFTLR	7.7	55	547.6365	3	18.622	0.6	35 35 35 46 46 66 77 75 77 87 63 47 39 36	[989.5]D[517.3]
1594	RHY(+79.97)QRGRRNSK	6.3	57	513.2571	3	18.646	-2.5	37 69 50 51 50 67 60 78 49 65 45	[1518.7]
1595	VKLELHMSKWVDR	10.8	83	820.9515	2	18.653	1.1	74 83 93 97 98 96 89 90 92 83 52 74 52	[99.1]KLELHMSKW[370.2]
1597	EPNKLDKLKGEVDR	11	79	820.9517	2	18.683	-0.2	82 81 74 92 94 83 71 73 96 89 87 63 63 46	EP[114.0]KLD[241.2]KGE[370.2]
1599	M(+15.99)LAPAKS(+79.97)K	4.8	59	941.454	1	18.698	1.6	31 98 98 94 42 41 36 31	[147.0]LAP[494.2]

1600	TDAAMMAEELKK	10.3	86	669.3251	2	18.707	-0.8	68 74 88 97 98 97 96 97 94 92 93 31	[216.1]AAMMAEELK[128.1]
1601	RFKARMPEARM(+15.99)YR	9.5	73	864.4485	2	18.716	-2.8	53 71 59 84 93 86 84 91 90 89 80 31 31	[431.3]ARMPEARM(+15.99)[319.2]
1605	LLLKMKKSLGGMS(+79.97)R	8	57	547.9708	3	18.767	2.2	31 87 56 55 50 36 40 43 60 66 77 81 82 31	[113.1]L[942.6]MS(+79.97)[156.1]
1606	TGYDDYVEGLR	9.6	87	644.2958	2	18.774	-0.6	62 74 88 96 97 98 98 96 90 93 62	[158.1]YDDYVEGL[156.1]
1607	FLAYDADK	6.3	78	471.7325	2	18.782	1	31 96 92 78 74 88 92 71	[147.1]LA[278.1]AD[128.1]
1610	DWEQKVEELRK	8.2	75	730.3799	2	18.82	-0.9	31 48 62 78 93 97 98 96 80 81 54	[558.2]KVEELR[128.1]
1611	CRKKNGVGPFPK	7.3	61	444.2512	3	18.827	-1.6	69 67 58 39 47 57 64 80 70 70 70 31	[785.4]G[469.3]
1612	DNDLDPNYVLSSR	8.6	66	754.3541	2	18.834	-0.9	41 51 69 92 98 95 89 95 98 31 31 31 31	[344.1]LDPNYV[443.2]
1615	WLRWWELGEQLDNLRK	10.1	63	714.7109	3	18.872	-2.8	31 31 32 32 41 61 60 88 89 87 91 91 82 67 71 49	[1069.5]GEQLDN[397.3]
1616	WVWWFWKHKLDNLQR	9.6	64	536.2849	4	18.88	-0.3	34 35 35 36 31 78 60 56 90 84 85 86 86 88 72	[1255.6]KLDNLQ[156.1]
1617	KKQWSVAEMPAQLDNLQR	11.9	66	1071.562	2	18.889	2.2	32 58 55 60 90 96 90 78 73 62 61 55 60 90 58 56 58 45	[570.3]SVA[669.3]D[511.3]
1618	YRMTLDGDYSGLEFAK	9.2	58	622.6285	3	18.897	-1.4	31 43 36 43 45 45 45 84 90 85 72 71 75 84 31 31	[836.4]DYS[299.1]F[199.1]
1621	MELQELQLK	8.2	91	566.3073	2	18.934	-0.4	95 96 98 90 96 96 83 89 67	MELQELQL[128.1]
1622	YNSEETLDHLETMKR	11.7	78	933.438	2	18.941	-0.6	52 58 59 90 96 96 96 96 96 96 95 72 60 62 42	[364.1]EETLDHLE[516.3]
1623	DWKEQVEELRK	6.9	63	730.3802	2	18.949	-0.5	31 31 50 55 63 82 96 87 70 70 53	[686.3]VEE[397.3]
1624	RM(+15.99)NLDLQATKAQLDNLQR	11.6	65	1072.564	2	18.956	-2	39 40 35 38 76 90 82 90 74 56 90 62 91 91 55 50 50 42	[645.3]LQA[229.1]A[128.1]LD[511.3]
1625	KWLGFKHDRMR	7.3	67	737.4005	2	18.965	2.9	57 89 78 92 82 71 57 81 41 41 38	[128.1]W[113.1]GF[265.2]D[443.2]
1627	KNHRT(+79.97)KSSNMEAVSK	9.9	66	599.619	3	18.995	-2.7	38 37 39 42 41 42 92 96 92 93 86 82 85 88 31	[844.4]SSNMEAVS[128.1]
1628	RRKRLECEQR	7.1	71	458.5893	3	19.003	-0.5	31 32 50 62 90 96 95 82 82 82	[596.4]LECEQR
1629	KDLDDLELTLAK	10.7	89	687.3806	2	19.01	1.2	96 96 97 98 98 97 96 94 90 82 85 31	KDLDDLELTLA[128.1]
1630	KMELDDLSSNMEAVSK	12.8	80	898.9247	2	19.018	1	90 90 92 97 98 98 97 97 85 66 72 76 65 58 59 31	KMELDDLSS[759.4]
1631	LVDSMQATLDSEVR	12.8	92	782.3877	2	19.026	-0.1	71 79 92 94 94 90 98 98 98 97 95 90 90 89	[212.2]DSMQATLDSEVR
1633	MFFSPANK	5.6	70	471.2312	2	19.055	0.2	31 31 31 95 96 95 91 83	[425.2]SPANK
1634	QMEGDLNEMELKLSHANR	15	84	1058.003	2	19.061	1.2	82 94 91 84 87 95 89 94 86 86 94 98 97 96 78 51 52 40	QMEGDLNEMELKLS[478.2]
1635	RTSGSGQATLDSEVR	11.8	79	782.3878	2	19.07	-2.5	32 33 34 45 93 95 91 97 97 98 97 95 89 89 88	[401.2]SGQATLDSEVR
1636	VLDSVFGTRDAFPR	10.8	77	790.4152	2	19.078	0.2	64 72 88 93 96 97 95 95 94 91 91 31 31 31	[212.2]DSVFGTRDA[400.2]
1639	RLVRM(+15.99)FNS(+79.97)CCKLSHANR	11	65	533.5024	4	19.118	0.5	31 32 32 34 34 41 51 64 86 93 94 95 95 90 80 80 61	[1099.5]CCKLSHAN[156.1]
1640	YRWS(+79.97)FPM(+15.99)ELKLSHANR	10.3	64	711.0007	3	19.127	-3	46 35 33 33 49 49 72 81 88 95 95 95 87 60 61 43	[1063.4]ELKLSH[341.2]
1641	HPRWRAPPKTCGHK	7.9	56	557.6302	3	19.136	-2.8	36 36 36 33 56 59 86 59 53 54 77 81 82 31	[803.4]P[429.2]GH[128.1]
1642	FYWLVYMGLTDR	6.9	58	521.9276	3	19.145	1.2	31 64 64 50 31 84 87 79 55 54 59 31	[708.4]YM[542.3]
1645	QLDLVDQLKLK	6.9	63	438.2661	3	19.183	0.2	52 49 51 53 94 94 64 79 64 53 31	[469.3]VD[610.4]

1646	QLDLVDQLKLK	9.1	83	656.8951	2	19.19	-0.3	72 81 95 96 98 97 76 93 83 84 31	[128.1]LDLVD[128.1]LKL[128.1]
1647	KLNLVDELQLK	9.4	85	656.8951	2	19.197	-0.3	75 74 83 94 98 96 89 88 79 87 67	[241.2]NLVDEL[128.1]L[128.1]
1649	YELFGSFPLK	6.3	63	600.8179	2	19.212	-1.1	31 78 69 61 69 89 90 79 31 31	[609.3]SF[338.2]
1652	Y(+79.97)PWQVVPALVNR	7.5	63	507.9266	3	19.25	2.5	31 31 83 64 64 85 95 79 51 50 51 60	[340.1]W[227.1]VP[553.3]
1655	TYNDRQLKPK	6.8	68	631.8444	2	19.279	-2.7	60 54 53 64 88 73 86 75 92 31	[493.2]R[128.1]L[128.1]P[128.1]
1657	QVTEEMASENESVAKLTK	14.7	82	997.4914	2	19.31	0.5	52 51 59 84 97 98 97 94 93 89 95 94 91 90 90 81 78 31	[328.2]EEMASENESVAKL[229.1]
1659	QLLGTLEEM(+15.99)R	8.7	87	603.3138	2	19.327	0.9	50 52 92 97 97 98 98 95 95 95	[241.1]LGTLEEM(+15.99)R
1661	KPFWT(+79.97)HGNLEGAFVRR	9.4	59	665.6642	3	19.343	1.7	82 82 82 40 56 43 57 58 82 83 71 47 42 42 31 31	KPF[675.2]LE[686.4]
1665	WRFS(+79.97)FWWAKLDKGFTSGGWKRKK	13	57	994.8386	3	19.389	-2.2	32 32 49 57 72 73 48 50 65 87 86 53 49 61 83 88 85 41 41 38 39 31 32	[1374.6]LD[332.2]TSG[783.5]
1667	KFYQKFVMRGHSRGHK	9.5	59	669.3603	3	19.408	0.5	32 32 40 44 44 40 59 70 86 92 89 89 79 65 50 31	[1071.6]RGHS[478.3]
1669	T(+79.97)REGRDLLAALLQQR	8.4	56	607.3231	3	19.438	0.5	40 42 37 37 37 41 60 60 56 70 89 92 59 63 51	[1162.6]LL[412.2]
1670	TLEDLQSELK	7.8	78	588.3113	2	19.446	0	88 91 97 86 52 45 91 93 97 31	TLED[241.1]SEL[128.1]
1671	LVNASVLPDLVVGNEYR	11.1	65	620.0069	3	19.453	-0.3	45 45 44 95 98 99 82 62 61 58 61 64 61 65 65 62 31	[326.2]ASVL[1142.6]
1672	KDPTLLPPLKR	6.8	61	426.6026	3	19.461	-0.6	93 92 64 53 47 59 41 81 51 51 37	KD[521.3]P[397.3]
1673	RMLKLYKGLESM(+15.99)R	7.8	60	547.6364	3	19.469	-1.7	66 38 36 45 36 51 57 87 84 80 76 83 31	[932.6]GLE[87.0]M(+15.99)[156.1]
1676	MLSTLLLTFDK	7.9	71	641.3616	2	19.507	2.8	91 89 92 94 94 90 87 39 39 34 31	MLSTLLL[491.2]
1677	KDRSSASSNKVTAAYVAWR	14.8	78	1049.047	2	19.514	1	53 51 59 92 97 94 94 93 86 79 76 86 86 85 80 74 66 88 31	[399.2]SSASSN[227.2]TAAY[170.1]W[156.1]
1678	KHHSALY(+79.97)MELQLSHANR	10.8	63	705.67	3	19.523	0.1	32 48 48 65 53 50 39 63 67 92 90 95 95 84 55 55 40	[1176.5]LQLSH[341.2]
1681	DLEESTLQHEATAAALR	14.5	85	927.963	2	19.562	-0.3	82 66 76 90 92 96 97 92 98 97 95 95 95 95 88 60 31	D[242.1]ESTLQHEATAAA[269.2]
1682	RKWLMKKAGKGCSHNK	9.1	57	624.6785	3	19.57	0.2	31 40 36 36 37 46 60 65 90 70 68 68 88 58 70 39	[1041.6]G[288.1]S[379.2]
1683	FNVWGLADVSK	8	73	412.552	3	19.578	-0.1	31 56 58 67 84 86 91 95 97 97 31	[546.3]GLADVS[128.1]
1684	QTFAGVLWASR	8.1	73	618.33	2	19.585	-0.2	36 36 35 86 95 96 97 97 95 97 31	[376.2]AGVLWAS[156.1]
1685	EPPASVLQLCHNVYER	12.9	81	927.963	2	19.593	1.1	31 79 86 86 93 97 97 88 93 89 90 88 84 70 79 31	[226.1]PASVLQLCHNV[448.2]
1688	Y(+79.97)KKYLRYVLGNSEGLSWRR	11	58	823.4247	3	19.634	0	58 58 42 35 34 36 55 64 91 68 51 57 82 78 67 51 50 42 65	[1193.6]L[258.1]E[755.4]
1689	FNWGVLWMSK	7.8	78	634.3181	2	19.643	-0.1	78 70 59 72 91 93 95 74 86 61	[504.2]VLW[131.0]S[128.1]
1690	LVDTPGPPPVGSKPR	11.1	74	758.9279	2	19.651	0.2	41 44 59 72 94 94 88 86 85 73 63 65 85 88 65	[428.2]PGPPP[243.1]KP[156.1]
1691	GFLLDGYPR	8.2	91	519.2742	2	19.662	-0.2	75 75 92 98 96 96 96 97 87	[204.1]LLDGYPR
1693	LVDSMQATLDSEVR	12.7	91	782.3859	2	19.691	-2.3	70 77 91 92 93 90 98 98 98 97 95 90 90 89	[212.2]DSMQATLDSEVR
1694	HCY(+79.97)LTM(+15.99)TDPSPEMRHR	9.5	59	1035.425	2	19.699	1.9	31 32 32 64 70 75 75 90 93 75 69 68 67 36 31 31	[945.3]DP[893.4]
1696	Y(+79.97)S(+79.97)FFEFAQNDLTRLR	9.1	61	1033.94	2	19.718	-2.2	31 50 50 50 31 85 85 79 86 91 81 59 49 44 31	[833.2]FA[128.1]NDL[526.3]
1697	RTLLYDVEKPPK	7.5	62	486.9489	3	19.73	0.4	36 36 41 62 65 80 91 90 81 83 45 31	[646.4]DVEKP[225.1]

1699	GRDSMKATLDSEVR	11.5	82	782.8889	2	19.759	-2.8	43 46 60 67 86 92 96 96 97 97 94 90 90 90	[415.2]MKATLDSEVR
1700	MEASPAAHK	5.4	60	471.2304	2	19.767	2.9	31 98 93 76 70 65 42 31 31	[131.0]EA[591.3]
1701	HWWKQPETR	5.4	60	423.2148	3	19.774	-2.5	31 31 36 59 47 88 86 86 67	[765.4]PET[156.1]
1702	FNDKVLWDSK	7.3	73	626.3204	2	19.782	-2.5	86 72 86 92 92 91 87 57 31 31	F[114.0]DKVLW[330.2]
1707	GSVVHNGVR	6.5	72	462.7549	2	19.838	1.6	69 59 59 74 95 89 79 90 31	[342.2]HN[57.0]V[156.1]
1708	FQPDVNENEGSLERTK	11.9	75	931.9495	2	19.848	2.1	73 65 72 91 95 91 92 88 92 92 85 80 57 40 40 32	[372.2]DVNENEGSL[514.3]
1711	KDEPVSGVLKLK	7.2	60	438.2657	3	19.887	-0.5	40 38 39 54 60 76 76 80 81 76 64 31	[712.3]VL[369.3]
1712	FLLT(+79.97)Y(+79.97)RPGAALEWK	8.1	58	608.9539	3	19.895	-0.7	31 31 94 36 35 53 59 83 84 82 70 53 42 43	[260.2]L[677.2]GAA[556.3]
1714	SAFPPDVAGVNDYK	9.6	68	740.3586	2	19.915	-1	37 37 55 96 96 93 89 83 61 47 47 85 92 31	[305.1]PPDVA[270.1]DY[128.1]
1715	ETEAFAALQR	6.5	65	568.2901	2	19.924	-1.1	88 86 85 89 31 65 64 45 51 40	ETEA[686.4]
1717	QLDLVDKLQLK	9.1	83	656.8961	2	19.953	1.1	79 91 96 94 96 95 79 85 53 79 57	[128.1]LDLVD[128.1]L[369.2]
1718	QYVKEKVLPDGKM(+15.99)LDNKK	10.5	59	717.0607	3	19.961	-0.3	63 65 41 33 32 33 50 88 94 87 52 45 47 91 82 52 54 36	[874.5]LPD[332.1]LD[370.2]
1719	WLLLYLWDNGVDSVSLKK	10.2	57	538.048	4	19.97	0.5	34 34 33 40 40 35 38 47 57 91 94 92 88 87 67 53 54 31	[1216.6]GVDSV[456.3]
1720	ELSQLDDPLK	7	70	1157.605	1	19.979	0.4	94 92 91 82 83 69 51 49 57 31	ELSQL[568.3]
1721	VNLTTGTDYYFR	9.8	81	725.3544	2	19.989	0.4	57 47 52 95 98 96 95 95 94 76 77 91	[326.2]TTGTDY[310.1]R
1723	HHQKWPVQVQGEVDDSVKEVK	14.3	68	824.7568	3	20.019	-2.9	31 52 41 41 36 37 40 60 90 85 94 94 95 97 96 94 83 64 63 76 52	[1040.5]VQGEVDDSV[484.3]
1724	LFKDNASVLPDFGKNLDKK	12.2	64	1075.085	2	20.029	-1.2	32 46 49 89 86 92 96 98 98 84 84 74 61 40 35 34 36 40 40	[388.2]DNASVLPD[930.5]
1725	CLLFDGSFKK	6.1	61	579.3057	2	20.038	1.6	43 43 64 92 83 67 53 54 71 31	[329.2]FD[547.3]
1726	T(+79.97)RLYTTLYQFR	6.9	63	771.3826	2	20.045	4.4	66 64 53 60 76 75 76 89 45 43 38	[928.4]Y[431.2]
1727	LNAGVSPPATLAQPVTVR	13.4	75	896.009	2	20.055	-0.7	40 39 50 89 93 98 91 76 80 92 95 96 87 91 91 52 31 41	[298.2]GVSP[97.1]ATLAQPV[356.2]
1729	VFFKQLDEAEGGLACR	9.6	60	594.9655	3	20.086	-1.2	56 56 56 48 41 69 85 95 93 86 64 43 39 40 48 31	[762.4]DEAE[557.3]
1730	YNALNEAELLMRAM(+15.99)K	9.7	64	891.9449	2	20.094	-2.9	67 62 91 94 89 95 96 94 61 37 35 34 34 36 34	[277.1]ALNEAE[859.5]
1731	CRKKTASMVRLVSANDTLR	12.8	68	1075.088	2	20.102	-0.5	35 34 35 49 74 90 83 63 63 93 98 96 92 88 82 79 45 45 32	[616.3]AS[230.1]RLVSAN[485.3]
1733	YNANNEAESSKKSTLK	10.2	64	892.4463	2	20.119	1.8	62 57 86 76 74 85 92 79 78 71 78 43 33 33 37 31	[277.1]A[228.1]EA[988.6]
1735	CS(+79.97)WT(+79.97)S(+79.97)NCCQVQEAR	8.4	60	618.825	3	20.148	-45.4	31 31 69 33 52 50 69 68 62 87 84 70 76 49	[1252.2]VQ[356.2]
1736	KRLSVLS(+79.97)KGGKGSWFR	9	56	629.3422	3	20.156	-2.1	33 35 36 46 31 77 58 46 71 89 85 79 78 48 43 35	[1048.6]GK[633.3]
1737	DVLASMGQLNVK	10.6	89	637.8416	2	20.165	-1.1	31 98 98 97 97 97 94 83 95 89 93 84	[115.0]VLASMGQLNVK
1739	MM(+15.99)VLRHT(+79.97)VNNCVLNK	8.5	57	623.2973	3	20.181	1.9	31 36 36 34 35 31 63 66 88 72 60 60 84 78 67	[1063.5]N[316.1]L[242.1]
1742	LLGSLDVTTSGT(+79.97)K	10.1	78	686.3436	2	20.219	2.4	95 96 96 96 97 98 97 95 81 40 39 39 37	LLGSLDVTT[453.2]
1743	MLNLEGSGLNVK	9.7	80	637.843	2	20.226	1.1	57 57 84 89 73 73 84 88 93 87 92 83	[244.1]NL[186.1]SGLNVK
1744	HQM(+15.99)TSSLLM(+15.99)SLLRGYYR	10.5	62	1044.524	2	20.233	2.2	59 56 56 61 31 65 66 78 83 84 84 71 52 48 50 52 49	[913.4]M(+15.99)SL[808.4]

1747	FNVWGLADVSK	8.1	73	412.5523	3	20.271	0.6	31 56 58 66 90 88 90 95 97 97 31	[546.3]GLADVS[128.1]
1748	NFDAGVLWVSK	9.9	90	618.3253	2	20.278	1.2	87 94 96 96 95 94 97 98 98 98 31	NFDAGVLWVS[128.1]
1749	MVSLLQEENVK	9.1	83	645.3422	2	20.287	0.1	96 96 72 73 89 80 94 89 72 80 66	MV[200.1]LQEE[114.0]V[128.1]
1751	LNARSPAQALAQPVTVR	10.8	64	896.5115	2	20.302	-1.6	34 33 33 91 98 94 46 41 44 84 94 84 88 88 53 31 41	[298.2]RSP[270.1]LAQPV[356.2]
1753	LLLLQDLK	5	62	478.3135	2	20.334	1.2	31 31 31 95 85 91 95 31	[339.3]LQDL[128.1]
1754	QPGSLDVTTYYK	8.4	70	686.3439	2	20.341	1	62 68 72 76 86 95 94 92 82 40 31 31	[369.2]LDVTT[454.2]
1755	MKNSYEETLDHLETMK	13.6	85	984.9568	2	20.348	1.2	75 73 85 96 97 97 84 83 84 95 96 96 93 84 80 31	[259.1]NSYEETLDHLETM[128.1]
1756	FFMRLKHTLSM(+15.99)LNMLANWK	11.7	62	799.7526	3	20.358	1.8	31 32 32 32 37 42 42 49 64 93 93 91 84 87 92 89 59 64 48	[1173.6]SM(+15.99)LNMLA[428.2]
1759	LVDSMQATLDSEVR	12.6	90	782.387	2	20.399	-1	64 73 88 93 94 91 97 97 98 97 94 89 89 89	[212.2]DSMQATLDSEVR
1760	YAVFDLAEGK	8.7	87	556.7844	2	20.408	-0.5	98 98 98 98 92 90 91 87 87 31	YAVFDLAEG[128.1]
1761	EWGNYDLSLQNVGRK	11.3	75	889.9485	2	20.415	4.4	40 40 52 67 94 97 97 96 96 87 83 91 71 66 41	[486.2]YDLSLQNV[341.2]
1762	TVLYTAAVRM(+15.99)DK	8.2	69	692.3666	2	20.423	-2.9	66 63 79 93 84 81 78 83 76 52 31 31	[313.2]YTA[71.0]V[546.3]
1763	GFLLDGYPR	7.8	86	519.2739	2	20.433	-0.8	63 65 85 97 97 95 94 94 82	[204.1]LLDGYPR
1767	VDQSLLTGESVSVLK	11.5	77	787.9363	2	20.478	1.2	58 57 54 84 93 98 97 91 88 90 93 93 86 31 31	[342.2]SLLTGESVSV[241.2]
1768	QFWYQS(+79.97)HGTFVAKYK	8.9	60	657.3076	3	20.487	4.4	56 56 45 49 41 47 50 75 89 89 75 66 56 57 35	[1113.4]TF[589.4]
1769	WMFPKLNEYVFR	7.4	61	543.9473	3	20.496	1.6	46 46 38 47 65 71 78 91 88 98 31 31	[916.5]EYV[303.2]
1772	HKFYRWEEAKLDDLTKKFTY(+79.97)R	12.4	59	952.1425	3	20.534	1.9	31 31 32 39 32 53 54 57 79 81 96 96 81 75 76 88 76 47 44 31 34	[1246.6]KLDD[214.1]K[775.3]
1774	Y(+79.97)KEWRLCCQLSHVNK	10.1	67	662.9729	3	20.55	-1.7	67 42 38 37 45 43 63 76 78 87 94 93 83 84 70	[1289.5]LSHVN[128.1]
1775	WWFLPLLNSGCESVR	8.7	58	602.9725	3	20.558	1.9	31 31 31 74 61 72 76 50 61 66 82 61 61 71 31	[1213.6]C[471.2]
1777	MELDDLSSNMEAVSK	13.2	88	834.8765	2	20.588	0.1	82 82 93 98 98 97 98 93 84 91 94 91 87 89 31	MELDDLSSNMEAVS[128.1]
1778	MEGDLNEMELQLSHANR	13.2	78	993.9541	2	20.596	0.1	42 43 51 63 69 88 95 97 97 96 89 97 98 92 72 72 50	[545.2]NEMELQLSH[341.2]
1779	DWEMTWKGLRGLLSKDDLR	11.7	61	773.7358	3	20.604	0.7	31 39 42 45 72 49 47 68 59 63 74 77 93 84 56 56 56 83 63	[1472.7]LS[358.1]L[156.1]
1781	MKNDNNSSSSAEAVSK	13.8	86	834.8765	2	20.621	-2	75 74 87 92 93 94 98 99 94 91 89 90 86 86 87 31	[259.1]NDNNSSSSAEAVS[128.1]
1784	VLDTPGALPQNVFK	11.3	81	749.9162	2	20.661	-0.8	69 77 89 96 96 95 94 83 83 63 73 83 96 31	[212.2]DTPGALP[242.1]VF[128.1]
1786	QPSAPWTGMLK	8.5	77	608.3126	2	20.678	-0.9	70 87 92 97 94 91 79 64 59 67 46	[128.1]PSAPW[530.3]
1787	WTAADDEMELQLSHANR	12.9	76	993.9539	2	20.685	1.5	63 63 83 44 44 60 93 96 96 97 88 96 97 88 63 63 45	[287.1]A[301.1]EMELQLSH[341.2]
1789	WVY(+79.97)FPLEGLALDNLRK	11.2	70	672.0113	3	20.716	-0.2	32 32 32 31 71 72 84 83 87 94 94 94 90 79 82 57	[885.4]EGLALDN[113.1]R[128.1]
1790	QQADWAELWQLDNLKR	12.4	77	1007.513	2	20.724	2.7	62 62 82 84 91 98 98 98 84 73 86 95 66 53 56 40	[256.1]ADWAELW[128.1]LD[511.3]
1791	TAEPVLAFYEGR	10	83	676.8455	2	20.734	-0.5	64 64 90 98 98 99 99 31 96 92 92 71	[172.1]EPVLA[147.1]YEG[156.1]
1793	DNDLDPAYVLSSR	8.8	68	732.8512	2	20.749	-0.9	40 56 85 94 98 95 91 92 97 31 31 31 31	[229.1]DLDPAYV[443.2]
1795	GFGDKVLAEWK	8.8	80	625.3323	2	20.777	-0.1	35 69 83 92 92 95 94 93 93 94 31	[204.1]GDKVLAEW[128.1]

1796	WREKQVDDLEGSLETRQK	12.5	69	739.7126	3	20.785	-1.1	32 32 48 41 45 63 83 91 94 96 92 88 89 87 69 62 69 56	[826.4]DDLEGSLE[513.3]
1797	EPTYLSYK	5.5	69	1000.499	1	20.794	0.2	31 93 94 90 92 84 31 31	[129.0]PTYLS[291.2]
1798	VTAAHNVGR	6	67	462.7555	2	20.803	3	31 81 81 81 85 59 64 86 31	[99.1]TAAH[213.1]G[156.1]
1799	VRADSVAELEGQNDSKAPK	13.4	71	1007.514	2	20.81	0.3	38 39 44 65 93 92 90 91 95 94 93 78 80 91 88 53 44 34 31	[441.2]SVAELEG[128.1]NDS[424.3]
1802	CCKATGVYNSPGASNPFKNFR	12.4	59	1131.032	2	20.85	-1.1	33 58 64 87 43 37 36 44 83 81 68 78 92 95 89 59 37 35 34 36 38	[334.1]A[420.2]NS[154.1]ASN[789.4]
1803	EGMLQQVEELK	7.2	65	652.33	2	20.859	-2.6	40 41 42 80 79 84 94 95 93 31 31	[317.1]L[128.1]QVEE[241.2]
1804	DVLASMGQLNVK	10.4	86	637.8423	2	20.867	0.2	31 95 95 94 92 92 92 77 93 89 94 86	[115.0]VLASMG[128.1]LNVK
1805	QHLYYRNGSYVEGLR	10	67	618.9782	3	20.876	-2.4	60 58 49 48 46 55 57 88 94 95 87 77 61 74 41	[974.5]GSYV[455.2]
1807	KFHRPREECYGSSNKLK	9.7	57	693.6901	3	20.907	0.3	32 32 32 33 43 47 89 84 92 91 82 69 48 45 53 54 31	[821.5]EECYG[657.4]
1808	WWLWLEELSER	6.7	61	516.2625	3	20.916	2.7	31 34 33 32 32 31 99 97 95 94 90	[913.4]ELSER
1809	MKPLVSGVLGRR	8.7	72	438.2664	3	20.924	-2.6	81 49 46 43 94 93 93 92 82 76 79 31	M[338.2]VSGVL[369.2]
1810	FYSSVAGLGVPSMDVRHR	13.1	73	989.5029	2	20.931	1.1	51 47 47 61 80 89 92 94 96 94 90 91 90 83 70 58 31 31	[484.2]VAGLGVPSMD[548.3]
1811	WLEALPLTK	6.1	68	535.8166	2	20.941	1.4	57 92 80 95 94 69 43 44 31	[186.1]LEAL[439.3]
1813	RDRSMVVLEEAMREELK	10.8	64	697.6956	3	20.969	1.9	34 39 43 59 48 48 64 93 94 96 80 79 78 72 64 53 31	[843.4]LEEA[786.4]
1814	FNGWVLADVSK	7.7	70	412.5523	3	20.978	0.5	53 40 36 36 95 93 91 94 97 97 31	[504.2]VLADVS[128.1]
1815	NFDAGVLWVSK	9.6	87	618.3252	2	20.985	1.1	76 80 94 95 95 94 94 97 97 97 31	[114.0]FDAGVLWVS[128.1]
1817	TLVNSPNKGTLDDYVEGLR	15.6	82	1046.041	2	21.002	1.1	67 72 88 87 95 92 88 95 94 93 93 95 96 84 78 84 52 68 32	[214.1]VNSPNKGTLDDY[99.1]E[326.2]
1820	NYSEETLDHLEMTK	11.8	84	855.3885	2	21.042	0.6	68 76 89 95 98 97 97 97 96 94 89 75 68 31	[277.1]SEETLDHLE[360.2]
1821	VY(+79.97)FYFAVLVADLSSNMEAWK	12.1	61	811.7106	3	21.05	-2.6	31 31 32 36 37 50 58 91 49 48 76 94 96 92 88 87 60 52 53 41	[969.4]L[285.1]LSSNM[514.3]
1822	YNSEETLDHLETMK	11.2	80	855.3885	2	21.059	0.6	78 62 64 76 95 96 96 94 93 93 92 78 69 31	[493.2]ETLDHLE[360.2]
1823	T(+79.97)LQVVSDNKKHR	9	75	752.8851	2	21.066	-0.1	47 88 68 97 97 98 94 90 90 64 34 33	[181.0]L[128.1]VVSDNK[421.3]
1825	VLNASVLPDYTKGPVEYR	11	61	674.3617	3	21.095	0.2	90 87 43 37 37 38 80 57 52 50 51 66 72 90 80 61 73 31	VL[371.2]L[661.3]PV[448.2]
1826	LLPGNEYLFR	6.5	65	611.335	2	21.104	0.1	31 96 93 90 74 81 73 42 31 31	[113.1]LPG[114.0]E[579.3]
1827	RFHS(+79.97)CLVSKLTR	7.6	63	509.5938	3	21.111	0.6	32 32 31 43 58 58 94 88 87 84 85 60	[823.3]VSKLT[156.1]
1828	NGLM(+15.99)VAELEELR	9.2	77	695.3558	2	21.118	0.1	43 47 54 95 98 98 98 98 31 89 90 72	[284.1]M(+15.99)VAEL[129.0]EL[156.1]
1829	LPPQARGMSQT(+79.97)K	7.2	60	465.228	3	21.127	2.8	31 81 65 59 53 53 65 92 57 43 64 45	[113.1]P[509.3]M[524.2]
1831	RMEELEAVAKPTR	8.2	63	765.4086	2	21.157	-0.4	92 92 31 31 97 95 87 80 56 42 38 39 31	RM[258.1]LEAV[553.3]
1832	WVMELEAVAAAALR	10.9	78	510.6083	3	21.164	-2.6	31 93 94 94 97 96 94 88 72 65 62 75 86 31	[186.1]VMELEAV[284.1]L[156.1]
1833	NSLGLNLLQELNHK	8.8	63	796.9411	2	21.172	-0.3	57 49 48 52 57 75 95 89 66 66 63 46 67 38	[598.3]LL[749.4]
1834	RPQQHLT(+79.97)LYKLR	6.7	56	544.9629	3	21.18	0.6	64 59 40 40 40 80 53 52 52 57 63 61	[646.3]L[854.4]
1835	RLGNMVAELEELR	9.6	74	765.4086	2	21.188	-0.4	64 59 54 52 68 80 87 91 95 31 95 96 83	[571.3]VAEL[129.0]ELR

1837	SSWREKRTSGGTTMYPGLWR	12	60	786.0591	3	21.217	0.7	66 66 52 35 49 46 45 53 73 55 53 70 95 94 94 90 42 39 39 31	[1332.7]TMYP[512.3]
1838	ADSKGDFM(+15.99)K	6.6	74	1014.453	1	21.226	-2.7	90 89 81 66 72 91 80 31 58	ADS[185.1]DF[275.1]
1839	LLSLNSADMLK	9.7	89	602.8346	2	21.232	1.1	95 95 95 96 92 94 93 91 83 82 54	LLSLNSADML[128.1]
1840	NNTEDFFK	5.3	66	507.7308	2	21.239	1.7	80 80 80 94 96 31 31 31	NNTED[422.2]
1841	WRMWLRKLEGSTDVQAEPRK	12.1	60	622.3333	4	21.246	1.3	31 31 35 36 35 35 48 58 93 93 77 72 86 92 80 83 84 52 45 31	[1169.7]EG[188.1]DVQAE[381.2]
1843	EVTDYLMK	6	75	499.7467	2	21.275	-0.1	67 67 95 93 90 86 31 66	[228.1]TDYL[259.1]
1844	LLSLNSADMLK	9.5	87	602.8339	2	21.281	-0.1	91 91 87 88 86 92 92 89 86 85 59	LLSLNSADML[128.1]
1845	ERAYANNVLSNTTMYPGLWR	15	75	1178.583	2	21.288	3.5	35 34 35 52 92 90 91 96 97 97 89 93 96 95 97 80 56 57 77 31	[519.2]ANNVLSNTTMYP[512.3]
1847	NVFRFYDDLEGSLEKEKKLR	11.6	58	829.4404	3	21.306	1.2	40 40 40 41 35 36 56 80 78 80 57 53 65 87 62 62 85 68 50 40	[941.4]D[113.1]E[257.1]E[257.1]K[397.3]
1849	DLTDYLMK	6.3	78	998.4861	1	21.336	-0.2	94 93 94 94 95 80 31 41	DLTDYL[259.1]
1850	ALVVGQVFK	6.2	69	480.7975	2	21.343	0.2	92 92 94 84 62 42 44 77 31	ALVV[559.3]
1851	RPAHYRDKFK	6	60	439.9114	3	21.35	1.7	43 40 46 59 56 74 66 88 89 31	[895.4]KF[128.1]
1853	SSGKWQATLDDEVK	11.2	80	782.3875	2	21.366	1.8	31 91 91 92 92 70 94 95 96 97 90 67 51 50	[87.0]SGKW[128.1]ATLDD[356.2]
1855	KKERY(+79.97)LKDDLEGSLEKEKK	11.9	63	806.0897	3	21.397	2.6	75 47 42 39 33 44 43 71 83 96 96 87 65 64 66 55 55 68 52	[1140.6]DLEG[842.5]
1856	LM(+15.99)HSVLRLVLSCNDK	10.7	71	872.4675	2	21.406	1.9	59 66 79 93 98 98 84 58 74 88 69 65 46 50 31	[397.2]SVLR[212.2]L[547.2]
1857	CPETKQLEELRK	9.1	76	737.3882	2	21.416	-2.5	31 66 71 74 83 79 96 97 95 77 78 52	[430.2]K[128.1]LEE[397.3]
1859	KLEKTRT(+79.97)ATAPKYR	8.7	62	581.6475	3	21.435	-1.9	39 38 44 57 58 59 53 54 89 89 91 71 74 43	[1007.5]TAP[447.3]
1861	QLESDLVQVQGEVDDWKEVK	14.9	75	1172.586	2	21.467	-0.7	55 44 45 85 93 95 95 89 97 90 93 92 95 98 98 70 42 36 37 32	[370.2]SDLVQVQGEVDD[670.4]
1862	KKLHKMLQALMK	8.2	68	490.2997	3	21.478	-0.6	31 34 48 56 92 90 87 75 76 80 84 58	[506.3]KML[199.1]LM[128.1]
1863	TRRSWPVDSTVLR	7.8	60	524.9578	3	21.487	-1.2	72 57 39 46 51 72 90 84 77 52 48 59 31	[783.4]VD[556.3]
1867	LVNASVLPDANFLDNK	12.4	78	865.4604	2	21.535	1.1	48 48 47 88 95 98 98 94 91 77 75 90 89 86 77 31	[326.2]ASVLPD[185.1]FLD[242.1]
1868	MKHSVLAHELVSHNK	12.3	82	865.4604	2	21.542	-1.8	62 72 87 94 97 95 86 86 98 98 99 78 62 66 46	[259.1]HSVLAHELV[466.2]
1869	FLDKNASVLPDYGPLPFK	13.4	74	1011.04	2	21.55	-1	73 78 92 91 89 95 96 98 97 82 78 85 69 54 45 39 39 32	[260.2]DKNASVLP[115.0]Y[639.4]
1870	RPSGWLFLHFLDNK	8.2	58	577.3092	3	21.559	-2.3	33 35 36 38 44 50 62 90 31 96 93 89 81 31	[843.4]L[137.1]FLDN[128.1]
1871	FFRT(+79.97)RANMPLTLSR	9.3	67	597.303	3	21.567	0.8	31 32 43 41 49 58 91 91 74 72 89 91 92 71	[858.4]NM[210.1]TLS[156.1]
1875	WMRYKGPDNM(+15.99)LDNK	8	57	595.2816	3	21.616	2.7	47 41 37 50 47 54 49 52 62 77 84 85 78 31	[1294.6]LD[242.1]
1876	VPTPNVSVVDLTVR	10.9	78	748.4282	2	21.625	0.9	31 84 94 92 87 96 96 93 93 91 76 59 52 38	[99.1]PTPNVSVVD[469.3]
1877	LCYWSDLALDMSNMEAVSK	13.7	72	725.9984	3	21.633	2.2	50 47 49 41 40 54 65 77 94 94 94 94 81 83 93 90 88 90 31	[951.4]LDMSNMEAVS[128.1]
1879	SHEEKELAVSKLEK	10.5	75	813.9379	2	21.663	-0.6	34 38 45 72 91 95 86 83 95 97 94 91 92 31	[482.2]KELAVSKLE[128.1]
1880	NHQKMELDDLSSNMEAWK	14.1	78	1088.493	2	21.67	-0.3	53 53 41 49 94 96 97 98 98 95 95 94 87 91 86 65 66 44	[507.3]MELDDLSSNME[385.2]
1881	VDDDLEDELYAKKLK	11.9	80	897.4616	2	21.679	-0.4	31 31 95 95 95 97 98 96 96 85 95 94 84 62 31	[214.1]DDLEDELYAKK[241.2]

1883	ETQRGWTM(+15.99)LPQK	8.2	68	745.8739	2	21.698	-0.9	67 66 64 69 69 86 76 61 89 56 67 40	[571.3]W[248.1]L[353.2]
1886	HSKEEEALVSKLEK	10.5	75	813.9382	2	21.737	-0.2	32 44 45 83 93 94 79 79 92 97 94 90 91 31	[352.2]EEE[184.1]VSKLE[128.1]
1888	EAWHLLR	4.6	66	462.7549	2	21.753	-2.6	92 92 92 51 51 51 31	EAW[519.3]
1889	ETWFGQFYM(+15.99)ATLLK	8.1	58	584.29	3	21.76	2.6	31 31 32 34 36 57 64 80 92 90 77 75 70 31	[895.4]YM(+15.99)A[455.3]
1891	KTLELNGPSQGELEK	10.2	68	821.9361	2	21.79	0.1	58 66 83 91 91 86 75 65 67 84 56 54 56 54 31	[229.1]LELN[241.1]Q[556.3]
1893	RWTQMAELEELR	8.5	71	521.2656	3	21.812	2	32 32 36 37 58 89 95 98 97 93 96 81	[702.3]AELEELR
1895	LWEWWQLVDLEGSLTREKKLR	13.5	64	895.8193	3	21.832	-2.9	31 44 42 46 63 39 38 49 82 90 90 82 80 77 82 92 86 66 70 48 39	[1140.6]DLEGS[113.1]TRE[525.4]
1898	RQTWVAELEELR	8.6	72	510.6083	3	21.87	2.2	42 41 48 48 90 90 95 97 31 94 96 82	[571.3]VAEL[129.0]ELR
1899	WPENALGVWTGLVVVM(+15.99)YK	12	66	1039.544	2	21.878	1.2	31 75 41 44 85 96 94 80 73 77 68 70 77 70 70 73 31 31	[526.2]ALGV[1192.6]
1900	LLGLNSADMLK	9.8	89	587.8284	2	21.889	-0.4	98 97 97 97 91 93 92 93 84 83 53	LLGLNSADML[128.1]
1901	LLTEENGFGR	7	70	568.2906	2	21.895	-0.1	91 94 93 93 51 42 47 82 72 31	LLTE[300.1]F[213.1]
1903	LDLDPLLSDR	7	70	578.814	2	21.925	-0.1	32 32 97 98 95 94 95 94 31 31	[228.1]LDPLLS[271.1]
1904	LLGLNSADMLK	9.5	87	587.8287	2	21.932	0	89 89 90 91 90 90 89 92 85 85 58	LLGLNSADML[128.1]
1906	LLGLNSADMLK	8.2	75	1174.649	1	21.947	-0.8	93 89 92 91 84 84 82 67 51 46 36	LLGLNSA[487.2]
1907	LMVAELEELR	7.8	78	601.8254	2	21.955	-1.1	31 94 90 90 96 97 31 87 91 71	[113.1]MVAEL[129.0]EL[156.1]
1909	CPPWDVM(+15.99)VVSKLTR	7.9	57	549.6186	3	21.984	1.2	31 37 37 37 78 53 47 47 55 89 84 72 71 45	[1042.5]SK[370.2]
1910	KFQFLYDDLEGSLEQTR	11.4	67	697.014	3	21.992	1.9	32 42 41 57 55 43 60 82 88 96 96 94 93 89 59 65 44	[941.5]DLEGSLE[385.2]
1913	VCMKSTK	4.3	61	796.4078	1	22.017	2.9	79 78 87 59 51 38 31	[202.1]M[444.3]
1915	YNFDNGLLYTHDDLFK	12.4	78	987.9679	2	22.045	2.8	80 72 57 88 86 96 96 92 80 73 58 92 92 71 71 31	Y[261.1]DNGLLY[238.1]DD[388.2]
1916	VLDSMQATLDSDLR	11.4	81	782.3874	2	22.055	-0.5	65 71 88 88 89 84 93 93 95 93 74 67 69 61	[212.2]DSMQATLD[471.2]
1917	MTGKELFLK	5.7	63	533.8021	2	22.064	0.6	76 75 77 82 64 65 58 31 31	[289.1]K[630.4]
1918	LQQSKALAAARR	7.5	63	438.266	3	22.075	2.1	87 55 45 40 43 47 75 85 90 82 63 31	L[655.4]AAA[312.2]
1922	AELGNHR	4.5	64	796.4084	1	22.123	3	31 97 85 83 83 31 31	[71.0]ELGN[293.2]
1924	FLFDMGNLMDRLDSFR	10.3	65	988.969	2	22.141	-2.5	35 65 57 87 76 76 86 88 82 73 56 75 57 42 39 32	[407.2]D[188.1]NLM[889.4]
1925	VNRKPAFK	4.6	58	480.2921	2	22.15	-1.5	59 39 42 70 93 92 31 31	[497.3]PA[275.2]
1928	RCWQLDVADDLHLAPK	9.7	61	627.3223	3	22.189	2.2	31 31 39 59 59 81 63 62 84 94 94 90 59 52 35 31	[686.3]D[170.1]DDLH[409.3]
1929	NVVLDLPGAPQDLK	10.7	77	739.9147	2	22.198	0.7	60 62 81 96 97 98 96 93 91 66 55 60 77 31	[213.1]VLDLPGA[581.3]
1930	Y(+79.97)RVVKLLYPSALTPLLKNR	10.7	56	775.4465	3	22.205	-0.2	32 32 32 35 34 41 87 90 86 44 43 54 76 81 94 73 47 47 33	[838.5]LYP[372.2]PL[511.3]
1933	CNPWAELGEQLDNLKR	13.6	85	943.4673	2	22.248	2.5	59 65 74 92 97 97 98 96 95 89 96 96 86 78 81 57	[314.1]WAELGEQLDN[113.1]K[156.1]
1934	CALY(+79.97)NLKWMAVPLQR	10	66	629.3137	3	22.256	2.6	39 39 42 38 46 48 91 78 73 85 86 96 80 83 64	[757.3]K[317.1]AVPLQ[156.1]
1935	AARKNAAGLSWAPASPFYK	14	73	1003.534	2	22.265	-0.2	31 32 39 50 83 89 94 93 93 94 88 83 85 96 95 95 85 31 31	[426.3]NAAGLSWAPASPF[291.2]

1936	SCKT(+79.97)AELFAPLDNLKR	13	81	943.4673	2	22.274	1.7	61 61 84 78 95 96 96 95 80 84 94 96 85 68 71 47	[190.0]K[181.0]AELFAPLDN[397.3]
1940	S(+79.97)FEKWQWGT(+79.97)VNLQR	8.1	58	646.9499	3	22.321	2.7	33 33 38 46 41 48 64 77 64 83 84 70 71 55	[1309.5]VN[397.2]
1941	VEDDLELTLAK	9	82	623.3318	2	22.33	-0.6	31 70 96 96 95 96 97 96 92 93 31	[228.1]DDLELTLA[128.1]
1943	SDWYQGQAENQTQR	7.9	56	570.9219	3	22.347	2.8	31 86 43 39 38 43 43 89 91 85 54 47 49 42	[87.0]D[662.3]AEN[513.3]
1945	EELWGAVNKT(+79.97)KLVK	10.7	76	847.9459	2	22.377	-1.9	76 76 91 84 96 96 96 95 95 62 54 49 63 31	[258.1]LWGAVNK[649.4]
1947	FCKLPVTEALTLGY(+79.97)R	10.8	72	895.9489	2	22.394	-0.3	39 53 69 92 95 73 56 61 89 96 97 97 95 31 31	[378.2]LP[329.2]ALTLG[399.1]
1949	DLGM(+15.99)VAELEELR	9.3	77	695.8465	2	22.409	-1.8	38 49 60 90 98 98 98 98 31 91 92 75	[285.1]M(+15.99)VAEL[129.0]EL[156.1]
1952	VGDLEEGKLYFFR	8.4	65	524.9407	3	22.447	1.3	96 95 78 72 65 55 53 57 93 77 31 31 31	VG[671.3]L[613.3]
1953	DEMQQGLPVNGSLGY(+79.97)R	9.9	62	615.2736	3	22.455	1.1	38 41 46 47 48 70 79 75 73 66 74 87 91 87 31 31	[1168.5]SLG[399.1]
1954	LLDTPSAPATSM(+15.99)ARK	11.6	77	787.9161	2	22.465	2.6	91 94 95 97 98 96 95 70 48 57 81 86 57 52 34	LLDTPSA[269.1]SM(+15.99)[355.2]
1955	T(+79.97)KLRRNTSLSAKR	7.6	58	537.6339	3	22.473	1.4	59 44 39 54 68 64 92 93 78 42 40 46 36	[848.4]TS[555.3]
1957	SYELPDGQVLTLGNER	12.8	80	895.9495	2	22.503	0	77 77 86 86 96 92 82 45 54 92 97 96 91 72 78 53	[250.1]ELPDG[227.1]LTLG[399.2]
1960	AFFQESQLKEAT(+79.97)EEK	10.9	73	932.9243	2	22.528	2.7	86 86 86 88 87 92 69 91 76 90 67 55 47 31 31	AFFQES[128.1]L[128.1]E[638.2]
1961	Y(+79.97)YPKRNKHFGDTRTLRR	9.5	56	572.7958	4	22.537	2.3	33 40 35 35 35 41 49 50 46 67 78 78 87 87 73 71 31	[1586.7]RT[425.3]
1963	WWEKGTGLCPKTR	7.6	59	521.2681	3	22.569	-3	31 81 35 35 39 45 57 89 74 66 71 78 53	[186.1]W[472.2]L[585.3]
1964	LAFEYGLTDLR	8.4	77	649.3433	2	22.576	0.6	31 31 31 98 98 95 93 94 93 94 79	[331.2]EYGLTDL[156.1]
1966	Y(+79.97)QKWWRTLEGAGGPVR	8.9	55	496.7463	4	22.592	2.3	49 41 39 37 37 58 49 77 81 80 79 63 59 51 48 31	[1241.6]EG[537.3]
1967	QLHQAVFER	5.9	65	564.301	2	22.6	-0.9	67 74 67 55 83 86 88 31 31	[506.3]AVF[285.1]
1969	EGNRRGSWR	5.7	63	1117.562	1	22.629	1.1	88 84 83 85 45 53 60 31 31	EGNR[642.3]
1970	LLTENWEGR	6.7	74	559.2849	2	22.638	-1.1	95 94 92 91 88 67 51 49 35	LLTEN[528.2]
1972	DGT(+79.97)GTLEENSS(+79.97)YK	8.7	67	780.78	2	22.654	1.6	39 49 62 89 92 96 95 84 64 73 51 31 36	[353.1]GTLEE[659.2]
1975	MKEEATLYCPKHK	8.8	68	526.5995	3	22.692	1.7	57 56 75 58 55 67 75 80 86 86 74 72 31	[802.4]YCP[393.2]
1977	LLTEGNEFGR	6.8	68	568.2911	2	22.715	0.8	94 97 96 89 48 45 56 93 31 31	LLTE[300.1]F[213.1]
1981	YAVFNFKGEALGCFNR	10.7	67	612.6356	3	22.762	1.5	86 54 54 58 58 58 66 71 83 89 78 64 62 63 70 49	Y[763.4]EA[690.3]
1982	HPTSLVM(+15.99)PNRTR	8.5	71	712.8732	2	22.77	-2.4	31 85 75 55 72 98 97 90 64 66 76 31	[137.1]P[301.2]VM(+15.99)P[527.3]
1983	LVDTPGSPLNLMVK	10.2	73	742.4119	2	22.78	-1.6	31 95 95 96 96 95 94 53 51 58 69 73 78 31	[113.1]VDTPGS[795.5]
1984	LQGPLSEVSDYYR	10.3	80	763.8762	2	22.788	-2.2	54 51 87 95 97 97 97 97 99 97 94 31 31	[241.1]GPLSEVSDY[319.2]
1985	SSCHMKATLDTLTR	9.9	71	782.3859	2	22.797	1.8	31 31 31 97 96 96 96 95 95 88 76 51 55 45	[277.1]HMKATLD[471.3]
1987	LPY(+79.97)MRVKSLTENDQYLFR	10.9	61	785.0515	3	22.828	-0.3	31 82 61 41 33 36 41 55 60 94 92 86 91 84 68 68 31 31	[113.1]P[957.5]TENDQ[579.3]
1989	VFFPWYEACTLDR	8.3	64	412.4475	4	22.85	0.7	61 61 61 31 42 49 43 81 80 79 81 84 68	[968.4]AC[101.0]LD[156.1]
1990	YRPLLPVLYKFPDPLLHDK	12.7	67	1162.664	2	22.858	1.8	31 56 49 92 98 97 96 97 98 63 41 46 46 75 90 58 46 47 31	[416.2]LLPVLY[584.3]L[493.3]

1991	WLGLVSGVVARR	7.7	64	438.2655	3	22.87	-2.2	39 39 46 49 69 91 79 83 73 79 82 31	[568.3]S[57.0]V[170.1]R[156.1]
1993	MRNKLPVLYPKLPGRCSPVR	11.3	56	581.8369	4	22.899	2.3	31 33 34 39 44 66 76 94 91 78 53 34 35 43 87 91 93 31 31 31	[838.5]LY[492.3]RCS[352.2]
1994	RRREKLLYPPVVSSLGYYK	13	68	775.4459	3	22.908	-0.2	31 31 31 35 34 36 88 92 96 98 93 81 81 81 88 83 77 78 54	[838.5]LYPPVVSSLG[454.2]
1995	WEKMFPM(+15.99)NGTFMLKR	9.2	61	644.6496	3	22.916	0.8	55 36 36 41 53 82 80 60 63 68 69 88 67 68 43	[721.3]PM(+15.99)[419.2]M[397.3]
1997	SSVT(+79.97)LSPLLKVALSPHGK	12.8	71	957.5248	2	22.933	-1.8	84 89 80 87 97 98 97 92 68 56 46 49 79 79 67 38 38 31	SSVT(+79.97)LSPL[1030.6]
1999	LVSQGLVKELDLM(+15.99)NHK	10.3	64	920.5018	2	22.964	-1.9	31 88 60 39 44 78 82 88 77 81 91 61 59 46 61 36	[113.1]V[385.2]VK[129.0]LD[639.3]
2000	YSENDGPTLDSNNR	10.3	73	791.3403	2	22.973	-2.5	95 95 93 88 69 57 64 90 89 62 57 58 60 42	YSEN[269.1]TL[586.2]
2002	EVQLVDKCGVLK	7.4	62	444.2513	3	22.993	-0.5	60 59 53 69 73 80 82 76 55 49 51 31	[568.3]DK[500.3]
2003	LLYGTLYWFK	5.6	56	435.2417	3	23.003	1.7	39 44 40 41 45 89 79 52 62 67	[547.3]L[624.3]
2005	CAMLYFQAFSKVADLMR	11.4	67	665.3305	3	23.035	3.7	60 59 55 46 35 45 63 89 92 92 95 92 91 84 56 47 32	[856.4]AFSKVAD[400.2]
2006	HLKLGPYT(+79.97)GTGTMYPGLWR	12.8	67	1114.537	2	23.043	-2.3	32 32 38 43 47 62 90 80 72 64 65 93 97 98 93 78 72 82 31	[645.4]YT(+79.97)[215.1]TMYP[170.1]W[156.1]
2007	Y(+79.97)YRKVHCLLFLSNPVVAR	12.8	71	753.3943	3	23.052	0.7	32 32 37 42 68 75 67 69 85 95 95 95 84 88 85 80 83 57	[1142.5]LFLSNPVVA[156.1]
2008	VTWKAFWSSELKSR	7.8	56	575.6406	3	23.063	-2.5	31 46 33 34 36 46 95 94 82 79 59 52 48 38	[732.4]WSS[613.4]
2009	LLDTPSAMPQLLLK	9.8	70	770.4442	2	23.071	-0.3	82 90 90 94 95 90 87 52 50 42 59 81 31 31	LLDTPSA[469.2]L[241.2]
2011	SSMLDAVKSM(+15.99)AVQSDRPR	12.8	71	997.4928	2	23.103	-0.6	74 77 77 89 94 89 85 51 64 52 87 82 51 56 82 74 50 31	[305.1]LDAV[362.2]AV[215.1]D[409.3]
2012	M(+15.99)VYFAYMPKPPPESGRADR	12.8	67	743.3607	3	23.114	2.2	31 84 85 59 79 92 70 58 57 84 80 81 72 71 54 53 55 64 43	[147.0]VY[218.1]Y[356.2]PPP[771.4]
2013	MQSDGLDDTVVPLR	9.2	65	773.3831	2	23.124	0.7	57 46 56 83 91 90 92 86 82 82 31 49 31 31	[346.1]DGLDDTV[465.3]
2015	T(+79.97)KWWNFNCCTAAELEGSLK	11.3	59	571.0004	4	23.145	-0.9	49 41 38 35 38 36 43 52 87 86 91 95 95 94 82 46 40 41 31	[1159.4]CTAAELE[385.2]
2017	QLLGQLEEMR	8.8	88	608.8231	2	23.178	2.9	55 59 95 98 91 97 99 96 97 87	[241.1]LGQLEEMR
2019	QLGEVEDLMVDVER	12.5	89	816.4031	2	23.194	2.8	49 52 92 94 97 97 97 97 96 98 98 92 90 90	[241.1]GEVEDLMVDVER
2020	VRRTWPYLTKSLLYK	8.3	56	642.0449	3	23.202	1.9	32 32 31 48 48 77 51 49 59 83 85 82 73 45 31	[1172.6]KSL[404.2]
2021	MTWKLEPVELER	7.2	60	510.9379	3	23.211	0.4	32 32 32 49 52 78 79 80 88 65 79 52	[885.4]VE[398.2]
2023	LLPLYVPPVAPPDLLYK	10.3	61	636.7121	3	23.242	-1.4	31 89 37 33 33 47 88 86 77 73 65 63 65 87 72 45 31	[113.1]L[472.3]PP[479.2]L[404.2]
2024	VAMVAELEELR	8.9	80	630.3371	2	23.25	0.4	51 60 85 97 98 98 98 31 92 93 77	[170.1]MVAEL[129.0]EL[156.1]
2025	KKY(+79.97)VLVEDLMVDVER	11.7	78	639.3229	3	23.257	-3.1	31 63 52 52 86 81 88 95 96 96 97 97 84 81 61	[598.3]LVEDLMVDVE[156.1]
2026	RT(+79.97)DS(+79.97)VKVAVVELR	8.2	63	544.6034	3	23.266	2.5	48 43 42 50 74 56 53 49 59 82 85 94 80	[1115.5]VELR
2027	LLRWFWM(+15.99)AGAVHR	7.6	59	553.6296	3	23.276	0.4	31 31 31 31 31 31 84 84 90 90 91 97 31	[901.5]M(+15.99)AGAVH[156.1]
2029	NGLMVAELEELR	8.9	75	687.3586	2	23.306	0.6	40 41 45 93 97 98 97 98 31 88 89 70	[284.1]MVAEL[129.0]EL[156.1]
2030	NSTVDSLLFLR	9.5	86	632.8486	2	23.313	0.3	73 78 94 98 98 94 93 97 94 91 31	[201.1]TVDSLLFL[156.1]
2031	QGVMVAELEELR	8.7	72	687.3586	2	23.32	0.6	35 36 36 88 95 95 94 97 31 90 92 73	[284.1]MVAEL[129.0]EL[156.1]
2032	M(+15.99)GTGSQLEM(+15.99)LR	8.9	81	627.7952	2	23.327	1.2	92 88 87 71 68 83 96 96 87 88 31	M(+15.99)GT[144.1]QLEM(+15.99)L[156.1]

2033	WMPGLLFYKGGVGLHK	9.9	62	601.665	3	23.334	1.7	46 40 38 41 41 58 62 75 92 85 81 87 80 66 61 31	[1007.5]KGGVG[378.2]
2035	FRLKFFLELVPYVAYYK	11.6	68	732.7475	3	23.364	1.1	31 33 33 36 37 73 94 95 93 82 81 93 90 85 82 83 31	[838.5]LELVPYVAYY[128.1]
2036	LWTVEGLMK	5.2	58	538.7944	2	23.373	0.7	42 42 76 86 61 55 53 57 42	[400.2]V[558.3]
2037	RKFNDHGDTT(+79.97)R	6.5	59	476.2121	3	23.38	-0.4	31 37 36 40 73 73 78 89 79 79 31	[854.4]D[438.2]
2039	WDQFYEVPLPR	8.9	81	725.3615	2	23.4	-0.3	76 90 63 77 73 98 98 98 89 89 31	[186.1]D[438.2]EVPLP[156.1]
2041	SSPSQVAFSQVADLMR	13.6	85	861.9272	2	23.429	-0.4	59 60 61 72 80 95 98 98 97 91 96 96 95 92 92 68	[358.1]QVAFSQVADLM[156.1]
2042	NKDEVAFSQVADLMR	11.5	77	861.9272	2	23.437	-0.4	35 34 35 50 92 96 97 95 85 95 96 95 90 89 63	[486.2]VAFSQVADLM[156.1]
2043	LRYMFDVLVAAFK	8.5	65	524.9591	3	23.445	1.4	32 32 32 32 81 97 96 97 95 95 94 31 31	[563.3]FDVLVAA[275.2]
2044	VHVQSDGVGVEER	9.1	70	705.8533	2	23.453	1.5	31 99 97 84 89 91 91 87 63 47 43 44 39	[99.1]HVQSDGV[570.3]
2045	VNWTKDVLSEPSKSLR	9.5	60	620.3385	3	23.461	-0.6	64 62 58 44 39 53 55 77 92 91 77 67 45 40 44 39	[955.5]SE[668.4]
2047	LKGADPEDVLVAAFK	13	86	786.9348	2	23.492	-0.4	83 72 83 86 97 98 97 96 95 94 89 89 92 85 31	L[128.1]GADPEDVLVAAF[128.1]
2048	VTFLTMNFVTLK	8	66	471.9318	3	23.5	-0.1	53 51 54 74 87 90 85 79 67 57 62 31	[460.3]TMN[588.4]
2049	LSFLTMFGEKLK	9.1	76	707.3937	2	23.507	-0.6	88 91 92 96 90 89 92 56 53 57 66 31	LSFLTMF[555.3]
2051	LDPSNLPVVEEHFK	10.8	77	541.9518	3	23.525	2.1	68 52 60 68 44 45 88 99 97 96 96 93 85 85	[639.3]PVVEEHFK
2053	QLLGTLEEMR	8.7	87	595.3156	2	23.555	-0.4	50 53 95 97 97 97 98 96 97 87	[241.1]LGTLEEMR
2054	QLLGTLEEMR	7.9	79	595.3156	2	23.562	-0.4	45 46 77 94 94 94 96 85 88 69	[354.2]GTLEEM[156.1]
2055	KAFLTMFDAK	7.4	74	586.3148	2	23.568	3.7	80 80 95 96 95 95 96 35 31 33	KAFLTMF[314.2]
2056	AGLLGTLEEMR	9	82	1189.623	1	23.575	-1.2	80 79 87 95 93 91 90 93 63 78 50	A[57.0]LLGTLE[416.2]
2057	LLPVLYPWRALLYYK	9.6	64	954.5621	2	23.582	1.3	31 68 68 98 97 95 95 33 39 35 56 89 89 31 31	[323.2]VLYP[526.3]LY[291.2]
2059	EPKGTLEEFR	7	70	603.3131	2	23.612	2.5	74 74 74 95 94 95 96 31 31 31	[354.2]GTLE[432.2]
2060	KEPGTLEPYR	7.3	73	1189.624	1	23.621	2.7	63 62 74 83 93 94 89 56 65 41	[354.2]GTLE[416.2]
2061	WYFCEGGQPR	5.8	58	414.8499	3	23.629	-0.6	58 58 58 68 61 64 61 50 55 46	[1223.5]
2062	NSLPNHWK	5.4	68	995.5044	1	23.638	-1.3	65 73 90 90 71 72 49 31	[201.1]LP[565.3]
2063	NKKLVS(+79.97)R	5.9	84	462.7552	2	23.647	0.6	66 66 80 90 93 95 95	[242.1]KLVS(+79.97)R
2066	FVVEKTTGETYVFR	9.6	69	838.4379	2	23.688	-0.2	31 82 65 44 44 93 94 81 82 92 92 92 31 31	[147.1]V[356.2]TTGETYV[303.2]
2067	EPGVGRTEYK	6.9	69	568.2905	2	23.699	-0.4	58 58 45 74 90 84 79 80 82 31	[382.2]GR[101.0]EY[128.1]
2068	KLGADPEKSLVAAM(+15.99)K	12	80	787.4365	2	23.707	2.5	83 82 85 89 96 58 54 68 82 91 89 89 84 84 56	KLGAD[354.2]SLVAAM(+15.99)[128.1]
2069	HHRVLPVLYM(+15.99)KYLLNQR	10.9	64	1098.616	2	23.716	1.4	31 72 72 77 79 84 95 97 98 51 48 42 45 56 45 46 38	[642.4]PVLY[1062.6]
2071	KEGNEKDSGELEELK	10.6	71	852.9201	2	23.749	2.6	78 76 70 68 81 89 93 92 90 90 75 46 41 33 31	[428.2]EKDSGE[612.3]
2072	FDDKVLADWK	7.8	78	618.8156	2	23.758	-1.7	31 94 94 93 93 82 75 89 91 31	[147.1]DDKVL[71.0]DW[128.1]
2075	NGLMMAELEELR	9.2	76	703.3426	2	23.786	-2.4	42 46 54 95 97 96 96 97 31 90 92 74	[284.1]MMAEL[129.0]EL[156.1]

2077	MRADLETYLLEK	9.6	80	741.387	2	23.816	0	72 78 89 87 85 88 90 90 94 87 69 31	[287.1]ADLETYLL[257.1]
2078	RHVYLLSLNSPM(+15.99)R	7.2	55	534.6254	3	23.824	2.3	31 39 39 36 49 38 40 59 82 89 90 90 31	[981.6]NSPM(+15.99)[156.1]
2079	KEDSTEKAGELYAHK	9.5	63	853.423	2	23.835	-0.2	63 62 79 69 71 79 83 68 64 84 72 36 39 39 31	[689.3]K[128.1]E[612.3]
2083	AKSWNETYLLTR	9.8	82	741.3895	2	23.885	-2	66 66 90 80 87 88 95 95 96 83 75 54	[199.1]SWNETYLL[257.1]
2084	RRRAWLLYPPPYVAYYK	10.2	60	738.0784	3	23.892	1.4	31 32 31 34 33 36 80 94 93 69 69 69 70 68 83 87 31	[838.5]LYP[527.3]YY[128.1]
2086	VPLYPPVVEEVGQKK	10	66	561.3229	3	23.911	1.2	31 56 55 59 92 96 96 93 87 64 58 70 46 54 31	[472.3]PPVVE[669.4]
2089	EPPVLYPPVVKKVMRR	9.4	59	636.7131	3	23.953	-0.2	31 31 31 91 91 90 90 93 31 65 65 76 43 37 33 34	[323.1]VLYPP[996.6]
2090	NFADALVAMAPK	9.2	77	624.3252	2	23.961	-1.7	76 80 94 93 89 81 70 69 82 74 78 31	[114.0]FADAL[170.1]M[296.2]
2091	Y(+79.97)RY(+79.97)FVM(+15.99)RSMVHGNLVLQEYK	12.1	60	903.744	3	23.969	2	31 31 31 38 40 42 49 61 64 71 92 86 62 63 82 93 85 81 66 31	[1508.6]HG[227.1]VLQE[291.2]
2093	QWQLVMLTRR	6	60	444.2512	3	23.99	-1.5	53 53 54 58 62 75 67 68 72 31	[1311.7]
2095	ATRSNLPVLYPPVYLLHSR	14.1	74	1098.617	2	24.021	-1.2	44 36 42 51 79 97 97 96 97 97 97 91 88 88 94 90 57 31 31	[529.3]LPVLYPPVYLL[380.2]
2096	Y(+79.97)WRYCVRVAKNDVANK	9.9	62	688.9995	3	24.03	0.2	32 32 32 37 36 40 84 90 91 89 82 85 80 62 72 41	[950.4]RVAKNDV[313.2]
2097	RWGKKPHLTTLGTNKAK	9.5	56	646.0453	3	24.04	-1.2	42 45 56 52 45 46 56 57 67 90 88 86 49 45 41 41 31	[1103.6]TLG[542.3]
2098	FNPGAVELEELR	8.7	73	687.3569	2	24.05	0.4	95 92 95 81 64 60 86 93 31 60 61 46	FNPG[170.1]EL[527.3]
2099	EFTPAQATMARNAR	9	64	782.3873	2	24.059	-1.3	31 31 56 64 70 76 88 89 91 88 61 56 51 39	[673.3]ATMA[497.3]
2101	HHRVLLVPELYVPVAYYK	11.5	64	732.7477	3	24.091	-1.7	31 33 34 35 37 33 45 58 92 93 72 91 90 89 86 83 83 60	[951.6]EL[163.1]VPVAYY[128.1]
2103	MEAPYALFWSDNAFKFR	11.4	67	698.335	3	24.11	-2	37 44 52 60 48 43 47 66 31 95 94 89 94 96 94 72 72	[1108.5]SDNAFK[303.2]
2105	RWHVRNTSLLNSK	9.2	71	537.6332	3	24.132	-1.5	80 80 31 67 66 62 85 95 94 81 58 74 43	RW[506.3]TSLL[329.2]
2107	HHRECLPHAYLVPLKKPK	10.6	59	722.7431	3	24.162	1.4	31 73 53 43 44 42 42 53 63 90 92 92 91 83 66 32 32 31	[1080.5]YLVPL[481.3]
2108	LTSVSLPPK	5.3	59	941.5657	1	24.172	-1	74 63 72 97 97 31 31 31 31	[301.2]VS[435.3]
2110	MFRKFELYPVPTLSLAATR	11.8	62	747.4125	3	24.19	-1.2	31 31 31 36 36 36 54 66 91 67 55 59 74 84 90 89 79 76 85	[1114.6]P[410.3]SLA[172.1]R
2111	RT(+79.97)ARNQASLR	6.3	63	418.2136	3	24.201	-0.4	48 41 37 39 55 64 85 85 92 74	[806.4]ASL[156.1]
2113	KHGTMVAELEELR	9.5	73	756.8955	2	24.232	-0.1	32 32 40 49 91 95 96 97 98 31 96 97 86	[423.2]MVAEL[129.0]ELR
2114	KVSPDM(+15.99)NGVVR	6.5	59	609.3195	2	24.24	1	31 31 31 31 97 89 77 79 78 72 31	[411.2]DM(+15.99)[525.3]
2115	VQLELNQLK	6.4	72	542.8218	2	24.247	0.3	89 85 94 73 69 55 58 69 49	VQL[725.4]
2116	NRKFLEAS(+79.97)GVRR	7.2	60	504.9328	3	24.257	2.9	32 33 33 45 62 92 93 92 76 69 55 31	[658.4]EAS(+79.97)[468.3]
2117	SSNGPLVAELEELR	10.7	77	757.3971	2	24.267	0.9	83 80 71 46 44 62 91 94 95 97 31 95 96 84	SS[381.2]VAEL[129.0]ELR
2119	QLLGTLEEMR	8.6	86	595.3162	2	24.297	0.6	48 52 95 96 95 97 98 95 97 85	[241.1]LGTLEEMR
2120	M(+15.99)PPGVAELEELR	8.6	72	678.8455	2	24.305	0.6	31 32 32 81 96 97 97 98 31 91 93 75	[341.1]GVAEL[129.0]EL[156.1]
2121	QLDDELPPVLSLMK	10.1	72	799.4292	2	24.312	0.4	47 48 86 97 97 98 99 99 31 91 59 55 57 41	[241.1]DDELPP[99.1]L[459.3]
2122	LLPVLYPS(+79.97)KKCLKVVK	12	75	954.5641	2	24.322	2.9	31 89 89 98 98 98 95 76 84 60 79 85 74 72 31 31	[113.1]LPVLYP[167.0]K[231.1]L[454.3]

2126	SPALVGMLKAAAR	10.8	83	642.8767	2	24.374	0.5	52 61 67 90 96 97 96 96 97 97 98 98 31	[255.1]LVGMLKAAA[156.1]
2127	DWPVAELEELR	8.4	76	678.8456	2	24.382	3.3	31 31 97 96 96 96 97 31 90 92 73	[301.1]PVAEL[129.0]EL[156.1]
2128	KKFVNTLGYLLEK	7.9	61	518.3077	3	24.39	-0.6	31 31 39 43 43 48 88 92 91 91 83 69 31	[717.4]LGYLL[257.1]
2129	LVNAWLKKDCPSVAWK	9	56	620.0081	3	24.402	2.9	81 80 52 55 81 77 56 56 45 45 31 47 44 44 66 31	LV[185.1]W[1255.7]
2131	LLTEGNEFGR	7.5	75	568.2903	2	24.434	-0.6	96 96 96 90 68 62 78 94 31 31	LLTE[300.1]F[213.1]
2132	QDPEDVLVAAFK	10.1	84	666.3452	2	24.441	-0.6	78 91 97 96 96 96 98 95 95 95 31 31	[128.1]DPEDVLVAA[275.2]
2133	MSDPLAALDPTEFER	10.4	69	846.3998	2	24.45	-1.2	35 35 45 89 91 97 98 98 96 87 81 83 31 31 31	[333.1]PLAALDPTE[432.2]
2134	QLVDYNVTGWLDK	10.5	81	775.8952	2	24.46	-1.1	65 71 89 96 97 93 95 94 94 94 94 31 31	[241.1]VDYNVTGWL[243.1]
2135	QDNSGSSVNFVFFK	11.3	81	788.3746	2	24.469	-1.2	63 69 85 96 97 97 87 62 58 84 96 98 98 31	[243.1]NSGSS[213.1]FVFF[128.1]
2137	NGLMMAELEELR	9.3	77	703.3439	2	24.501	-0.6	45 48 56 95 98 97 97 97 31 90 91 74	[284.1]MMAEL[129.0]EL[156.1]
2138	VPNLVDSEGYFFR	10.9	84	771.882	2	24.511	-1.3	93 89 79 85 97 98 96 95 95 95 96 31 31	VP[114.0]LVDSEGYF[303.2]
2139	RPGVPGMR	5.3	66	435.2415	2	24.521	-1.8	86 81 81 31 64 64 84 31	RPG[253.1]M[156.1]
2140	WFRERGSQMGAELR	9	64	574.9538	3	24.532	-1.4	31 35 35 44 47 62 62 64 95 93 88 84 85 67	[1046.5]MGAEL[156.1]
2141	LPFDFSPHVSKLTR	7.8	56	548.6367	3	24.543	3.1	31 69 69 68 38 38 36 31 31 92 87 71 69 43	[1039.5]SK[370.2]
2143	ELPEDVNVAAFK	8	67	666.3464	2	24.576	1.1	31 31 31 87 91 90 90 94 94 94 31 31	[339.2]EDVNVAA[275.2]
2144	STVSPMTVLPLPK	7.9	61	685.39	2	24.583	-2.2	31 31 31 91 94 77 75 75 95 81 37 31 31	[287.1]SP[331.2]LP[338.2]
2145	RYNYY(+79.97)FAAVLVCVAAM(+15.99)K	12	71	693.3253	3	24.592	-1.2	32 39 36 37 40 72 97 95 93 88 73 71 85 92 90 89 64	[986.4]AAVL[202.1]VAAM(+15.99)[128.1]
2146	WAMNAFQFMLTDR	10.4	80	815.8806	2	24.604	2.2	65 56 56 82 95 96 88 87 88 96 94 94 31	[388.2]NAFQFMLTD[156.1]
2151	DEKKRMNS(+79.97)FAKR	7.6	63	530.5911	3	24.665	-1.8	69 68 86 80 44 48 46 50 68 74 72 49	[244.1]KK[1070.5]
2152	LLPVLYLTPAELYYK	9.4	63	898.5132	2	24.676	-2.9	31 55 55 96 96 96 61 54 56 70 72 76 51 31 31	[323.2]VLY[1078.6]
2155	HWVLYPPVVKAGKGKTK	11.1	65	636.7117	3	24.719	-0.6	31 31 83 86 93 94 95 31 82 79 81 82 86 43 34 34 31	[323.1]VLYPP[99.1]V[128.1]AGK[414.3]
2156	Y(+79.97)YKLVPMLPK	6.6	66	444.5661	3	24.729	0.3	31 42 83 71 95 87 75 66 69 31	[406.1]K[113.1]VP[469.3]
2157	VLLGPAPHR	5.4	60	480.2921	2	24.737	-1.7	31 95 88 77 73 73 31 31 31	[99.1]LL[615.3]
2158	CSRHAELGEQLDNLQR	12.2	76	934.9531	2	24.746	-2.2	36 35 57 83 93 94 93 90 86 73 84 92 82 75 77 62	[346.1]HAELGE[128.1]LDN[397.2]
2159	KHGTMMAELEELR	9.8	75	772.8814	2	24.757	-0.3	32 37 45 76 92 96 95 95 96 31 96 97 86	[423.2]MMAEL[129.0]ELR
2161	LLPVLYPDGLLLYYK	9.8	65	890.5162	2	24.789	-2.5	31 84 84 98 96 89 88 54 35 35 39 87 87 31 31	[113.1]LPVLYP[398.2]LY[291.2]
2162	LVDSMQATLDSEVR	12.6	90	782.3882	2	24.798	0.6	71 77 91 91 92 90 97 96 96 95 91 89 90 89	[212.2]DSMQATLDSEVR
2163	QTFVAGLADASR	7.5	62	412.5522	3	24.809	3.3	33 34 33 38 40 76 92 89 89 90 93 31	[603.3]LADAS[156.1]
2165	LSKSQSEK	4.7	59	906.4916	1	24.829	2.8	73 73 75 49 45 64 31 58	[887.5]
2167	KPRHLCNTSLLNSK	9.3	67	537.6328	3	24.861	2.7	68 70 55 57 38 44 53 84 94 93 82 63 78 46	[848.4]TSLL[329.2]
2168	RHKLYPAKSYLLYK	8.5	61	890.5154	2	24.87	-1.8	31 45 41 85 79 84 42 39 47 92 92 82 56 31	[421.3]L[163.1]P[286.2]YLL[291.2]

2169	QNWPHVVGNVANK	8.1	62	488.2562	3	24.879	-0.5	50 55 55 85 31 80 76 48 45 47 83 82 63	[428.2]P[137.1]V[369.2]AN[128.1]
2170	HHHLWKLYPMVRGPRLR	10.1	60	732.7462	3	24.889	0.2	31 65 48 43 35 36 57 81 96 94 88 73 69 61 53 43 31	[951.5]YPMV[735.5]
2171	LQLGTSSYFR	7.1	71	586.3099	2	24.899	1.7	88 77 89 93 92 92 38 41 41 50	L[128.1]LGTS[553.3]
2173	VWTEAELEELR	8.4	76	687.8499	2	24.931	2	31 82 77 66 96 97 98 31 89 92 72	[99.1]W[230.1]AEL[129.0]EL[156.1]
2174	VHAVLVWAGAT(+79.97)LK	9.8	75	722.8873	2	24.938	-2.7	91 93 89 91 96 94 94 86 69 50 46 42 31	VHAVLVWA[550.3]
2175	VSPMTAELEELR	9.5	80	687.8499	2	24.947	-0.5	31 72 85 89 96 98 97 98 31 88 91 71	[186.1]PMTAEL[129.0]EL[156.1]
2176	ETNLMAYHYLFR	8.1	68	779.3801	2	24.955	0.6	49 48 49 67 81 97 89 88 89 90 31 31	[457.2]MAYHYL[303.2]
2177	DRRHNNDGLR	6.1	61	418.2139	3	24.966	1.3	32 32 31 70 65 85 83 67 89 52	[678.3]ND[57.0]L[156.1]
2179	VRLMY(+79.97)M(+15.99)LVLHKLR	9.3	71	589.9907	3	24.996	2.8	35 35 54 54 61 77 93 96 96 93 87 84 57	[889.4]LVLHKL[156.1]
2180	YAVSEPLLSQMVLAK	11.7	78	824.952	2	25.004	-0.7	51 54 57 92 97 96 96 96 94 81 86 86 75 73 31	[333.2]SEPLLSQMV[312.2]
2181	MNATLSDLVMGNLYK	12.9	86	835.4176	2	25.014	-0.5	69 64 86 95 96 94 93 94 97 98 96 87 91 93 31	[245.1]ATLSDLVMGNLY[128.1]
2182	VQLELNQLK	6.3	71	542.8216	2	25.025	0	62 57 92 79 77 64 58 83 58	[227.1]L[484.2]L[128.1]
2183	MAT(+79.97)KFFVHSHWTVFFK	10	63	698.335	3	25.033	1.9	45 44 42 42 38 41 52 78 78 78 84 79 80 91 93 31	[1265.5]W[101.0]VFF[128.1]
2185	LLPVLYPPVVEEVGQK	10.9	68	594.0129	3	25.066	-0.7	31 40 40 55 58 63 78 88 97 94 94 90 85 62 66 40	[795.5]PVVEEV[313.2]
2186	YNGSEPLELAALPLLK	13.2	83	864.4821	2	25.076	-0.5	59 61 70 90 95 96 95 96 97 98 97 89 83 73 87 31	[334.1]SEPLELAALP[113.1]L[128.1]
2188	TPGLMENFLVLHQLR	11.4	76	884.4821	2	25.096	-0.3	57 58 51 54 90 89 86 96 97 95 97 77 59 81 46	[368.2]MENFLVL[265.1]L[156.1]
2189	RPM(+15.99)MHHGVAKWR	7.2	60	507.9264	3	25.107	-2.1	31 31 31 66 40 37 65 90 94 88 86 60	[862.4]VAKW[156.1]
2191	SLSTELFK	6.2	77	462.7553	2	25.139	-0.4	31 96 95 91 88 89 95 31	[87.0]LSTELF[128.1]
2192	Y(+79.97)KGRT(+79.97)KEEFMEVSQLQEYK	12.5	66	851.7112	3	25.146	2.4	57 39 36 39 49 40 40 90 31 94 77 85 86 81 95 89 94 91 31	[1022.4]E[147.1]M[129.0]VSQLQEY[128.1]
2193	VGKMVATLLES(+79.97)K	8.8	73	678.3525	2	25.158	-2	69 60 72 82 94 93 94 93 76 53 31 55	[284.2]MVATL[537.2]
2194	VMGGLPDVVTLMEK	11.8	84	744.893	2	25.168	-0.8	77 78 82 85 92 94 92 95 94 94 91 83 84 31	[230.1]GGLPDVVTLME[128.1]
2197	LLTEGNEFGR	7.3	73	568.291	2	25.21	0.4	95 96 95 88 62 57 75 92 31 31	LLTE[300.1]F[213.1]
2198	FESFLPLMK	5.3	59	556.2968	2	25.218	0.5	31 31 96 96 97 50 46 47 37	[276.1]SFL[469.3]
2199	KETNNLSLDAASRTKT(+79.97)R	10.6	62	992.9954	2	25.226	1.2	53 50 57 55 65 68 78 91 79 75 78 67 54 53 48 42 41	[786.4]L[1066.5]
2200	WWNPLQPLGKHAPSVK	10.1	63	620.0075	3	25.238	-2.3	31 74 48 48 62 51 55 57 90 77 72 85 94 94 31 31	[1034.5]G[265.2]APS[227.2]
2201	Y(+79.97)NLRGLVAAFK	8.2	74	666.3458	2	25.248	-2.2	94 79 77 68 72 84 90 91 91 31 31	Y(+79.97)[440.2]LVAA[275.2]
2203	DGLMMAELEELR	8.6	71	703.8358	2	25.28	-0.9	36 49 50 80 86 93 93 95 31 83 89 66	[285.1]MMAEL[129.0]EL[156.1]
2205	WRYPRQNKR	5.1	56	435.2417	3	25.302	-2	66 35 33 43 61 47 84 63 69	[886.5]N[284.2]
2207	FLYVPRRPANPGRPR	8.3	55	599.3442	3	25.322	-0.5	32 39 36 51 62 62 63 57 71 61 79 62 61 52 31	[1777.0]
2210	WRT(+79.97)PKQAVMGAELR	8.8	63	574.9538	3	25.365	-2.2	34 41 37 41 38 39 48 74 96 90 87 87 87 70	[1046.5]MGAEL[156.1]
2211	EPPVLYPTKKYLTFK	9.8	65	912.5167	2	25.376	-2.4	31 31 31 97 97 98 90 72 72 85 71 57 58 49 31	[323.1]VLYP[229.1]K[652.4]

2212	ELELPEGGLFYFR	10.5	81	785.4001	2	25.387	-1	31 91 93 84 86 92 80 77 88 92 82 87 64	[129.0]LELPEG[57.0]LFYF[156.1]
2213	KPPVNYPNVSLLLWR	8.5	57	898.5129	2	25.398	-1.7	31 31 79 78 69 88 81 35 35 35 91 96 31 31 31	[535.3]YP[300.1]LL[455.3]
2215	EPPVLYRRAKLYYK	8.4	60	898.5127	2	25.431	-2	31 31 31 97 96 97 78 59 56 57 76 61 31 31	[323.1]VLY[1078.6]
2216	LLFNKREPVLLNSCR	9.4	63	601.3414	3	25.441	-0.5	37 46 44 48 51 57 51 78 76 84 84 83 74 91 31	[1096.6]LLN[87.0]C[156.1]
2217	RRHM(+15.99)TVVWCLCTGKK	9.4	63	459.2414	4	25.451	2.3	31 32 52 50 79 78 47 47 75 95 92 79 71 73 31	[1184.6]LC[414.3]
2219	M(+15.99)ANQTVSSQFR	9.3	85	642.8044	2	25.474	1.1	60 60 59 86 93 96 98 96 93 97 85	[332.1]QTVSSQFR
2221	YRKLKAFKVVSYFK	8.9	64	889.03	2	25.506	0.3	32 32 31 43 52 56 67 94 95 94 90 79 90 31	[906.5]KVVS[163.1]F[128.1]
2222	S(+79.97)ESFVNGGSTQAR	8	62	710.297	2	25.517	-2.3	64 70 93 92 77 66 77 65 41 37 37 40 37	[296.0]SF[870.4]
2224	QPMVMKANKRK	7	64	444.2518	3	25.538	-2.7	56 60 61 63 53 56 66 79 83 87 31	[899.4]KR[128.1]
2225	DMT(+79.97)CDLQAMS(+79.97)ELDGMS(+79.97)R	10.1	60	1071.79	2	25.548	-44.9	31 31 47 58 89 87 85 89 84 60 62 60 82 38 37 32 31	[530.1]DLQAM[409.1]D[511.2]
2227	LLPVLYPPVTTLYYK	9.8	66	890.518	2	25.581	-0.4	31 33 33 97 97 98 98 98 43 43 59 89 93 31 31	[323.2]VLYPP[301.2]LY[291.2]
2228	LVLPKMMK	5.2	65	480.2921	2	25.588	-1.1	31 31 97 87 82 80 79 31	[212.2]LPKM[259.1]
2229	EVVSMQATLDSEVR	10.8	77	782.3878	2	25.598	0.1	61 62 62 66 67 73 94 97 97 97 91 70 71 68	[673.3]ATLDS[384.2]
2231	WWYWRGVRYK	6.2	62	500.596	3	25.62	2.6	31 66 69 49 50 66 83 82 62 61	[934.4]VR[291.2]
2233	KPVPLYRVKYLNYK	8.5	61	891.0255	2	25.653	-1.9	32 32 32 93 93 95 58 55 69 92 54 52 58 31	[324.2]PLY[383.3]Y[518.3]
2234	VYKCLKNTSLLNSK	9	64	537.6376	3	25.663	3	77 43 38 35 41 59 68 89 92 91 80 60 75 45	[848.5]TSLL[329.2]
2235	HCAEDGS(+79.97)AEEVM(+15.99)K	9.8	75	751.27	2	25.672	-0.4	31 85 85 85 91 75 74 89 93 77 77 77 31	[137.1]CAED[224.0]AE[503.2]
2236	RRSM(+15.99)GLADVSK	8.3	75	412.5553	3	25.684	-1	48 48 48 88 88 91 90 93 97 97 31	[399.2]M(+15.99)GLADVS[128.1]
2239	YTTFNRHSR	5.9	66	591.2959	2	25.727	3	33 78 97 97 95 93 31 31 31	[264.1]TFNR[380.2]
2240	NSVTKDENFK	6.8	68	1181.584	1	25.736	3.9	71 76 92 94 83 77 45 45 45 50	[201.1]VTK[633.3]
2241	RRDHNNDAVR	6.1	61	418.2142	3	25.746	2.2	31 32 59 59 80 85 73 66 71 48	[564.3]NN[441.2]
2245	VQLELNQLK	6.9	76	542.8209	2	25.797	-1.3	62 57 88 83 80 82 75 89 64	[227.1]LELN[128.1]L[128.1]
2246	AEVTENYSLR	7.4	74	1181.582	1	25.805	1.9	94 94 94 96 93 78 78 48 31 32	AEVTE[633.3]
2247	QT(+79.97)MAQFDWK	5.7	63	617.7501	2	25.815	-2.7	57 58 58 85 81 85 79 31 31	[440.1]AQF[429.2]
2248	WQFKVNPVSCLR	7.8	65	492.9312	3	25.825	0.7	58 55 55 57 51 50 86 91 83 75 82 31	[802.4]PVS[103.0]L[156.1]
2251	LLPVLYPPVVEEVGQK	11.7	73	594.0131	3	25.867	-0.4	31 42 42 69 65 68 90 95 96 89 89 89 87 79 73 53	[698.4]PPVVEEV[313.2]
2252	YEM(+15.99)SHAKVAKWR	7.2	60	507.9265	3	25.878	1.1	31 40 46 45 51 50 54 64 93 88 86 61	[961.4]AKW[156.1]
2253	RRMRGCT(+79.97)KLWSDVLLR	8.9	56	518.2719	4	25.889	2.1	31 36 43 43 52 51 57 43 46 54 88 92 78 73 64 31	[1367.7]SD[481.3]
2254	MPM(+15.99)RTVAGVLR	6.6	60	416.2292	3	25.901	-2.2	31 31 49 60 51 74 89 89 78 75 31	[731.3]AG[368.3]
2255	MVSLLQEK	5.9	74	474.2649	2	25.912	-0.5	97 97 97 31 84 59 66 57	MVS[113.1]L[385.2]
2257	TVSTELFK	5.5	69	462.7553	2	25.944	-0.3	31 31 96 89 86 86 95 31	[200.1]STELF[128.1]

2258	FHHAPWSAEPVAFGR	9.5	63	570.2842	3	25.951	2.4	31 31 31 59 58 75 86 91 94 80 70 64 70 71 31	[775.4]SAEP[530.3]
2259	RRTWAMMAEELKK	8.7	67	550.6245	3	25.962	-1.4	31 51 48 47 67 76 95 94 94 75 75 77 31	[801.4]MAE[498.3]
2260	LQEAEEQLEAVNSK	12.2	87	794.3959	2	25.973	-0.9	71 66 92 97 98 96 89 96 97 95 95 78 90 50	[241.1]EAEEQLEAV[114.0]S[128.1]
2263	LLTEENGFGR	7.4	74	568.2903	2	26.017	-0.6	96 96 96 96 55 46 51 87 81 31	LLTE[300.1]FG[156.1]
2264	RFRFEWLGKHAPWK	8.3	59	620.0068	3	26.024	2	38 31 32 31 39 70 70 90 81 77 85 63 64 49	[1034.5]GK[137.1]A[411.2]
2265	DNKQST(+79.97)RGMGKLKETPK	10.2	60	666.6646	3	26.034	-2.4	45 45 38 38 44 58 47 63 66 78 63 66 90 88 79 77 31	[1395.6]KE[326.2]
2266	DFETLSQLSK	7.3	73	584.2982	2	26.045	0	31 31 96 95 75 73 65 92 94 77	[262.1]ET[328.2]LS[128.1]
2267	QLDLVDKLQLK	8.5	78	656.8947	2	26.055	-0.9	72 81 93 91 95 92 68 73 52 77 57	[128.1]LDLVD[610.4]
2269	MTRRLDPASSAKHNK	9.3	62	856.454	2	26.088	-0.7	81 65 67 80 86 90 83 66 60 43 40 41 43 43 36	M[257.1]RLDP[823.4]
2270	VSLFTLYWFK	6.9	69	435.2419	3	26.098	2.1	31 79 49 48 64 93 87 65 80 87	[547.3]LY[186.1]FK
2271	Y(+79.97)VRESLLVSKLTR	7.8	60	548.6369	3	26.108	5	31 36 36 36 46 46 65 85 88 86 80 79 56	[940.4]VSKL[257.1]
2275	KLDLVSGVVSAPK	8.1	62	438.2659	3	26.164	-0.1	42 41 41 34 91 89 75 75 69 80 68 71 31	[469.3]VS[255.2]S[296.2]
2276	FWRWVTGNMGAELR	7.7	55	574.9542	3	26.172	-3	31 39 32 32 41 42 41 51 57 87 87 81 81 65	[1177.5]GAEL[156.1]
2277	WKYKFKCLAANPLLEAYELK	13.6	68	810.1077	3	26.183	-0.5	44 40 36 37 37 40 58 77 90 96 90 86 87 97 96 95 94 84 31 31	[1096.6]AANPLLEAYE[241.2]
2278	VDPFEWLAVLR	6.3	58	448.9169	3	26.195	3.9	31 55 55 55 69 77 76 71 48 60 31	[1325.7]
2279	LLGLNMGSELK	8.3	76	587.8289	2	26.205	0.4	94 92 94 94 85 58 58 60 73 86 31	LLGLN[404.1]L[128.1]
2282	NMSQTVSSQFR	8.7	79	642.8033	2	26.247	-0.5	49 49 49 61 95 96 96 94 93 97 82	[460.2]TVSSQFR
2283	DAQLHLDDAVR	8.8	80	626.8173	2	26.257	-0.5	80 80 80 96 97 96 96 91 62 65 33	DAQLHLDD[326.2]
2284	LLSLNSADMLK	8.4	76	602.8338	2	26.267	-0.2	95 94 94 95 90 91 73 65 51 52 36	LLSLNS[558.3]
2287	LQDLVDQLKMK	7.6	69	444.2508	3	26.311	-1.5	87 59 68 70 94 92 64 69 54 63 31	L[356.2]VD[628.4]
2288	HRFANDSWM(+15.99)LAGMQTR	10.5	66	968.9473	2	26.321	-1.7	32 90 81 93 89 95 98 31 88 85 50 38 38 40 50 46	[137.1]RFANDS[186.1]M(+15.99)L[644.3]
2290	RRRY(+79.97)LTLTNTR	6.5	59	510.6075	3	26.339	1.2	31 31 31 33 42 59 91 85 84 89 70	[925.5]LTNT[156.1]
2293	LLPVLYPVPTTLYYK	10.6	71	890.5161	2	26.384	-2.5	31 91 91 98 98 98 99 31 56 56 62 89 93 31 31	[113.1]LPVLYP[398.2]LY[291.2]
2294	LVDSMQATLDSEVR	12.6	90	782.3873	2	26.395	-0.6	69 76 90 90 91 89 98 97 97 97 94 89 89 88	[212.2]DSMQATLDSEVR
2295	LVLSTLGEK	5.7	63	480.2918	2	26.405	-0.8	31 31 96 95 93 86 50 50 33	[212.2]LSTL[314.2]
2296	KELLDVSSGNFYK	8	61	500.596	3	26.414	-0.3	35 34 35 59 74 79 79 78 86 69 69 64 31	[871.5]G[552.3]
2299	KPFFSKNTSLLNSK	10	71	537.6343	3	26.459	-1	74 74 74 51 51 54 68 87 94 94 84 62 77 45	[848.5]TSLL[329.2]
2300	NFAWLVGDVSK	7.9	72	412.5524	3	26.468	0.8	56 57 52 66 86 89 88 85 86 91 31	[518.2]LVGDVS[128.1]
2305	KNHGQNNWVR	6.2	62	418.2139	3	26.534	-1.8	37 35 37 56 68 87 88 86 94 31	[564.3]NNWV[156.1]
2306	CY(+79.97)FRNLRCEANLKR	7.7	55	622.6281	3	26.542	2	57 57 32 44 39 48 53 84 89 82 50 43 48 38	[1032.4]CEA[511.3]
2308	GYSRRVLESGHSELK	10	67	573.3044	3	26.563	0.5	38 38 45 47 73 68 92 91 88 66 64 78 84 92 31	[718.4]LES[281.1]EL[128.1]

2309	RFM(+15.99)YALLVSDTR	7.6	63	496.5949	3	26.575	1.7	32 49 42 52 50 71 93 94 89 79 74 31	[797.4]LVS[372.2]
2311	VQLELNQLK	7.2	81	542.8215	2	26.609	-0.1	64 59 89 91 88 88 81 91 69	[227.1]LELNQL[128.1]
2312	LNFEKGTGRVAFK	8.1	63	489.6074	3	26.617	-2.6	56 56 65 72 61 63 84 94 83 54 43 44 31	[688.4]TGR[445.3]
2313	KNFWKPVDACLR	7.1	59	492.9317	3	26.627	1.7	36 35 36 51 65 51 83 89 83 73 72 31	[800.4]VDA[372.2]
2314	GTYDDYVEGLR	9.6	87	644.2957	2	26.637	-0.9	66 75 90 96 97 98 98 95 89 93 60	[158.1]YDDYVEGL[156.1]
2315	RHHGAGAVEELQR	10.3	79	730.3801	2	26.647	1.3	48 77 67 81 83 94 96 96 97 93 69 73 50	[430.2]GAGAVEE[397.2]
2317	REPT(+79.97)RKNVSAQR	7	58	507.9264	3	26.68	0.1	37 43 46 41 44 46 85 93 84 65 69 42	[847.4]NVS[355.2]
2318	QLLGTLEEMR	8.7	87	595.3154	2	26.689	-0.7	54 57 95 97 97 97 97 93 95 81	[241.1]LGTLEEMR
2320	MVSLLQEK	6.6	83	474.2646	2	26.71	-1.1	98 98 98 31 92 79 85 77	MVS[113.1]L[128.1]E[128.1]
2321	NCVAGVLR	5.5	68	416.229	2	26.72	0.3	66 68 68 80 85 72 74 31	[316.1]AG[368.3]
2323	VTSTELFK	6.2	77	462.7554	2	26.754	-0.1	31 92 93 91 89 89 95 31	[99.1]TSTELF[128.1]
2324	KALTWAMSDEELKK	10.8	77	550.6245	3	26.762	1.3	62 66 76 65 51 74 89 90 92 96 95 93 94 31	[670.4]MSDEELK[128.1]
2325	LYTKLECGVNAKR	8.8	68	498.9421	3	26.772	1.4	76 48 43 49 70 84 89 90 91 86 59 56 34	[618.4]ECGVN[355.2]
2329	LLTEENGFGR	7.3	73	568.2899	2	26.827	-1.5	96 96 96 95 47 44 49 88 80 31	LLTE[300.1]FG[156.1]
2330	VLNKKNVLFDCVSHNK	10.9	68	620.006	3	26.835	1.7	89 89 83 49 43 40 67 63 53 68 91 91 91 55 68 38	VLN[844.5]CVS[379.2]
2331	VYESNDLLSK	8.9	89	584.2974	2	26.847	-1.3	93 94 88 77 70 91 94 96 96 81	VYE[201.1]DLLSK
2332	FWDRLWWK	5.5	68	618.82	2	26.856	1.2	31 31 89 87 89 70 73 73	[333.1]DRL[500.3]
2333	LQEAEEQLEAVNSK	12.1	86	794.3947	2	26.867	-2.5	72 68 94 98 98 96 83 91 95 95 94 78 89 51	[241.1]EAEEQLEAV[114.0]S[128.1]
2336	LKYLTSKCCSKLTR	8.5	61	548.6371	3	26.91	-0.2	32 32 39 40 52 47 46 46 91 91 90 88 87 65	[936.5]CSKLT[156.1]
2339	Y(+79.97)LPRWLDLVNCALWR	8.8	58	666.6655	3	26.942	0	37 38 34 35 32 39 72 90 89 85 87 80 61 59 31	[1023.5]LVNCA[455.3]
2341	KLDLVSLAASAPK	8.5	65	438.2653	3	26.975	-1.5	43 42 47 45 31 96 95 95 92 86 71 70 31	[568.4]SLAAS[296.2]
2342	Y(+79.97)RYKRSLMGAELR	8	61	574.9534	3	26.984	-2.9	33 32 32 37 40 53 61 94 86 82 85 86 70	[1046.5]MGAEL[156.1]
2344	LNFFLCLLEDK	8.6	78	677.8563	2	27.002	-1.5	83 76 94 85 93 94 96 83 60 55 31	L[114.0]FFLCLL[372.2]
2345	EPEEKLSDLTEQLWTGK	12.9	76	1001.999	2	27.013	-2.9	48 50 50 76 81 95 96 96 96 96 95 87 95 68 49 72 34	[484.2]KLSDLTEQL[472.2]
2347	NCHM(+15.99)KLLAANPLLEAYLEK	14.9	78	1094.068	2	27.047	-0.4	57 59 72 64 64 91 98 99 98 90 82 83 94 96 94 93 81 31 31	[629.2]LLAANPLLEAYL[257.1]
2348	NMSQTVSSQFR	8.9	81	642.8038	2	27.058	0.2	53 53 53 67 94 96 98 95 93 97 82	[460.2]TVSSQFR
2349	RGSQQSLALAWK	7	58	448.9169	3	27.068	-1.5	41 43 44 58 58 60 67 69 72 73 75 31	[1325.7]
2350	TLEAPLGCMLK	8.2	75	588.3113	2	27.078	-0.6	81 85 94 78 70 80 74 69 68 70 49	TLE[168.1]L[532.3]
2351	DAQLHLDDAVR	8.2	74	626.8171	2	27.087	-0.7	55 55 53 94 95 94 95 91 69 74 39	[314.1]LHLDD[326.2]
2353	YNQLQDVLPLK	7.1	65	444.2509	3	27.12	1.3	66 56 54 69 70 82 83 79 59 59 31	[646.3]DV[451.3]
2354	LLSLNSADMLK	8.8	80	602.8334	2	27.129	-0.9	95 95 95 96 90 91 90 79 57 53 36	LLSLNSA[487.2]

2355	LLFWVEHLESTR	7.6	63	510.6077	3	27.139	-1.6	35 35 35 31 91 91 93 79 75 69 85 31	[559.3]VEH[329.2]T[156.1]
2356	LNFESM(+15.99)MKVLK	8.2	75	678.3582	2	27.15	2.2	79 76 94 96 98 98 89 55 51 48 31	[227.1]FESM(+15.99)M[468.3]
2357	QLDLVDQLKLK	7.6	69	656.894	2	27.159	-2	70 77 92 95 96 93 41 49 48 61 31	[241.1]DLVD[610.4]
2359	LVLSTLGEK	6	66	480.2916	2	27.191	-1.3	31 31 94 90 89 87 65 66 40	[212.2]LSTL[314.2]
2360	LVDSMQATLDSEVR	12.4	88	782.3864	2	27.201	-1.8	69 76 91 91 92 89 97 97 97 95 89 82 84 83	[212.2]DSMQATLDSEVR
2361	LKMYVMPADYLR	7.2	60	500.5964	3	27.211	-0.1	77 58 58 31 58 57 60 82 79 66 60 31	[862.4]A[547.3]
2363	LLPVLT(+79.97)HVKLLYYK	10.3	74	890.5148	2	27.232	2.8	31 89 89 96 96 94 55 63 80 94 92 86 31 31	[113.1]LPVLT(+79.97)[236.1]KLLY[291.2]
2366	NFGWVLADVSK	8.6	78	412.5522	3	27.275	0.2	67 75 67 31 98 97 94 94 97 97 31	[504.2]VLADVS[128.1]
2368	LLVPLYPPVATGARERR	10.8	63	636.7119	3	27.297	1.8	88 88 88 61 58 66 72 72 48 41 43 73 82 70 57 31 31	LLV[895.5]A[597.3]
2371	SVKYSNNDAVR	6.7	61	418.2146	3	27.344	0.9	31 41 44 55 83 89 80 67 63 67 47	[477.3]SNN[441.2]
2373	EDSLRREDKLSELK	8.9	64	573.3058	3	27.363	-2.9	34 41 41 54 55 35 85 66 84 90 91 87 93 31	[756.4]E[115.0]KLSEL[128.1]
2375	DMRRAPALVSSER	8.6	66	496.5953	3	27.383	-2.1	32 32 38 47 54 65 86 92 95 92 80 76 61	[726.4]ALVSS[285.1]
2377	VQLELNQLK	7.2	80	542.8223	2	27.416	1.3	64 59 89 90 90 88 78 90 66	[227.1]LELN[128.1]L[128.1]
2378	KHYFKVPDACLR	7.3	61	492.932	3	27.424	2.4	32 50 43 69 87 73 72 80 66 62 61 31	[575.3]K[196.1]D[443.2]
2379	WTPFTKQVEELKR	8	61	554.6376	3	27.434	-1.4	36 35 37 81 58 50 52 85 87 81 69 71 48	[384.2]F[357.2]VEE[397.3]
2380	M(+15.99)RKGLEAPT(+79.97)ANK	9.4	79	471.2312	3	27.445	2.1	40 40 58 90 90 95 95 86 85 91 93 75	[431.2]GLEAPT(+79.97)AN[128.1]
2381	SAYDDYVEGLR	9.5	86	644.2964	2	27.457	0.4	67 73 93 96 97 98 98 94 86 90 54	[158.1]YDDYVEGL[156.1]
2383	REWFTQNAKWR	6.9	63	507.9276	3	27.49	-1.9	38 47 40 53 54 49 78 93 88 86 61	[961.4]AKW[156.1]
2384	QLLGTLEEMR	8.7	87	595.3165	2	27.5	1	57 60 95 97 96 97 97 93 95 81	[241.1]LGTLEEMR
2386	QWSCKVAGVLR	7.3	66	416.2302	3	27.521	2.8	58 43 45 49 74 84 91 91 80 78 31	[632.3]VAGV[269.2]
2387	KNASAAMMTVELKK	10.6	76	761.4095	2	27.532	-0.6	80 72 83 84 90 96 96 93 90 88 57 47 48 31	K[114.0]ASAAMMTV[498.3]
2389	SLSTELFK	6.1	77	462.755	2	27.565	-0.9	31 96 94 88 85 90 95 31	[87.0]LSTELF[128.1]
2390	LT(+79.97)VRKNAAELEGDGR	8.3	55	570.2836	3	27.573	-0.9	35 34 34 40 40 48 53 92 95 88 80 56 54 39 31	[862.4]AELE[385.2]
2391	RRTWAMMAEELKK	9.2	71	550.6244	3	27.584	-1.6	31 77 43 41 58 69 96 95 96 93 91 92 31	[801.4]MAEELK[128.1]
2392	MVSLLQEK	5.8	72	474.2643	2	27.595	-1.7	98 98 98 31 71 57 64 56	MVS[611.4]
2395	LLTEGNEFGR	7.2	72	568.2913	2	27.637	1	96 97 96 91 59 53 74 91 31 31	LLTE[300.1]F[213.1]
2396	YYAWLPKLGKGFTWK	8.3	55	620.0078	3	27.645	2	44 42 43 47 59 54 66 83 91 80 59 48 44 31 31	[921.5]LGK[619.3]
2397	QLEAEEQLEAVNSK	12.2	87	794.397	2	27.654	0.5	70 76 94 97 98 95 83 94 97 95 95 79 90 52	[241.1]EAEEQLEAV[114.0]S[128.1]
2398	YNVAGVLWASR	8.7	79	618.33	2	27.665	-0.2	65 60 65 84 88 91 95 96 93 95 31	[376.2]AGVLWAS[156.1]
2399	DM(+15.99)ETKSLLSK	7.8	78	584.2985	2	27.677	-2.3	31 98 97 95 62 56 64 95 96 80	[115.0]M(+15.99)ET[328.2]LSK
2401	LAHLLLYADM(+15.99)K	6.3	57	435.2412	3	27.709	0.9	42 40 39 38 34 96 92 90 89 31 31	[547.3]LYAD[275.1]

2402	RRRFSKCCSKLTR	7.8	60	547.6364	3	27.72	0	31 31 37 40 45 51 51 83 83 83 86 85 62	[933.5]CSKLT[156.1]
2407	KLDLVSLAASAPK	8.5	65	438.2662	3	27.787	0.5	45 44 51 52 31 95 94 95 92 85 61 67 31	[568.4]SLAAS[296.2]
2408	WFRWQSGVMGAELR	8.8	63	574.9546	3	27.795	-2.3	31 35 35 37 36 39 52 91 93 93 90 85 86 68	[947.4]VMGAEL[156.1]
2410	FQLVAGAVY(+79.97)QRK	9.7	81	730.3795	2	27.817	4.1	91 84 86 86 90 93 94 96 93 60 62 33	FQLVAGAVY(+79.97)[412.3]
2413	NSMQTVSSQFR	8.8	80	642.8034	2	27.862	-0.4	51 51 51 67 96 97 95 94 93 97 85	[460.2]TVSSQFR
2414	CKTYLVTVVYR	6.1	55	448.9168	3	27.872	1.2	46 46 49 52 59 62 73 60 60 60 31	[1325.7]
2415	EPGLNLLYQK	7.1	71	587.8285	2	27.882	2.6	82 81 75 80 88 91 91 49 31 40	EP[57.0]LNLL[419.2]
2416	MELDDLSSNMEAVSK	12.7	84	834.8765	2	27.892	0.1	76 75 90 95 97 97 98 96 90 94 92 76 72 80 31	[260.1]LDDLSSNME[170.1]S[128.1]
2420	LLSLNSADMLK	9.1	82	602.8334	2	27.947	-0.9	96 96 95 96 91 92 87 79 64 63 42	LLSLNSA[487.2]
2421	NAELHLDDAVR	8	73	626.8168	2	27.957	-1.2	53 47 47 95 95 91 92 91 69 78 39	[314.1]LHLDD[326.2]
2422	NYRTYKVDTLTR	8.1	67	510.6077	3	27.967	1	55 52 39 40 46 66 92 85 85 81 88 72	[825.4]VDTLT[156.1]
2423	TTFSPAAGQAEPVER	10.4	70	520.9271	3	27.978	1.1	73 68 64 67 67 70 72 55 53 70 87 93 68 65 63	[931.4]EP[384.2]
2425	LVDSMQATLDSEVR	12.5	89	782.3884	2	28.012	0.9	68 75 90 88 89 88 97 97 98 97 93 88 89 88	[212.2]DSMQATLDSEVR
2426	LVLSTLGEK	6.2	68	480.2927	2	28.023	1	31 31 96 94 94 88 67 68 41	[212.2]LSTL[314.2]
2427	EPFYRLGGNRYK	7.5	63	500.5967	3	28.032	0.2	65 65 65 49 64 57 88 57 49 66 61 62	[805.4]G[618.3]
2428	LLPVLYPDAVLLYYK	9.3	62	890.5171	2	28.042	-1.4	31 57 57 98 96 89 87 39 39 43 55 84 81 31 31	[323.2]VLYP[398.2]LY[291.2]
2429	QLDLVDQLKLK	8.2	75	656.8961	2	28.053	1.2	71 79 95 96 98 95 57 69 57 70 31	[241.1]DLVD[610.4]
2432	FNAWLVGDVSK	7.8	71	412.5532	3	28.096	2.6	56 55 49 53 84 91 90 88 88 92 31	[518.2]LVGDVS[128.1]
2437	SVKYSNNDAVR	6.8	62	418.2146	3	28.163	0.9	31 42 39 48 61 85 84 86 73 78 49	[564.3]NND[326.2]
2439	KKWWQEDQLSTLR	7.6	58	573.3057	3	28.184	0.3	31 50 31 43 66 66 84 75 87 79 53 49 36	[885.4]D[128.1]L[457.3]
2441	KHPRKALTLR	5.8	58	407.264	3	28.207	2.5	34 33 55 76 66 64 62 68 67 50	[1200.8]
2443	VQLELNQLK	6.5	72	542.8218	2	28.241	0.4	66 61 92 91 89 62 52 76 53	[227.1]LEL[483.3]
2444	FTLNTVAGEGSPKR	7.8	56	492.932	3	28.25	0.7	49 53 41 40 41 41 45 81 83 81 71 55 56 37	[746.4]GEG[468.3]
2445	WKFT(+79.97)NKVPYLVKAPRLR	9.7	57	732.7468	3	28.26	2.4	43 39 36 57 52 51 63 94 89 84 60 54 55 57 53 45 31	[983.5]PYL[820.5]
2446	SAYDDYVEGLR	9.3	84	644.2963	2	28.271	0.1	55 66 90 96 97 97 97 94 85 90 54	[158.1]YDDYVEGL[156.1]
2451	QLLGTLEEMR	8.8	88	595.3157	2	28.335	-0.2	61 66 96 96 96 97 98 93 96 81	[241.1]LGTLEEMR
2453	Y(+79.97)Y(+79.97)QTGHYR	4.5	56	416.4801	3	28.353	-1.8	31 56 54 54 71 65 66 49	[1228.4]
2455	SLSTELFK	5.9	73	462.7553	2	28.386	-0.3	31 94 92 86 79 77 91 31	[87.0]LST[242.1]F[128.1]
2457	RRTWAMMAEELKK	9.1	70	550.6246	3	28.406	-1.2	31 52 49 48 70 90 96 93 92 86 83 84 31	[670.4]MMAEELK[128.1]
2459	YESLPWSAELEKEK	9.3	67	570.2842	3	28.427	-2.8	50 39 39 59 70 81 82 93 95 92 86 48 51 41	[589.3]WSAELE[385.2]
2461	LLTENGEFGR	7.1	71	568.2913	2	28.461	1	94 96 96 89 60 64 76 63 31 31	LLTE[660.3]

2463	LNFLLM(+15.99)SM(+15.99)PLK	9	82	669.8602	2	28.478	-2.1	94 91 97 97 97 97 89 74 66 64 31	LNFLLM(+15.99)S[485.3]
2464	QFTAGVLWASR	8.1	73	618.33	2	28.488	-0.2	36 35 37 88 96 96 96 97 93 95 31	[376.2]AGVLWAS[156.1]
2465	MVSLLQEK	6.4	80	474.2656	2	28.499	1	97 97 97 31 88 74 84 72	MVS[113.1]L[128.1]E[128.1]
2467	TLSVFLYWFK	5.8	58	435.2417	3	28.531	1.7	49 49 46 43 43 94 64 50 58 78	[547.3]L[624.3]
2468	LMY(+79.97)KVLLVSQLTR	8.4	64	548.637	3	28.542	0.6	31 31 41 45 45 65 84 93 88 74 84 84 65	[827.4]LVS[128.1]LT[156.1]
2469	LLFLNM(+15.99)CLDLK	8.9	81	669.86	2	28.553	-2.5	88 88 94 95 87 92 93 93 85 36 31	LLFLNM(+15.99)CLD[241.2]
2471	DFETLSQLSK	6.8	68	584.298	2	28.573	-0.2	31 31 98 97 60 54 52 87 92 71	[262.1]ET[328.2]LS[128.1]
2473	KLDLVSLAASAPK	8.2	63	438.266	3	28.606	0	41 41 44 41 31 96 95 95 89 83 61 65 31	[568.4]SLAAS[296.2]
2474	Y(+79.97)YVKKWVMGAELR	7.8	60	574.954	3	28.615	2.2	35 35 34 42 48 31 85 97 88 83 73 71 54	[947.4]VMGA[398.2]
2475	Y(+79.97)LEFYLDLVDKLKCR	10.6	71	666.6655	3	28.626	0.7	33 53 45 71 82 80 92 89 88 93 89 75 56 62 43	[632.2]YLDLVDK[500.3]
2477	LQEAEEQLEAVNSK	12.1	86	794.3967	2	28.647	0	69 65 92 97 99 97 88 94 95 95 95 78 89 50	[241.1]EAEEQLEAV[114.0]S[128.1]
2479	SNMQTVSSQFR	9	82	642.8026	2	28.68	-1.6	51 51 51 82 95 96 98 96 94 97 85	[332.1]QTVSSQFR
2485	EVQLVDQLKMK	7.1	64	444.2511	3	28.754	-0.8	85 43 42 54 62 91 63 83 65 81 31	E[439.3]D[128.1]L[128.1]M[128.1]
2486	LLGLNGTDMLK	7.7	70	587.8284	2	28.764	-0.5	92 88 83 80 81 61 51 55 55 72 48	LLGLN[645.3]
2487	WNNKKAELEELR	8.5	71	510.6079	3	28.773	1.4	60 55 55 55 64 79 87 94 31 92 95 79	[741.4]EL[129.0]EL[156.1]
2488	LLSLNSGEMLK	8.3	75	602.8335	2	28.784	-0.7	96 95 95 96 89 87 54 52 57 60 40	LLSLNS[558.3]
2489	MELDDLSSSGTEAWK	12.2	82	834.8755	2	28.794	1	82 81 92 97 98 97 98 31 69 73 87 93 92 95 31	MELDDLS[231.1]TEAW[128.1]
2491	LVLSTLGEK	6.5	72	480.2928	2	28.828	1.3	31 31 96 93 90 88 81 82 53	[212.2]LSTLGE[128.1]
2492	VLDSMQATLDSEVR	12.8	91	782.3887	2	28.837	1.2	73 80 92 92 93 90 97 97 97 97 95 90 90 90	[99.1]LDSMQATLDSEVR
2493	WWYTGLQVRYK	6.4	58	500.5969	3	28.848	-2.1	31 67 67 45 38 39 58 86 85 62 58	[934.4]VR[291.2]
2494	LLPVLYPELVGLYYK	9.3	62	890.5168	2	28.858	-1.7	31 34 34 96 96 97 95 84 49 39 45 77 87 31 31	[323.2]VLYPE[382.3]Y[291.2]
2495	NAELHLDDAVR	8	72	626.8182	2	28.869	1	56 48 48 93 96 95 95 85 66 73 38	[314.1]LHLDD[326.2]
2498	FNWGVLADVSK	7.6	69	412.5524	3	28.912	0.7	53 44 41 49 80 87 87 91 97 97 31	[504.2]VLADVS[128.1]
2503	DRRHNNDAVR	6.6	66	418.214	3	28.979	1.7	31 31 31 72 69 90 93 86 87 59	[678.3]NDAV[156.1]
2504	QMLYMPAPTCAGEGLQR	9.8	57	622.6285	3	28.988	0.2	44 45 57 39 37 42 54 59 63 85 78 72 68 65 57 58 45	[1032.5]C[711.4]
2505	M(+15.99)LHSVLWPALSCKTK	10.1	67	865.459	2	29	-1.1	81 81 91 31 31 98 87 79 77 84 57 54 58 60 31	M(+15.99)LH[186.1]LW[168.1]L[547.3]
2507	ACRLFKLESHGSELK	10.4	69	573.3057	3	29.022	-1.6	41 46 57 52 53 81 92 94 84 70 68 84 86 93 31	[590.3]KLES[194.1]SEL[128.1]
2509	VQLELNQLK	6.8	76	542.8219	2	29.057	0.6	62 58 85 74 72 79 82 92 72	[227.1]L[356.2]QL[128.1]
2510	AQFTDEVKASPKR	7.8	60	492.9318	3	29.065	0.2	32 35 35 88 85 80 85 83 84 42 40 41 40	[346.2]TDEVKA[468.3]
2511	SAYDDYVEGLR	9.1	82	644.2963	2	29.074	0.2	55 66 90 96 97 98 97 93 77 87 44	[158.1]YDDYVE[57.0]L[156.1]
2512	KLDLVDQLQLK	9.6	87	656.895	2	29.084	-0.5	88 87 94 95 98 97 84 85 74 87 66	KLDLVDQL[128.1]L[128.1]

2513	FWPGAGAVSAQGRR	10.2	73	730.3804	2	29.094	-1.3	31 69 74 75 77 93 95 94 93 89 69 62 60 31	[558.3]GAVSA[497.3]
2515	RHS(+79.97)KMKNAKWR	6.7	60	507.9269	3	29.128	2.8	37 37 34 37 49 61 75 94 88 87 60	[961.4]AKW[156.1]
2516	QLLGTLEEMR	8.6	86	595.3162	2	29.138	0.5	55 58 94 97 96 96 97 91 94 77	[241.1]LGTLEEM[156.1]
2518	KCNWTVAGVLR	6.5	59	416.2296	3	29.156	1.4	34 35 42 63 56 58 84 88 77 74 31	[731.3]AG[368.3]
2519	Y(+79.97)MHPPVDTMLAAYRNK	9	56	662.9717	3	29.167	2.1	34 49 43 76 31 66 63 55 52 54 86 84 71 52 37 41	[1264.5]AA[561.3]
2521	SLSTELFK	5.9	73	462.7555	2	29.201	0.1	31 96 95 88 77 74 90 31	[87.0]LST[242.1]F[128.1]
2522	HHLVLAMMAEQLTR	8.7	62	550.6248	3	29.209	-1	31 31 58 46 55 70 91 96 93 83 52 52 54 46	[670.4]MMAE[498.3]
2524	KKRFCEAAELEGDGR	9.2	61	570.2844	3	29.232	-2.9	31 60 31 31 48 75 78 95 95 88 81 61 57 45 31	[862.4]AELE[385.2]
2527	LLTEKGDTCR	7.5	75	568.291	2	29.276	-2.5	94 96 95 94 56 48 49 79 80 56	LLTE[401.2]C[156.1]
2528	YYAWLQFAKWAALVK	9.1	60	620.0076	3	29.284	1.8	61 61 62 45 62 47 63 69 82 92 92 52 40 40 31	[1042.5]KWA[411.3]
2529	QFTAGVLWASR	8.2	75	618.33	2	29.294	-0.2	42 41 51 84 94 94 96 97 93 94 31	[376.2]AGVLWAS[156.1]
2530	MVSLLDAAK	7.3	81	474.2653	2	29.305	0.3	97 97 97 98 94 71 71 64 31	MVSLL[385.2]
2531	DVLASMGQLNVK	10.2	85	637.8425	2	29.315	0.4	31 96 95 95 95 95 94 84 94 79 88 70	[115.0]VLASMGQL[114.0]V[128.1]
2534	WHVYNKLVSQLTR	8	61	548.6376	3	29.36	-1.9	31 37 37 37 54 46 68 92 91 76 81 82 61	[940.5]VS[128.1]LT[156.1]
2535	RWNS(+79.97)FLVLLPDT(+79.97)GYKR	9.2	57	532.0072	4	29.37	1.8	32 40 37 46 74 78 33 54 60 68 77 84 68 48 62 49	[1420.7]T(+79.97)[504.3]
2536	DM(+15.99)ETSKLLSK	8.1	81	584.2988	2	29.382	-1.8	31 97 97 93 75 71 86 93 93 72	[115.0]M(+15.99)ET[215.1]LLS[128.1]
2537	MFFPSANK	5.2	65	471.2316	2	29.391	1	31 31 31 81 86 85 89 79	[425.2]PSAN[128.1]
2539	KLDLVSLAASAPK	8.4	65	438.266	3	29.425	0	43 42 47 49 31 95 94 95 89 81 68 70 31	[568.4]SLAAS[296.2]
2540	Y(+79.97)YRRKTVMGAELR	8.1	62	574.9543	3	29.434	-1.4	34 32 32 34 43 58 72 94 86 83 84 84 66	[1046.5]MGAEL[156.1]
2541	VLTWFFDDLVNCGMLPK	10.4	61	666.665	3	29.445	-2.9	32 32 32 32 31 49 82 91 89 89 83 86 84 71 59 61 31	[793.4]DDLVNCG[469.3]
2542	QLEAEEQLEAVNSK	12.1	87	794.3962	2	29.457	-0.6	71 79 94 97 98 95 87 95 97 94 93 72 88 46	[241.1]EAEEQLEAV[114.0]S[128.1]
2545	M(+15.99)ANQTVSSQFR	8.8	80	642.8035	2	29.502	-0.3	47 47 47 77 94 96 97 95 94 97 86	[460.2]TVSSQFR
2546	RQTQRSASPSVK	6.8	57	448.9169	3	29.512	1.5	48 37 35 34 37 73 78 85 91 93 31 31	[827.4]SPS[227.2]
2547	HMAHS(+79.97)DSCFK	5.8	58	414.8189	3	29.523	-0.7	49 41 42 57 62 31 86 86 86 31	[758.2]SCF[128.1]
2548	MKEVWY(+79.97)MELKLSHANR	10.1	63	705.6697	3	29.534	1.5	35 35 37 58 51 38 71 76 96 97 96 95 79 51 51 39	[1176.4]LKLS[478.2]
2549	KEEFQAAQEPVER	7.7	59	520.928	3	29.545	2.8	37 37 41 87 45 43 48 48 61 77 81 80 79	[386.2]F[624.3]VE[156.1]
2551	QLDLVDQMKLK	6.3	57	444.252	3	29.58	1.2	54 52 53 51 94 92 54 50 44 51 31	[469.3]VD[628.4]
2552	RKFARS(+79.97)VLCLTR	7.4	62	510.6089	3	29.588	-0.9	33 36 34 45 53 90 84 95 80 62 63 60	[658.4]S(+79.97)VLC[370.2]
2553	MELDDLSSNMEAVSK	12.7	84	834.8768	2	29.599	0.4	78 78 93 97 98 97 98 97 86 89 86 77 75 79 31	[260.1]LDDLSSNME[385.2]
2554	LLSLNSADFPK	9.7	88	602.8349	2	29.61	4.5	96 95 95 96 92 94 94 90 90 90 31	LLSLNSADFP[128.1]
2555	LLGLNSADMLK	7.7	70	587.8292	2	29.62	0.8	93 89 84 84 88 65 56 53 55 54 39	LLGLN[645.3]

2557	FPKLLVCQNM(+15.99)YK	7.2	60	500.5957	3	29.654	-1.5	47 49 63 66 77 59 57 55 58 81 68 31	[1042.6]M(+15.99)[291.2]
2558	LVLSTLGEK	6.1	68	480.2916	2	29.664	-1.2	31 31 96 94 91 86 68 69 42	[212.2]LSTL[314.2]
2559	LVDSMQATLDSEVR	12.5	89	782.3871	2	29.674	-0.9	68 75 90 90 90 89 97 97 97 97 93 87 88 87	[212.2]DSMQATLDSEVR
2561	QPQEQELAVSKLEK	10.9	78	813.937	2	29.696	-1.7	52 53 59 69 80 96 90 88 95 95 93 90 92 31	[482.2]QELAVSKLE[128.1]
2563	T(+79.97)KNLKLATSLLNSK	8.7	62	537.634	3	29.73	0	43 47 40 48 43 52 63 86 91 94 75 61 76 46	[848.5]TSL[442.3]
2564	NFVWGLADVSK	7.8	71	412.5524	3	29.739	0.8	31 31 31 93 92 92 91 93 96 96 31	[360.2]WGLADVS[128.1]
2569	RS(+79.97)LKNNWVR	6	67	418.2139	3	29.804	-3	31 31 87 85 87 78 76 88 31	[323.1]LKN[300.1]V[156.1]
2571	YPHSVLPWALCSTKK	9.7	65	865.4596	2	29.825	1.5	84 84 84 31 31 97 73 48 51 60 90 82 58 58 31	YPH[186.1]L[467.3]CS[357.2]
2572	AAVFSY(+79.97)LESLLLRR	8.9	64	573.3057	3	29.836	-0.5	65 64 46 44 39 39 94 80 80 81 76 73 73 31	[718.3]LESL[538.4]
2575	VQLELNQLK	6.4	71	542.8225	2	29.882	1.7	52 49 89 73 69 74 77 88 64	[227.1]L[484.2]L[128.1]
2576	MM(+15.99)NWPKELKKR	6.8	62	492.9324	3	29.892	0.9	68 68 59 60 63 66 74 79 79 31 31	[1457.8]
2577	QADLHLDDAVR	8	73	626.8183	2	29.903	1.2	54 44 45 87 96 96 96 90 71 77 39	[314.1]LHLDD[326.2]
2578	GTYDDYVEGLR	9.7	88	644.2968	2	29.913	0.9	68 78 91 97 97 97 98 96 89 93 61	[158.1]YDDYVEGL[156.1]
2579	KLDLVDQLQLK	9.6	88	656.8962	2	29.923	1.4	88 87 95 95 97 95 80 88 77 88 68	KLDLVDQL[128.1]L[128.1]
2581	FESKY(+79.97)KVAKWR	6.5	60	507.9267	3	29.956	2.6	45 36 36 40 46 49 64 93 89 86 64	[961.4]AKW[156.1]
2582	QLLGTLEEMR	8.5	85	595.3157	2	29.967	-0.2	49 51 93 94 93 95 97 93 95 81	[241.1]LGTLEEMR
2583	CKNSLY(+79.97)RNNYAYRNK	9	60	662.9712	3	29.976	-0.6	51 50 54 61 72 50 49 48 83 86 66 62 60 48 55	[1058.4]NY[632.3]
2584	RHNPKVAGDPR	6.9	63	416.2294	3	29.988	-2.1	32 56 43 57 66 86 90 85 72 68 31	[632.4]VAG[368.2]
2585	NFYNRFDLGEKLDNLRK	10.5	62	714.7095	3	29.999	2.5	58 58 47 53 44 43 44 55 88 90 91 90 83 62 47 52 39	[1069.5]GEKLD[511.3]
2587	SLSTELFK	6.2	77	462.7559	2	30.034	1	31 96 95 91 87 87 95 31	[87.0]LSTELF[128.1]
2588	KAGMEEAMLKATLEK	10.8	72	550.6255	3	30.042	1.1	59 58 59 59 66 86 83 90 90 91 88 72 68 69 31	[516.2]EAMLKA[471.3]
2593	LLTEGNEFGR	7.3	73	568.2912	2	30.107	0.9	95 96 96 92 63 58 69 92 31 31	LLTE[300.1]F[213.1]
2594	VMS(+79.97)WLKPLGKGLHRR	8.8	59	620.0074	3	30.117	2.4	67 67 67 45 64 42 48 62 83 87 67 61 49 31 31	[1034.5]GK[619.4]
2595	YVAWRMPVSK	7.9	79	618.83	2	30.128	-2.4	90 92 92 95 86 78 94 98 31 31	YVAWR[131.0]PV[215.1]
2597	MVSLLQEK	6.5	81	474.2651	2	30.149	0	97 97 97 31 91 73 83 71	MVS[113.1]L[128.1]E[128.1]
2599	KNYMKYLVSQLTR	7.6	59	548.6372	3	30.182	2	32 39 37 37 35 34 31 96 94 80 86 87 67	[940.5]VSQLT[156.1]
2600	LLYASLYWFK	6	60	435.242	3	30.192	2.3	43 45 40 45 50 90 76 56 70 81	[547.3]L[496.2]K
2602	FSLMNMPLSK	8.1	81	584.2983	2	30.214	-0.5	94 94 90 80 71 88 92 92 31 70	FSLM[114.0]MPL[215.1]
2603	YVLDLVDAGLKMK	9.4	72	732.9104	2	30.224	0.4	31 31 90 90 91 98 96 92 84 67 64 63 31	[262.1]LDLVDAG[500.3]
2605	QLDLVSGVLGLAK	9.2	71	438.2657	3	30.258	-0.6	52 45 45 58 93 92 89 89 88 87 72 73 31	[469.3]VSGVLG[312.2]
2606	TDSLPFTWVMGAELR	8.7	58	574.954	3	30.267	-2.7	44 47 46 47 31 39 39 31 97 96 86 71 63 69 56	[947.4]VMG[469.3]

2608	WRWKRPYYNCAETPK	8.4	56	666.6652	3	30.289	0.4	31 31 36 41 42 85 62 64 53 68 69 79 71 71 31	[812.5]P[1069.5]
2609	LQEAEEQLEAVNSK	12.2	87	794.3965	2	30.3	-0.2	74 69 95 97 98 95 85 95 97 96 95 77 89 50	[241.1]EAEEQLEAV[114.0]S[128.1]
2611	MNSQTVSSQFR	9.2	84	642.804	2	30.335	0.5	64 59 67 75 94 95 97 94 93 97 82	[460.2]TVSSQFR
2612	RRWLLCSPWK	5.7	57	448.9171	3	30.345	0.6	31 32 31 32 54 81 88 89 92 31	[724.4]CSPW[128.1]
2613	WRMKEAYDANK	7.9	72	471.2311	3	30.355	0.2	32 32 49 53 89 96 93 92 92 85 75	[601.3]EAYDAN[128.1]
2615	YKMLDYVAPLLLRGK	10.5	70	890.5156	2	30.377	2.7	51 64 61 91 90 77 65 72 93 98 93 71 42 42 32	[422.2]LD[333.2]PLL[454.3]
2618	LLSLNSADMLK	9	82	602.8336	2	30.42	-0.5	96 95 95 96 89 83 79 79 70 70 43	LLSLNS[558.3]
2619	NKHYKAELEELR	8.4	70	510.6083	3	30.43	2.1	41 41 49 48 68 90 94 96 31 94 96 83	[670.4]AEL[129.0]ELR
2620	LLGLNSADMLK	8.7	79	587.8282	2	30.441	-0.7	96 94 96 95 89 84 68 64 64 66 45	LLGLNS[558.3]
2621	MELDDLSSGGMEAVSK	13.6	85	834.8759	2	30.452	-0.6	86 85 93 97 97 97 97 92 86 83 90 87 77 73 77 31	MELDDLSSGGME[385.2]
2624	VLDSMQATLDSEVR	12.5	89	782.3877	2	30.496	-0.1	75 80 90 93 95 90 97 97 97 97 92 80 81 79	[99.1]LDSMQATLDSEV[156.1]
2625	LVLSTLGEK	5.7	64	480.2922	2	30.507	-0.1	31 31 96 95 91 77 55 56 38	[212.2]LST[427.2]
2626	RRRRDVYKFKTALASPGFR	10.6	56	581.8359	4	30.516	0.3	31 31 31 47 45 47 41 35 42 52 86 91 93 91 81 61 56 54 31	[1404.8]TALAS[457.2]
2627	HSEEKELAVSKLEK	10	71	813.9377	2	30.527	-0.9	32 34 38 53 88 95 86 85 95 95 89 84 86 31	[482.2]KELAVSKLE[128.1]
2629	RLCHPKNTSLASKR	7.8	56	537.6345	3	30.562	-1.2	56 56 75 38 42 43 62 87 92 59 41 39 46 37	[848.4]TS[555.3]
2630	WCSKVLADVSK	7.8	71	412.5527	3	30.572	-1.3	54 55 55 65 79 85 79 85 96 97 31	[603.3]L[71.0]DVS[128.1]
2631	LLPVLYPPVNDEVALKK	10.8	64	636.7123	3	30.58	1.1	31 43 43 87 76 73 82 76 76 69 77 79 74 57 51 48 31	[323.2]V[276.1]P[1093.6]
2632	KMLGY(+79.97)LTCSLPQR	7.6	58	530.5918	3	30.591	1.8	42 43 41 42 51 55 55 85 94 71 58 58 57	[886.4]CS[494.3]
2635	DRRHNNDGLR	6.3	63	418.2144	3	30.636	2.5	32 32 31 72 67 91 94 75 88 46	[678.3]ND[57.0]L[156.1]
2636	NHLT(+79.97)TERTCASNALVR	9.1	57	622.6284	3	30.646	1	62 50 50 47 62 36 39 43 77 79 81 69 69 55 50 31	[1206.5]S[553.3]
2637	LVNASVLPDGQFLDNK	11.4	71	865.4598	2	30.656	0.3	54 54 53 90 93 96 97 87 73 59 49 55 90 79 74 31	[326.2]ASVLP[447.2]L[357.2]
2639	LAFYYVEDKLSELK	9.1	65	573.3057	3	30.679	-1.2	34 34 36 49 61 51 93 80 80 88 91 87 93 31	[756.4]EDKLSEL[128.1]
2641	VQLELNQLK	6.8	75	542.822	2	30.714	0.8	61 56 90 81 80 77 78 88 64	[227.1]LEL[242.1]L[128.1]
2642	YRFLS(+79.97)GKNKKR	6.2	56	492.9319	3	30.724	-1.5	32 32 31 49 65 85 77 64 73 71 31	[746.3]G[654.4]
2643	QLDLVDQLKLK	8.4	76	656.8956	2	30.734	0.5	69 78 92 95 98 95 64 77 64 67 31	[241.1]DLVD[610.4]
2644	GTYDDYVEGLR	9.6	87	644.2961	2	30.744	-0.2	66 76 90 96 97 98 98 96 88 93 58	[158.1]YDDYVEGL[156.1]
2647	REQLM(+15.99)CGKAQSVR	7.2	55	507.9269	3	30.789	2.5	38 49 37 42 46 65 65 66 93 55 63 64 31	[961.4]A[470.3]
2648	QLLGTLEEMR	8.7	87	595.316	2	30.799	0.2	55 59 95 96 96 97 98 94 96 81	[241.1]LGTLEEMR
2650	MMLKQVQAAAR	6.9	62	416.2296	3	30.819	-1	46 51 50 44 42 82 83 86 86 78 31	[631.3]VQAA[227.1]
2651	FPGEGAGAVEELRK	10.3	73	730.3802	2	30.831	-0.5	31 42 48 59 81 85 95 96 96 97 93 73 74 49	[430.2]GAGAVEE[397.3]
2653	SLSTELFK	6	75	462.7553	2	30.864	-0.3	31 96 95 88 80 80 93 31	[87.0]LSTELF[128.1]

2655	RRTWAMMAEELKK	9.2	71	550.6246	3	30.885	-1.1	31 54 58 58 89 96 97 95 94 71 70 73 31	[599.3]AMMAE[498.3]
2656	DM(+15.99)LRM(+15.99)LAAELEQTR	7.9	57	570.2841	3	30.896	1.2	43 42 43 36 39 42 51 95 94 86 81 43 52 38	[862.4]AELE[385.2]
2657	AANY(+79.97)RSTLVAMKR	7.9	61	520.9277	3	30.907	-2	82 81 63 51 47 43 55 84 67 60 55 55 41	AA[701.3]L[585.3]
2659	LLTEEGNFGR	7.5	75	568.2908	2	30.941	0.1	93 96 96 97 57 53 48 87 87 31	LLTE[300.1]FG[156.1]
2660	LVNAWLPLANQGFTWK	9.3	58	620.0073	3	30.949	3.5	81 80 54 58 82 81 54 45 47 59 56 62 57 49 31 31	LV[185.1]WL[1142.6]
2661	NFDARLWVSK	8.5	85	618.33	2	30.959	-0.2	73 78 94 94 95 97 89 98 98 31	[261.1]DARLWVS[128.1]
2662	MVSLLQEK	6.5	81	474.2653	2	30.97	0.4	98 98 98 31 92 75 81 73	MVS[113.1]L[128.1]E[128.1]
2665	RMLFLYWFK	5.6	62	435.24	3	31.013	2.7	33 33 32 41 91 87 68 83 89	[547.3]LY[186.1]FK
2666	YT(+79.97)KKRALVSQLTR	7.2	56	548.6389	3	31.023	1.8	31 35 35 35 37 46 68 85 84 71 68 69 53	[940.5]VS[498.3]
2667	RKRLQLSS(+79.97)SRET(+79.97)AYNR	9.1	57	532.0085	4	31.034	2.9	33 33 34 35 37 52 58 71 74 73 77 74 87 53 64 44	[1601.8]A[433.2]
2668	DFETLSQLSK	7.4	74	584.2997	2	31.045	2.6	31 31 96 95 71 70 69 94 95 80	[262.1]ET[328.2]LSK
2669	ELYKLELT(+79.97)DAKLDNLRK	10.5	61	714.7127	3	31.055	1.5	32 32 31 43 43 56 35 65 58 82 91 93 93 85 69 73 53	[1184.5]AKLDN[397.3]
2671	KLDLVSGVVSAPK	8.6	66	438.2657	3	31.089	-0.7	41 40 43 51 93 89 81 78 75 83 72 76 31	[469.3]VSG[198.1]S[296.2]
2672	LM(+15.99)YHNMKLMGAELR	8.7	62	574.9536	3	31.099	-1.5	32 32 37 65 51 47 49 66 94 88 83 76 77 63	[1046.5]MGA[398.2]
2673	VEWAKT(+79.97)LAKGSVCAETPK	11.2	62	666.6645	3	31.11	1.2	58 52 51 45 39 39 48 64 64 80 77 75 72 79 87 76 75 31	[1106.6]G[360.1]E[326.2]
2675	LQEAEEQLEAVNSK	12.2	87	794.3958	2	31.132	-1.2	74 69 95 98 98 94 78 93 96 97 96 80 91 53	[241.1]EAEE[128.1]LEAVNS[128.1]
2677	NSMQTVSSQFR	8.8	80	642.8027	2	31.166	-1.5	55 54 55 60 89 95 97 94 92 97 84	[460.2]TVSSQFR
2679	LLFYYRKPYLLYK	8.1	62	890.5156	2	31.187	2.5	31 31 31 59 83 52 56 83 85 92 89 78 31	[536.3]Y[284.2]PYLL[291.2]
2680	MFAYPANK	6.7	84	471.2307	2	31.198	-0.8	90 90 90 31 97 95 90 80	MFA[163.1]PANK
2683	MPQLVDKSTALK	7.8	65	444.2512	3	31.243	-0.7	86 64 53 56 58 84 82 76 59 57 64 31	M[437.3]DK[500.3]
2684	LLSLNASDMLK	8.8	80	602.8334	2	31.253	-0.9	95 93 93 95 89 92 92 73 58 59 39	LLSLNAS[487.2]
2685	RLFELEANGEVPR	8.5	66	510.6081	3	31.263	1.7	32 51 46 71 84 90 87 73 80 67 68 69 31	[545.3]LEA[114.0]G[481.3]
2686	MELDDLSSNMEAVSK	12.5	83	834.8752	2	31.273	-1.5	77 75 87 96 98 97 97 88 80 88 92 79 74 79 31	[260.1]LDDLSSNME[385.2]
2689	WPAEDAHKVRYK	7.6	63	500.5966	3	31.316	0.1	31 31 61 61 73 65 61 71 89 84 63 59	[934.4]VR[291.2]
2690	LVDSMQATLDSEVR	12.8	91	782.3876	2	31.325	-0.2	69 78 91 94 94 90 98 98 98 97 94 89 90 89	[212.2]DSMQATLDSEVR
2691	LVLSTLGEK	6	67	480.2923	2	31.336	0.2	31 31 96 93 92 88 63 63 38	[212.2]LSTL[314.2]
2693	LLGLNSADMLK	8.6	78	587.829	2	31.357	0.5	95 93 95 95 90 85 71 67 59 63 42	LLGLNS[558.3]
2695	RVVSHRNTSLGTQR	8.6	61	537.6332	3	31.39	1.1	31 68 68 68 44 74 54 88 93 78 45 43 55 45	[848.5]TS[555.3]
2696	NFGWVLADVSK	8.5	77	412.5518	3	31.4	-0.7	68 76 64 31 96 96 94 94 97 97 31	[504.2]VLADVS[128.1]
2698	DHTEKELAVSKLEK	10.2	73	813.9377	2	31.421	-0.9	32 32 47 73 82 95 85 84 95 94 89 87 89 31	[482.2]KELAVSKLE[128.1]
2699	WY(+79.97)KDKTGDGRKR	6.8	57	530.5906	3	31.433	-0.6	31 73 54 45 79 54 50 55 86 67 48 33	[1073.4]G[440.3]

2701	RRDHNNDAVR	6.6	66	418.2143	3	31.468	2.3	31 32 63 63 86 88 86 74 78 49	[564.3]NND[326.2]
2702	NSYERWYHEANLQR	9	64	622.629	3	31.477	2.6	89 95 96 94 51 36 36 37 51 82 69 57 58 44	NSYE[771.3]A[511.3]
2703	LVNASVLPDAALAM(+15.99)SNK	12.2	72	865.4601	2	31.488	-1.3	45 45 45 85 95 98 99 95 88 86 88 85 57 51 51 56 45	[326.2]ASVLPDAAL[547.2]
2705	HHHWLKLYPPFPVLRQK	9.5	56	732.7476	3	31.51	-2.6	31 31 31 34 34 33 94 85 93 82 81 81 78 43 35 35 36	[838.4]LYPPFP[624.4]
2707	VQLELNQLK	7	78	542.8211	2	31.545	-0.9	63 59 87 93 89 82 73 87 62	[227.1]LELN[128.1]L[128.1]
2708	FTWRLVPDACLR	7.2	60	492.9312	3	31.553	0.8	31 34 34 49 53 84 94 89 77 69 68 31	[703.4]VPD[443.2]
2710	NLGMVALEEELR	9.4	79	687.3572	2	31.575	-1.4	71 72 89 97 96 96 91 92 31 72 75 55	[227.1]GMVALE[527.3]
2713	QLLGTLEEMR	8.7	87	595.3156	2	31.617	-0.4	58 62 94 97 96 97 97 93 95 80	[241.1]LGTLEEMR
2714	RHS(+79.97)KMKNAKWR	7.1	64	507.9265	3	31.626	2	37 37 34 39 56 80 89 93 89 86 62	[719.3]KNAKW[156.1]
2715	LDWMFLMWS(+79.97)LSHVNK	8.6	57	662.9708	3	31.636	-1.4	32 32 36 46 42 44 37 35 53 93 93 90 77 79 58	[1289.5]LSH[341.2]
2717	TGYDDYVEGLR	9.7	88	644.296	2	31.656	-0.3	68 79 91 97 97 97 98 96 90 93 61	[158.1]YDDYVEGL[156.1]
2719	SLSTELFK	6.3	79	462.7557	2	31.689	0.5	31 96 95 93 92 92 96 31	[87.0]LSTELF[128.1]
2720	RRLCAAMMAEELKK	9.9	71	550.6255	3	31.697	-1.7	31 63 40 45 48 76 92 96 96 96 92 89 90 31	[670.4]MMAEELK[128.1]
2722	WKWYAKAELEGDGR	8.4	60	570.2851	3	31.72	-2	47 35 36 37 37 67 93 95 93 87 67 61 48 31	[862.4]AELE[385.2]
2723	Y(+79.97)LARYKLKGEMAKKNK	9.5	59	674.362	3	31.731	-2.5	35 41 36 40 46 38 67 87 76 76 86 87 71 56 56 41	[987.5]K[186.1]MA[498.3]
2725	LLTENGEFGR	7.1	71	568.2906	2	31.765	-0.1	94 95 95 86 57 61 75 81 31 31	LLTE[300.1]F[213.1]
2726	Y(+79.97)LKVLWAVYVLPWK	8.3	60	620.0068	3	31.774	-0.3	31 34 35 44 56 56 57 88 81 79 88 64 65 49	[953.5]VY[99.1]L[411.2]
2727	NFAWLRATEK	8.2	82	618.33	2	31.784	-0.2	87 94 98 98 97 83 90 74 67 31	NFAWLRA[358.2]
2728	MVSLLQEK	5.6	70	474.2645	2	31.796	-1.4	97 97 97 31 79 48 60 43	MVS[611.4]
2731	FTVVTLYWFK	7.6	76	435.24	3	31.838	-2.3	72 72 72 59 68 94 92 66 82 81	[547.3]LY[186.1]FK
2732	CRFQHRLVSQLTR	8.1	63	548.6373	3	31.849	3.9	53 36 40 40 39 53 55 89 93 78 84 84 65	[940.5]VS[128.1]LT[156.1]
2735	DFETLSQLSK	7.3	73	584.2982	2	31.878	0.1	31 31 97 95 79 77 67 88 92 71	[262.1]ET[328.2]LS[128.1]
2737	QLDLVSGVLQLK	7.3	61	438.2658	3	31.912	-0.3	53 45 43 34 96 91 86 78 51 42 62 48	[469.3]VSG[581.4]
2738	MDMKRLTGNMGAELR	10	67	574.954	3	31.922	1.6	32 58 58 44 40 58 59 58 69 94 89 86 87 88 72	[1046.5]MGAEL[156.1]
2740	VMHHYKNNLVNCGMLPK	10.5	62	666.6656	3	31.944	-2.4	31 82 82 47 48 47 53 84 80 62 56 58 87 72 60 63 31	[99.1]MH[542.3]NL[316.1]G[469.3]
2741	KLDLVDQLQLK	9	82	656.8945	2	31.955	-1.3	85 85 94 94 96 94 71 71 63 81 60	KLDLVD[369.2]L[128.1]
2743	LLPVLYPDGLLLYYK	9.1	61	890.5157	2	31.988	-3	31 49 49 97 96 88 86 52 38 38 41 87 87 31 31	[323.2]VLYP[398.2]LY[291.2]
2744	NMSQTVSSQFR	9	82	642.8034	2	31.999	-0.4	59 58 62 69 91 94 96 93 93 97 84	[460.2]TVSSQFR
2745	MFAYPANK	6.7	84	471.2307	2	32.009	-0.9	91 91 91 31 97 95 90 79	MFA[163.1]PAN[128.1]
2746	MALLQLSGTPWK	7.2	60	448.9166	3	32.02	0.7	53 54 62 59 53 53 54 61 78 68 68 55	[1325.7]
2747	QLEAEEQLEAVNSK	12.1	86	794.3961	2	32.03	-0.7	67 71 92 94 97 94 82 94 95 96 96 80 91 52	[241.1]EAEEQLEAVNS[128.1]

2749	LDQLVDKLQMK	6.3	57	444.2514	3	32.064	-0.1	87 54 52 63 64 88 63 35 35 35 46	L[455.2]D[628.4]
2750	WSRQLAELEELR	8.5	71	510.6083	3	32.074	2.2	31 58 57 52 63 87 95 97 31 93 95 81	[670.4]AEL[129.0]ELR
2751	MELDDLSNSMEAVSK	12.4	82	834.8761	2	32.084	-0.4	77 77 92 97 98 97 96 67 69 80 93 88 83 86 31	[260.1]LDDLS[201.1]MEAVS[128.1]
2752	LLSLNSADMLK	9	82	602.8336	2	32.095	-0.5	96 96 96 96 92 94 91 77 62 60 39	LLSLNSA[487.2]
2753	KMNWATGAVLR	6.4	58	416.2295	3	32.105	1	46 40 41 38 51 75 79 74 73 85 31	[958.5]L[156.1]
2755	LKMPEVCAGSLSHK	8.3	60	500.5962	3	32.139	2.1	76 39 39 47 88 76 80 86 65 62 76 31 31 31	[469.3]E[99.1]CA[609.3]
2756	LVDSMQATLDSEVR	12.7	91	782.3868	2	32.149	-1.2	70 77 91 94 94 89 97 97 97 97 94 89 89 88	[212.2]DSMQATLDSEVR
2757	LVLSTLGEK	6.6	74	480.2922	2	32.16	0.1	31 31 96 92 90 90 85 86 58	[212.2]LSTLGE[128.1]
2759	LLGLNSADMLK	9	82	587.8287	2	32.181	0.1	96 94 95 95 91 81 77 76 71 71 45	LLGLNS[558.3]
2761	NM(+15.99)SRVLADVSK	8.4	76	412.5519	3	32.215	0	54 54 75 81 81 85 86 94 96 96 31	[348.1]RVLADVS[128.1]
2762	RRT(+79.97)LKNTSLTGKR	7.3	56	537.6334	3	32.223	0.5	31 67 46 44 45 65 86 94 75 41 41 55 31	[848.4]TS[555.3]
2767	RRDHNNDAVR	6.7	67	418.2141	3	32.288	2	31 32 61 61 85 90 88 80 82 53	[564.3]NNDAV[156.1]
2769	LVNASVLPDAALANSM(+15.99)K	12.3	73	865.4597	2	32.309	-1.8	44 44 44 76 92 97 98 92 87 85 88 95 82 61 47 62 31	[397.2]SVLPDAALA[476.2]
2770	HHGVDPPVELYTPPLLKRK	12.6	66	732.7477	3	32.32	-0.1	83 85 80 63 52 47 70 68 54 86 77 84 78 84 87 49 35 36 32	HHG[636.3]L[163.1]T[97.1]PL[525.4]
2771	EESHKELAVSKLEK	10.4	74	813.9385	2	32.331	0.1	53 52 45 65 91 94 82 80 92 95 87 79 82 31	[482.2]KELAVSK[113.1]E[128.1]
2773	VKLLFSSYK	6.1	67	542.8233	2	32.366	-0.7	70 77 90 97 75 75 56 31 31	[227.2]LL[612.3]
2775	FRCREVAAGSPKR	7.2	55	492.9333	3	32.384	0.2	31 31 37 46 69 75 84 79 69 50 49 49 40	[790.4]A[596.3]
2776	NVAMVAELEELR	9.6	80	687.36	2	32.395	2.6	61 65 77 96 97 97 96 97 31 84 86 66	[284.1]MVAEL[129.0]EL[156.1]
2779	QLLGTLEEMR	8.8	88	595.3159	2	32.44	0	57 62 95 98 97 97 98 94 96 82	[241.1]LGTLEEMR
2780	AEFLKMNQAQWR	7.7	65	507.9265	3	32.45	1.3	31 75 43 40 49 55 73 72 93 78 87 73	[961.5]A[128.1]W[156.1]
2782	MWDLY(+79.97)AAKCQLSHVNK	9.5	59	662.9717	3	32.468	2.1	42 43 48 61 38 37 45 52 88 53 72 87 80 70 72 55	[1058.4]C[241.1]SH[341.2]
2783	GTYDDYVEGLR	9.6	87	644.2962	2	32.479	0	64 75 89 96 97 98 97 96 89 93 58	[158.1]YDDYVEGL[156.1]
2785	SLSTELFK	6.1	76	462.756	2	32.512	1.1	31 96 95 91 86 84 92 31	[87.0]LSTELF[128.1]
2787	WWRAAMSDKKDKK	9.3	72	550.6253	3	32.532	2	31 31 44 56 88 91 96 87 81 79 79 89 72	[599.3]AMSDK[243.1]K[128.1]
2789	VDFATYMKNGRTLDNLRK	10.1	56	714.711	3	32.555	2.9	32 40 39 53 51 55 52 43 59 68 52 58 89 87 64 51 58 43	[1383.7]LD[511.3]
2791	LLTENGEFGR	7.2	72	568.2903	2	32.59	-0.6	95 96 95 89 58 62 76 84 31 31	LLTE[300.1]F[213.1]
2792	LHFKLKGLDGM(+15.99)TAPWK	9.1	57	620.0067	3	32.598	0.7	31 31 48 47 62 58 38 38 39 80 84 86 86 63 61 48	[1051.6]GM(+15.99)TA[411.2]
2793	KFTAGVAMPASR	9.7	81	618.33	2	32.609	-3	54 61 70 91 94 93 93 94 95 95 96 31	[376.2]AGVAMPAS[156.1]
2794	MVVVDKEK	6.5	81	474.2647	2	32.62	-0.8	98 98 92 69 69 69 85 66	MVV[342.2]E[128.1]
2795	RHHQGAVEELQR	9.5	79	730.3792	2	32.63	0	49 49 79 85 94 94 96 97 95 74 76 56	[430.2]QGAVEE[397.2]
2797	RWWGELLVSQLTR	8.3	64	548.6375	3	32.664	-2.2	37 37 39 45 53 58 80 92 93 74 76 77 59	[827.4]LVS[498.3]

2798	KPKHGLYADFK	6.1	56	435.2422	3	32.675	-2.7	31 32 32 40 58 92 94 83 82 31 31	[547.3]LYAD[275.2]
2799	NYVTQTHEVAYNR	8.1	62	532.2574	3	32.685	-2.1	64 63 36 36 37 63 72 95 93 82 65 62 31	[843.4]EVA[433.2]
2800	DM(+15.99)ETKSLLSK	7.8	78	584.2983	2	32.697	-2.6	31 97 97 94 62 57 65 94 95 78	[115.0]M(+15.99)ET[328.2]LS[128.1]
2803	LKDLVSLAASPAK	8.9	68	438.2659	3	32.739	-0.2	86 60 60 83 31 93 91 88 59 59 69 71 31	L[243.1]L[99.1]SLA[454.3]
2804	Y(+79.97)YRRKTVMGAELR	8.9	69	574.954	3	32.749	-1.9	34 31 31 46 59 78 91 97 90 88 86 86 67	[947.4]VMGAEL[156.1]
2806	QVNRWPQNLVNCGMLPK	10.1	59	666.3458	3	32.771	1.1	38 36 41 42 40 46 48 82 85 80 62 66 84 82 69 71 31	[908.5]NLV[217.1]GM[338.2]
2807	HHRGPVARLR	5.5	55	400.2398	3	32.783	1.7	31 55 53 50 59 85 69 59 53 31	[584.3]V[496.3]
2809	LLPVLYPVPTTLYYK	9.3	62	890.5171	2	32.816	-1.4	31 47 47 96 96 97 98 31 44 44 50 89 92 31 31	[323.2]VLYP[398.2]LY[291.2]
2810	M(+15.99)ANQTVSSQFR	8.9	81	642.8038	2	32.827	0.2	50 50 49 77 94 95 96 94 94 97 87	[460.2]TVSSQFR
2812	RWREEQAAMVER	7.4	62	520.9285	3	32.848	0.6	49 32 32 45 43 56 86 94 88 70 71 69	[884.4]AAM[384.2]
2813	SPFPKLSGTPWK	8.4	70	448.9174	3	32.859	5.1	92 91 91 84 66 52 50 52 60 68 70 56	SPFP[897.5]
2815	MPKLVDTNTALK	7.4	61	444.2517	3	32.893	0.4	38 39 42 59 87 91 79 74 63 62 66 31	[469.3]VD[628.4]
2816	FPRRLAELEELR	7.9	66	510.2907	3	32.902	-1.1	31 32 32 49 61 87 94 96 31 95 97 84	[669.4]AEL[129.0]ELR
2817	LLSLNSADMLK	9.2	83	602.8344	2	32.912	0.7	96 95 95 96 92 91 86 78 69 69 45	LLSLNSA[487.2]
2818	MELDDLSSNMEAVSK	13.1	87	834.877	2	32.922	0.7	81 81 91 97 97 96 97 94 87 92 93 90 85 88 31	MELDDLSSNMEAVS[128.1]
2819	CHYKM(+15.99)LAAELEGSLK	8.9	59	570.2852	3	32.933	1	31 59 45 42 34 38 38 96 95 94 90 78 57 54 31	[862.4]AELE[385.2]
2824	LVLSTLGEK	5.9	65	480.292	2	32.996	-0.4	31 31 97 95 92 83 57 58 38	[212.2]LSTL[314.2]
2827	VVAM(+15.99)RYLTSLLNSK	9	64	537.6344	3	33.04	-3	78 47 38 40 39 47 60 89 94 92 84 63 79 46	[848.5]TSLL[329.2]
2828	NM(+15.99)SRVLADVSK	8.9	81	412.5525	3	33.049	1.4	70 78 81 75 81 91 92 92 95 95 31	[261.1]S[156.1]VLADVS[128.1]
2830	DEQFRMKVRYK	7	64	500.597	3	33.071	-1.5	62 62 54 57 51 56 59 89 85 63 61	[934.4]VR[291.2]
2831	LVDSMQATLDSEVR	12.7	90	782.3886	2	33.082	1.1	67 75 90 94 94 90 98 97 97 97 95 89 89 89	[212.2]DSMQATLDSEVR
2833	NRWWPVLYPTEPVLLGKK	11.2	62	732.7473	3	33.115	-2.4	41 38 36 53 48 60 83 95 94 86 80 83 87 61 44 43 48 31	[838.4]LYPTEPV[539.4]
2835	YY(+79.97)KTKLRS(+79.97)AEYKR	7.2	55	622.6285	3	33.138	0	32 74 57 53 54 51 69 66 72 62 47 35 39	[1846.9]
2836	SVKYSNNDAVR	8.2	75	418.2141	3	33.149	-0.1	31 74 74 76 78 87 89 90 81 83 55	[564.3]NNDAV[156.1]
2837	FLHSVLWAPLCSQTK	8.7	58	865.4594	2	33.159	1.3	31 31 31 31 31 97 83 74 73 89 63 63 49 70 42	[583.3]LW[168.1]L[547.2]
2839	VQLELNQLK	6.7	75	542.822	2	33.193	0.7	64 59 88 74 72 80 78 89 65	[227.1]L[242.1]N[128.1]L[128.1]
2842	QVGMVAELEELR	9.7	80	687.3585	2	33.221	0.4	55 61 87 97 97 97 96 97 31 85 89 67	[227.1]GMVAEL[129.0]EL[156.1]
2843	LLGLNSADMLK	8.6	78	587.8286	2	33.231	-0.2	91 88 84 84 86 87 82 78 65 65 42	LLGLNSA[487.2]
2846	QLLGTLEEMR	8.7	87	595.3159	2	33.272	0	54 58 95 98 97 97 98 93 95 80	[241.1]LGTLEEMR
2847	SMGPVTFKNAQWR	8.3	64	507.9268	3	33.28	1.8	40 40 55 54 45 41 47 73 77 93 86 91 83	[961.5]AQWR
2851	SLSTELFK	6.3	78	462.7557	2	33.33	0.5	31 94 93 92 91 92 97 31	[87.0]LSTELF[128.1]

2853	FQLTRAMMASHTKK	8.9	64	550.6249	3	33.347	-0.8	71 70 56 50 50 73 91 95 89 65 51 49 46 31	[716.4]MMA[581.3]
2855	EREFQATLDSMPR	9.2	71	790.3792	2	33.37	-1.5	48 48 39 75 74 81 82 95 94 86 79 79 31	[689.3]ATLDS[384.2]
2857	LLTEGNEFGR	6.9	69	568.2911	2	33.404	0.6	93 96 96 90 51 48 54 91 31 31	LLTE[300.1]F[213.1]
2858	LVNAWLWAVFDLPWK	9	60	620.0076	3	33.412	1.7	45 45 45 61 58 62 47 61 81 64 65 85 65 64 47	[953.5]V[262.1]L[411.2]
2859	NFAWLVGATTR	9.4	85	618.33	2	33.423	-0.2	76 81 96 98 97 93 91 90 91 87 31	[114.0]FAWLVGATT[156.1]
2863	VMLLY(+79.97)KLVSQLTR	9.3	71	548.6373	3	33.475	1.2	64 64 84 67 50 49 56 94 92 76 81 82 64	[230.1]L[597.3]VS[128.1]LT[156.1]
2864	LLHALLYGEM(+15.99)K	6.2	57	435.2421	3	33.485	2.9	44 42 35 35 48 93 93 83 81 31 31	[547.3]LYGE[275.1]
2866	MCDVAET(+79.97)LEAVNSK	10.7	76	795.3351	2	33.505	2.8	44 56 63 90 93 95 91 80 79 94 92 64 80 41	[349.1]VAET(+79.97)L[129.0]AV[114.0]S[128.1]
2869	QLDLVSGVLQLK	7.4	62	438.2657	3	33.547	-0.7	46 44 43 39 96 92 90 88 70 45 46 35	[469.3]VSGV[482.3]
2870	WWWLFEVMGAELR	9.3	71	574.9537	3	33.557	0.2	31 31 46 64 56 84 91 95 91 89 88 88 71	[818.4]EVMGAEL[156.1]
2875	LLPVLYPPVTTLYYK	10.2	68	890.5163	2	33.617	-2.3	31 55 55 97 97 98 98 99 51 51 60 78 84 31 31	[323.2]VLYPP[414.2]Y[291.2]
2877	FVPDSQSYLVR	7.2	65	655.8422	2	33.64	2.5	73 73 73 87 77 65 75 77 53 31 31	[343.2]D[833.4]
2878	GTYDDYVEGLR	9	82	644.2965	2	33.65	0.5	70 75 87 95 96 97 97 91 66 82 36	[158.1]YDDYVE[57.0]L[156.1]
2881	YNQLQDVLPLK	6.7	61	444.251	3	33.694	1.5	51 58 54 65 55 87 91 78 45 45 31	[646.3]DV[451.3]
2882	LFVLRTTKTLR	7.6	69	674.4256	2	33.704	-2.4	31 31 92 91 89 86 79 62 60 76 54	[260.2]VLRT[599.4]
2883	ALFRRLEY(+79.97)LSLTR	7.6	59	573.3107	3	33.716	1.6	43 42 55 42 62 67 92 70 91 62 51 45 33	[756.5]E[243.0]L[457.3]
2885	KWWAVAELEELR	8.3	69	510.6081	3	33.736	-0.8	32 32 41 66 70 90 95 97 31 93 96 82	[670.4]AEL[129.0]ELR
2890	LVLSTLGEK	6.3	70	480.2925	2	33.799	0.7	31 31 96 91 87 83 76 77 50	[212.2]LSTL[314.2]
2891	Y(+79.97)NETRFAQLLLK	7.5	62	788.4032	2	33.808	3.9	88 60 60 65 85 66 69 49 60 75 31 31	Y(+79.97)[344.1]R[813.5]
2894	VT(+79.97)VVLTRTSLLNSK	9.2	66	537.6339	3	33.854	-0.3	31 31 31 81 69 63 67 91 94 93 82 59 76 43	[379.2]V[370.2]TSLL[329.2]
2895	NM(+15.99)SRVLADVSK	8.3	76	412.552	3	33.865	0.1	52 52 63 80 79 90 92 95 97 97 31	[348.1]R[99.1]LADVS[128.1]
2897	LVDSMQATLDSEVR	12.7	91	782.3876	2	33.886	-0.2	73 78 92 91 91 87 97 97 97 97 94 89 89 88	[212.2]DSMQATLDSEVR
2900	WKPLWKLELPVYGLYYK	9.5	56	732.7479	3	33.931	1.6	42 35 34 36 38 45 47 93 95 84 77 69 56 55 70 31 31	[951.6]ELP[886.5]
2902	RDTYRNEVRYK	6.5	59	500.5957	3	33.954	0.9	48 50 57 58 42 41 60 81 84 63 63	[934.4]VR[291.2]
2903	SPTDAAMMRVSDLK	10.4	74	761.3757	2	33.964	2.7	64 66 62 67 73 96 97 95 80 80 73 63 71 44	[471.2]AMMRV[443.2]
2906	VQLELNQLK	6.8	76	542.8218	2	34.004	0.3	64 60 87 87 86 83 67 86 58	[227.1]LELN[128.1]L[128.1]
2907	FGERSAAKGDSK	7.5	63	418.2142	3	34.014	0.1	31 91 87 54 42 41 63 76 80 76 77 31	[147.1]GE[513.3]G[330.2]
2913	QLLGTLEEMR	8.7	87	595.3156	2	34.078	-0.4	53 56 95 97 97 97 98 94 96 82	[241.1]LGTLEEMR
2914	RRRGFQGCAEWR	8.3	69	507.9261	3	34.087	2.2	31 34 48 69 89 84 69 67 88 88 91 67	[525.3]FQ[160.0]AEW[156.1]
2917	GKDNNSR	4	58	790.3797	1	34.129	-0.6	31 86 84 51 51 47 51	[57.0]KD[471.2]
2918	LSSTELFK	5.5	68	462.7554	2	34.139	-0.2	31 31 93 88 86 88 94 31	[200.1]STELF[128.1]

2919	QVGMVAELEELR	9.2	77	687.3578	2	34.148	-0.5	47 51 82 95 97 95 88 88 31 86 88 68	[227.1]GMVAEL[129.0]EL[156.1]
2920	VLNASVLPDANFLDNK	11.9	75	865.459	2	34.158	-0.6	52 51 51 63 86 95 98 90 85 78 79 90 86 78 72 31	[397.2]SVLPD[185.1]FL[357.2]
2921	RRTDAAMMANSGLKK	9.6	64	550.6248	3	34.169	1.6	31 74 42 48 54 60 66 93 93 75 58 59 81 92 31	[801.4]MA[258.1]LK[128.1]
2925	LLTENGEFGR	6.9	69	568.2906	2	34.22	-0.2	94 96 96 86 51 52 62 84 31 31	LLTE[300.1]F[213.1]
2927	NFWALDRVSK	7.3	73	618.33	2	34.24	-0.2	51 50 82 95 95 94 94 98 31 31	[261.1]WALDRV[215.1]
2930	CMDVAET(+79.97)LEAVNSK	10.3	73	795.3352	2	34.283	2.8	35 33 64 88 87 95 93 79 80 95 93 61 79 38	[349.1]VAET(+79.97)[113.1]EAV[329.2]
2931	RANKCPSALVSQLTR	9.3	62	548.6378	3	34.295	-1.2	36 38 40 45 52 59 46 45 64 91 93 82 84 85 61	[940.5]VSQLT[156.1]
2932	KKKYLDSFM(+15.99)K	5.9	59	435.242	3	34.306	2.9	31 31 31 76 75 76 73 72 31 87	[1156.6]K
2933	LLSLNSADMLK	8.3	76	602.8345	2	34.317	1	95 95 95 96 91 89 54 47 59 61 43	LLSLNS[558.3]
2935	QLDLVSGVVALAK	8	61	438.2658	3	34.349	-0.3	50 44 45 80 87 77 74 77 63 60 49 54 31	[356.2]LV[725.4]
2936	DGDARTR	4.1	59	790.3796	1	34.36	-0.8	54 65 67 75 60 56 31	[771.4]
2938	RMMSNLNTVMGAELR	9.1	60	574.954	3	34.377	1.6	41 45 43 52 50 46 45 51 88 96 87 76 64 65 51	[947.4]VMG[469.3]
2941	LLPVLYPTTVPLYYK	10.3	69	890.5163	2	34.423	-2.3	31 55 55 97 97 98 84 63 60 57 89 87 89 31 31	[323.2]VLYP[301.2]PLY[291.2]
2943	SSFDDYVEGLR	8.8	80	644.2964	2	34.442	0.3	67 62 62 94 94 97 97 93 76 86 42	[321.1]DDYVE[57.0]L[156.1]
2945	MELDDLSSNMEAVSK	12.5	84	834.8762	2	34.463	-0.3	76 74 87 96 98 97 98 96 86 92 90 75 71 77 31	[260.1]LDDLSSNME[385.2]
2947	QLDLVDKMQLK	7.2	65	444.2515	3	34.496	-0.1	52 42 42 89 92 90 65 66 52 67 55	[356.2]LVD[628.4]
2948	WSRQLAELEELR	8.7	73	510.6086	3	34.507	2.6	31 69 68 53 58 87 96 97 31 95 97 84	[670.4]AEL[129.0]ELR
2950	LLGLNSADMLK	8.9	81	587.8286	2	34.529	-0.1	96 94 96 96 92 91 81 67 62 66 44	LLGLNSA[487.2]
2951	QPQEQELAVSKLEK	10	72	813.9379	2	34.54	-0.6	51 51 51 65 83 94 85 84 94 90 73 69 73 31	[482.2]QELAVS[498.3]
2953	LVLSTLGEK	6.6	73	480.2928	2	34.575	1.2	31 31 95 94 93 91 82 82 54	[212.2]LSTLGE[128.1]
2956	MTKWLEMECGGHSHVNK	10.7	63	662.9724	3	34.605	2.2	38 37 42 46 38 38 48 74 81 84 83 86 91 80 69 71 55	[1048.5]CGGHSH[341.2]
2957	YVESNDLLSK	8.8	88	584.299	2	34.616	1.4	94 94 89 75 70 92 92 94 94 78	YVE[201.1]DLLS[128.1]
2960	FNREGLADVSK	7.6	69	412.5518	3	34.662	2.5	53 44 38 38 82 92 91 94 97 97 31	[546.3]GLADVS[128.1]
2961	CALLLTYATSLLNSK	9.5	64	537.6336	3	34.672	2.5	49 49 62 68 34 36 45 64 89 94 93 81 61 76 45	[848.4]TSLL[329.2]
2962	LVDSMQATLDSEVR	12.6	90	782.3876	2	34.683	-0.2	70 78 91 93 93 90 97 97 97 97 93 86 87 86	[212.2]DSMQATLDSEVR
2966	FPQYRNEVRYK	6.6	60	500.5962	3	34.734	-0.8	56 56 54 69 43 41 70 75 75 58 56	[1480.8]
2967	FKFLRFLELVPYVAYYK	11.2	66	732.7474	3	34.744	0.9	31 33 33 35 32 66 72 95 90 76 77 92 89 87 86 86 31	[951.6]EL[196.1]YVAYY[128.1]
2972	VQLELNQLK	7.1	78	542.8221	2	34.81	0.9	67 62 93 83 78 83 79 90 66	[227.1]LE[113.1]N[128.1]L[128.1]
2974	RDRHNNDAVR	6	60	418.2142	3	34.828	2.1	31 31 31 59 63 86 88 75 79 48	[678.3]ND[326.2]
2978	QLLGTLEEMR	8.8	88	595.3162	2	34.879	0.5	57 62 95 96 96 97 98 94 96 83	[241.1]LGTLEEMR
2979	TWLYRQNAQWR	7	63	507.9271	3	34.888	-2.8	57 32 35 32 47 45 79 96 88 93 86	[961.5]AQWR

2983	VTSTELFK	5.1	64	462.7558	2	34.941	0.7	31 92 86 74 62 60 69 31	[99.1]TS[618.3]
2984	YPHSVLWPALAPHNK	9.5	63	865.4602	2	34.95	-2.3	76 76 76 31 31 97 75 67 67 93 91 49 36 37 37	[583.3]L[354.2]LA[476.2]
2985	NVAMVAELEELR	9.2	77	687.3586	2	34.961	0.5	50 53 55 93 97 97 96 97 31 88 91 71	[284.1]MVAEL[129.0]EL[156.1]
2986	RRTWAMMAEELKK	8.4	65	550.6251	3	34.972	-0.3	31 47 41 41 56 84 97 96 90 71 68 79 31	[670.4]MMAE[498.3]
2987	RVVT(+79.97)KQAAELEGDGR	8.3	55	570.2846	3	34.983	0.9	31 31 37 40 36 36 60 94 95 95 85 60 53 38 31	[862.4]AELE[385.2]
2989	LLTENGEFGR	6.9	69	568.291	2	35.018	0.4	95 95 94 85 53 55 67 82 31 31	LLTE[300.1]F[213.1]
2990	LVGKSVLS(+79.97)NLEGLRHR	9.5	59	620.0076	3	35.026	1.4	72 72 54 51 47 31 76 63 61 82 87 67 65 51 31 31	[977.5]LE[619.4]
2991	VYADRLWWK	7.3	81	618.83	2	35.037	0.4	90 92 88 90 94 94 60 60 60	VYADRL[500.3]
2993	MVSLLQEK	6.6	82	474.2648	2	35.06	-0.6	98 98 98 31 94 77 86 74	MVS[113.1]L[128.1]E[128.1]
2995	SVTLFLYASFR	6.9	63	435.24	3	35.092	0.7	31 71 43 42 42 93 93 77 69 70 55	[547.3]LY[461.2]
2996	QVY(+79.97)PFLLVSKLTR	8.9	68	548.6371	3	35.104	2.9	39 39 39 31 62 73 83 84 95 93 88 87 65	[827.4]LVSKLT[156.1]
2997	LLSLNSADMLK	8.9	81	602.8343	2	35.114	0.6	96 95 95 96 87 83 80 77 66 65 42	LLSLNSA[487.2]
2998	MFAPYANK	5.4	67	471.2306	2	35.124	-1.1	90 90 90 31 31 92 31 77	MFA[260.1]A[242.1]
3001	KLDLVSGVVSAPK	8.9	69	438.2659	3	35.167	-0.1	43 42 45 57 95 92 85 85 81 85 72 75 31	[469.3]VSGVVS[296.2]
3003	QMM(+15.99)RLVTGNMGAELR	9.3	62	574.9545	3	35.185	2.5	42 38 35 38 42 53 60 58 59 75 90 90 86 85 67	[1177.5]GAEL[156.1]
3007	LLPVLYPCCLKVKYK	9.8	65	890.5154	2	35.239	-1.6	31 64 64 98 97 98 98 85 63 43 41 40 45 61 45	[323.2]VLYPC[862.5]
3008	ASYDDYVEGLR	8.5	78	644.296	2	35.25	-0.4	50 50 83 96 95 96 96 90 71 80 40	[158.1]YDDYVE[57.0]L[156.1]
3011	LFWNMVAAGSKPR	7.7	59	492.9315	3	35.28	1.4	31 31 59 64 64 72 83 77 76 64 51 51 37	[790.4]A[596.3]
3014	WQTRVAELEELR	8.2	69	510.6087	3	35.322	2.9	58 36 36 39 70 87 94 96 31 93 96 81	[670.4]AEL[129.0]ELR
3015	MELDDLSSNMEAVSK	12.9	86	834.8768	2	35.333	0.5	84 82 92 95 98 97 98 95 89 90 89 81 76 81 31	MELDDLSSNMEA[99.1]S[128.1]
3016	LLGLNSADMLK	8.7	79	587.829	2	35.343	0.6	96 95 96 95 90 81 77 67 63 63 43	LLGLNS[558.3]
3017	ACNGHKEALVSKLTR	10.8	72	813.939	2	35.355	-2.3	52 49 47 45 56 90 94 81 80 94 95 91 79 77 47	[482.2]KEALVSK[370.2]
3019	LVLSTLGEK	6.1	68	480.292	2	35.389	-0.4	31 31 96 93 91 86 66 67 41	[212.2]LSTL[314.2]
3020	RFHRRKY(+79.97)PAESTTCHR	9	56	532.0068	4	35.398	1.5	33 33 32 37 34 70 63 59 56 86 84 80 72 61 63 31	[1291.6]EST[497.2]
3022	SRRWTWWNS(+79.97)TLDGNK	8.5	57	662.9721	3	35.422	2.5	32 32 33 32 34 34 58 58 57 90 89 88 89 84 31	[1339.6]TLDGN[128.1]
3023	DFETLSQLSK	7	70	584.2984	2	35.433	0.4	31 31 97 95 71 70 60 86 90 66	[262.1]ET[328.2]LS[128.1]
3027	NFAWLVGDVSK	8.7	79	412.5522	3	35.488	0.1	72 80 61 62 88 93 93 94 95 96 31	[114.0]F[257.1]LVGDVS[128.1]
3028	VLDSMQATLDSEVR	12.6	90	782.388	2	35.497	0.3	67 74 89 92 93 90 97 97 97 97 93 89 89 88	[212.2]DSMQATLDSEVR
3029	RRPQQQDEPDVLVAAM(+15.99)K	11.1	65	666.3464	3	35.508	0.8	31 76 42 48 55 56 89 68 55 66 80 91 87 82 66 64 42	[793.4]D[341.1]VLVA[346.2]
3033	HLKT(+79.97)KTYELYVPVLRKK	9.8	58	732.7481	3	35.56	-0.2	35 35 37 40 37 42 49 92 78 72 90 85 78 62 54 48 37	[951.5]E[276.1]VP[624.4]
3037	VQLELNQLK	7	78	542.8215	2	35.617	-0.1	60 57 89 89 88 85 78 89 64	[227.1]LELN[128.1]L[128.1]

3040	GFVFNNWGGVR	8	72	418.2139	3	35.647	4.1	31 83 83 70 70 87 78 88 84 85 31	[57.0]FV[261.1]N[186.1]GGV[156.1]
3044	QLLGTLEEMR	8.7	87	595.3159	2	35.7	0	56 60 96 98 97 97 98 93 95 80	[241.1]LGTLEEMR
3045	LATNACFLQAQWR	10	77	507.9266	3	35.709	1.5	81 85 91 56 57 74 68 62 61 94 87 91 84	LAT[676.3]AQWR
3047	SSLAQVAM(+15.99)SQVADLMR	12.5	78	861.9279	2	35.729	-1.6	31 64 54 55 57 91 97 98 91 80 86 94 95 92 92 68	[486.2]VAM(+15.99)SQVADLM[156.1]
3049	SLSTELFK	6.3	79	462.7557	2	35.763	0.5	31 96 95 93 91 91 96 31	[87.0]LSTELF[128.1]
3050	NGLMVAELEELR	9.2	77	687.3588	2	35.771	0.8	51 52 56 94 97 96 96 97 31 87 90 70	[284.1]MVAEL[129.0]EL[156.1]
3051	YYASVLVLANFLDNK	10.8	72	865.4603	2	35.782	-1.6	71 70 85 93 96 97 57 57 42 43 90 90 78 73 31	[326.1]ASVL[397.2]FL[357.2]
3052	RRMRAMSDEELKK	8.1	62	550.6251	3	35.793	2.1	31 44 40 45 74 85 93 94 96 57 56 59 31	[670.4]MSDE[498.3]
3053	VT(+79.97)KNRLAAELEDNR	8.2	58	570.2845	3	35.804	0.6	32 41 36 38 46 56 77 95 93 90 78 49 46 31	[862.4]AEL[514.2]
3055	LLTENGEFGR	6.7	67	568.291	2	35.839	0.4	93 94 93 84 48 49 62 81 31 31	LLTE[300.1]F[213.1]
3056	ETFRYKPLGKHAPWK	8.8	59	620.0075	3	35.847	-2.3	31 78 32 34 46 43 49 65 89 79 74 80 64 64 49	[1034.6]G[265.2]A[411.2]
3057	M(+15.99)KTAGVLWASR	8.1	73	618.33	2	35.858	-3	38 36 39 92 94 95 96 96 90 93 31	[376.2]AGVLWAS[156.1]
3059	QLEAEEQLEAVNSK	12.2	87	794.3968	2	35.881	0.2	69 74 92 95 98 95 86 94 96 94 94 79 90 52	[241.1]EAEEQLEAV[114.0]S[128.1]
3063	WRYKSGYVSKLTR	8.4	64	548.6373	3	35.934	-2.6	32 32 36 39 53 59 68 89 94 92 87 86 64	[940.5]VSKLT[156.1]
3065	LLSLNSADMLK	9.2	84	602.8339	2	35.955	-0.1	96 96 95 96 91 93 91 81 70 68 41	LLSLNSAD[372.2]
3067	KLDLVSGVVSPAK	9.1	70	438.2658	3	35.989	-0.4	49 48 52 42 92 90 83 85 88 90 73 74 31	[469.3]VSGVVS[296.2]
3068	M(+15.99)QMRLQSGVMGAELR	9.8	66	574.954	3	35.999	1.7	52 51 42 37 35 40 55 67 87 91 88 87 87 87 70	[947.4]VMGAEL[156.1]
3069	NSYM(+15.99)VMLNPLVHCSNK	9	56	467.2225	4	36.01	-1.4	57 58 65 31 44 42 41 42 44 47 90 90 78 57 64 43	[1178.5]VH[432.2]
3070	MVSLLQEK	5.7	71	474.265	2	36.021	-0.2	97 97 97 31 88 49 62 44	MVS[113.1]L[385.2]
3073	LLPVLYPPVTTLYYK	11	74	890.5167	2	36.064	-1.9	31 69 69 98 98 98 98 98 61 61 71 89 92 31 31	[323.2]VLYPP[301.2]LY[291.2]
3074	ASYDDYVEGLR	8.7	79	644.2964	2	36.075	0.3	52 52 85 97 97 98 97 92 73 83 40	[158.1]YDDYVE[57.0]L[156.1]
3077	MFAYPANK	6.9	86	471.2312	2	36.104	0.2	95 95 95 31 98 96 92 82	MFA[163.1]PANK
3079	QLDLVDKLQMK	6.8	62	444.2513	3	36.139	-0.5	53 51 52 48 88 87 71 71 47 60 46	[469.3]VD[628.4]
3080	RQWTVAELEELR	8.2	68	510.6084	3	36.148	2.3	44 43 39 51 59 84 92 95 31 95 97 84	[670.4]AEL[129.0]ELR
3081	MELDDLSNSMEAVSK	11.9	79	834.876	2	36.159	-0.5	78 78 90 96 98 97 96 55 65 82 91 75 71 81 31	[260.1]LDDLS[201.1]ME[170.1]S[128.1]
3082	LLGLNSADMLK	9.5	86	587.8286	2	36.17	-0.1	95 92 93 92 90 88 86 86 84 84 55	LLGLNSADML[128.1]
3083	QPQEKEPSVSKLEK	9.9	70	813.9378	2	36.181	-0.7	53 53 42 86 67 92 93 92 98 84 65 61 63 31	[353.2]E[128.1]EPSVS[498.3]
3085	LVLSTLGEK	6.6	73	480.2922	2	36.216	0	31 31 97 94 94 92 81 82 53	[212.2]LSTLGE[128.1]
3088	DFETTNLLSK	7.6	76	584.2983	2	36.248	0.3	31 31 92 95 80 80 84 94 94 76	[262.1]ETTNLLS[128.1]
3089	WT(+79.97)MPREAKKPDSQWKR	9.5	60	531.761	4	36.26	0.7	32 32 34 45 66 91 70 69 70 70 80 82 65 49 52 35	[751.3]E[424.3]DS[598.3]
3091	EPPYVLPPVVLPALLYK	9.7	57	636.7129	3	36.295	-0.2	31 78 73 42 41 47 87 94 31 31 51 61 64 88 69 43 31	[698.4]PP[479.3]L[404.2]

3092	FNWVGLADVSK	8.7	79	412.5528	3	36.306	1.7	53 69 69 78 89 93 92 93 97 97 31	[546.3]GLADVS[128.1]
3094	VLDSMQATLDSEVR	12.6	90	782.3889	2	36.326	1.5	65 74 88 93 94 89 97 97 98 97 95 91 91 90	[212.2]DSMQATLDSEVR
3095	SKPY(+79.97)KKPLLDVCAEGLR	12.1	71	666.3464	3	36.337	-2.1	71 70 88 57 54 50 71 77 81 84 87 82 83 81 60 70 38	[215.1]P[709.4]LDVCAE[326.2]
3097	LRRRWALYPRNAVAYYK	10.3	61	732.7479	3	36.371	-0.3	32 32 31 31 38 38 63 96 93 49 56 64 75 89 86 86 64	[951.6]YP[440.2]AYY[128.1]
3098	EPKFPMAARTSHK	9.4	73	500.5967	3	36.383	-2	92 91 48 45 50 85 85 81 81 80 81 85 31	EP[372.2]MAARTSH[128.1]
3101	QNMT(+79.97)DENS(+79.97)M(+15.99)ANR	7.9	65	529.5059	3	36.413	1.3	63 64 71 51 68 71 89 84 70 50 63 37	[798.2]NS(+79.97)[488.2]
3103	VQLELNQLK	6.7	74	542.8223	2	36.449	1.3	68 63 93 74 69 76 72 87 62	[227.1]L[484.2]L[128.1]
3104	WQLHNNERR	5.8	64	418.2144	3	36.458	-0.5	63 55 55 72 82 78 67 69 31	[564.3]N[555.3]
3109	QLLGTLEEMR	8.8	88	595.3163	2	36.522	0.7	59 63 96 98 98 97 98 93 95 80	[241.1]LGTLEEMR
3111	RFPAFTQNAQWR	6.8	57	507.9271	3	36.54	-2.7	37 37 31 44 37 37 40 60 89 86 91 84	[961.5]AQWR
3112	RRRHTGTFWK	6.1	61	448.9171	3	36.55	-2	31 31 34 45 60 88 81 71 84 84	[706.4]GT[147.1]WK
3113	WTY(+79.97)KWLTSLKR	6.1	56	521.2689	3	36.561	-0.4	63 52 52 52 58 71 72 55 49 47 38	[1542.8]
3115	TVSTELFK	5.5	69	462.7556	2	36.595	0.3	31 31 94 88 86 90 96 31	[200.1]STELF[128.1]
3116	YPHSVLPKQNAPHNK	8.9	59	865.4601	2	36.604	-0.2	77 77 77 31 31 98 73 44 43 83 92 50 35 36 34	[583.3]L[353.2]NA[476.2]
3117	NGLMVAELEELR	8.8	73	687.3584	2	36.615	0.3	46 47 52 93 96 94 85 87 31 85 87 66	[284.1]MVAEL[129.0]EL[156.1]
3118	RRTDAAMMLNTNKK	8.6	61	550.6252	3	36.625	2.3	31 63 48 63 75 87 90 95 59 54 50 45 51 38	[599.3]AMM[698.4]
3119	RHAELEGCPK	7.2	72	570.2844	2	36.636	-0.9	73 73 92 94 88 82 71 56 58 31	[293.2]AELE[385.2]
3121	LLTEGNEFGR	6.7	67	568.2913	2	36.67	1.1	93 95 95 89 45 43 50 92 31 31	LLTE[300.1]F[213.1]
3122	VLNKKNKFAQCVSNHK	10.3	64	620.0078	3	36.679	-1.5	82 81 48 46 42 46 71 58 57 51 82 87 92 60 76 38	VL[958.5]CVS[379.2]
3123	NFDARLWVSK	8.6	86	618.33	2	36.689	-0.2	76 81 94 94 95 96 88 98 98 31	[114.0]FDARLWVS[128.1]
3125	WNPYKWLPFLVDAFPK	9.4	59	674.3621	3	36.712	1.7	56 45 46 53 48 50 55 95 31 75 78 90 87 62 31 34	[987.5]P[359.2]DA[372.2]
3128	KSKKFTLCGDFLTR	9.3	67	548.6371	3	36.758	1.8	32 32 33 60 50 62 79 87 95 92 87 80 80 56	[832.5]CGDFLT[156.1]
3129	LLSLNSADMLK	8.8	80	602.834	2	36.769	0.1	94 92 92 95 90 90 88 73 60 57 42	LLSLNSA[487.2]
3131	SSPSQVAFSQVADLMR	12.2	77	861.9275	2	36.787	-0.1	55 52 53 60 81 94 94 56 87 57 95 95 95 90 90 65	[358.1]QVA[147.1]S[128.1]VADLM[156.1]
3133	KLDLVSGVVSAPK	8.4	65	438.2654	3	36.821	-1.4	42 42 45 45 96 95 88 82 73 72 60 65 31	[469.3]VSGV[482.3]
3134	Y(+79.97)YRKRTVMGAELR	8.5	65	574.9535	3	36.831	-2.8	35 31 33 34 45 59 92 95 88 87 87 86 69	[947.4]VMGAEL[156.1]
3136	MVSLLQEK	6.4	81	474.2645	2	36.853	-1.3	97 97 97 31 93 73 81 70	MVS[113.1]L[128.1]E[128.1]
3137	KHHRPTEDQLSELK	9	65	573.3046	3	36.862	0.9	32 32 35 41 48 66 93 83 71 89 93 89 95 31	[756.4]ED[128.1]LSEL[128.1]
3139	LLPVLYPVPTTLYYK	10.4	69	890.5166	2	36.897	-2	31 82 82 97 97 98 99 31 54 54 60 90 93 31 31	[113.1]LPVLYP[398.2]LY[291.2]
3140	MFHFEVAALQKR	6.7	56	492.9318	3	36.908	1.9	31 31 31 31 77 76 78 86 76 51 58 34	[861.4]A[525.3]
3141	SSFDDYVEGLR	8.6	78	644.2957	2	36.918	-0.8	54 58 58 96 95 97 97 92 76 85 43	[321.1]DDYVE[57.0]L[156.1]

3142	MFAPYANK	5.5	69	471.231	2	36.928	-0.3	93 93 93 31 31 93 31 79	MFA[260.1]A[242.1]
3145	QLDLVDQLKMK	7.2	65	444.252	3	36.972	1	49 42 42 51 95 94 67 88 69 83 31	[469.3]VD[128.1]L[128.1]M[128.1]
3146	WWKAVAELEELR	7.8	65	510.609	3	36.981	1	31 35 36 42 52 89 94 97 31 93 95 81	[670.4]AEL[129.0]ELR
3147	LLGLNTGDMLK	8.8	80	587.8293	2	36.992	1.1	95 93 95 95 89 72 73 74 72 72 45	LLGLN[645.3]
3148	MELDDLSSNMEAVSK	12.9	86	834.8775	2	37.003	1.3	78 78 93 97 98 97 97 95 83 92 93 88 81 85 31	[260.1]LDDLSSNMEAVS[128.1]
3149	CHKNKEPSVSKLTR	10.8	77	813.9391	2	37.014	-2.1	44 41 40 46 91 96 96 96 99 96 93 87 85 60	[482.2]KEPSVSKLT[156.1]
3151	LVLSTLGEK	6.2	69	480.2917	2	37.048	-1	31 31 97 95 93 87 69 70 42	[212.2]LSTL[314.2]
3153	DFETNTLLSK	7.3	73	584.298	2	37.066	-0.3	31 31 98 92 60 63 80 94 95 77	[262.1]ET[215.1]LLS[128.1]
3154	WRHM(+15.99)RHECNHSHVNK	8.7	58	662.9715	3	37.077	-1.7	32 32 31 32 38 34 64 88 69 76 86 80 72 73 57	[1048.5]C[251.1]SH[341.2]
3157	FFKLYPPVVKAGFLGPK	9.8	58	636.7119	3	37.123	3.5	31 38 38 69 64 89 92 31 79 70 72 80 74 49 34 33 31	[698.4]PP[397.3]G[542.3]
3158	KVSWCLADVSK	7.4	68	412.5521	3	37.134	-2.7	31 55 42 42 63 94 94 94 96 96 31	[603.3]LADVS[128.1]
3159	VT(+79.97)VVKKNTSLLNSK	8.3	59	537.6339	3	37.144	-0.2	31 31 31 66 52 58 56 87 94 92 61 53 66 45	[848.5]TSL[442.3]
3160	LVDSMQATLDSEVR	12.6	90	782.3874	2	37.154	-0.5	67 76 90 93 94 90 97 97 98 97 93 88 88 88	[212.2]DSMQATLDSEVR
3163	HHRKKTRHYLVPVAYYK	11.3	66	732.7467	3	37.199	-2	31 81 73 46 43 49 56 73 72 76 86 75 66 65 79 84 64	[137.1]H[1082.6]V[430.2]Y[128.1]
3164	VVERDMAARTSHK	8.2	63	500.5962	3	37.211	-0.4	36 43 43 68 62 62 85 81 75 72 73 82 31	[729.3]AA[344.2]H[128.1]
3170	VQLELNQLK	7	78	542.8218	2	37.279	0.3	63 58 91 90 89 81 76 88 65	[227.1]LELN[128.1]L[128.1]
3171	EGKLHNNTPDK	6.8	62	418.2139	3	37.289	-0.7	35 35 42 63 64 74 86 85 83 77 31	[678.3]NTP[243.1]
3175	QLLGTLEEMR	8.6	86	595.3159	2	37.341	0	49 51 95 98 97 97 98 93 95 81	[241.1]LGTLEEMR
3177	RHS(+79.97)KMKNAKWR	6.4	58	507.9265	3	37.358	2.1	36 36 34 41 48 69 74 89 80 79 50	[961.4]AK[342.2]
3179	QAANSAGHFR	5.8	58	529.76	2	37.377	0.1	53 61 63 76 49 49 77 90 31 31	[599.3]H[303.2]
3181	SLSTELFK	6.1	76	462.7552	2	37.411	-0.7	31 96 95 89 85 85 94 31	[87.0]LSTELF[128.1]
3182	NVAMVAELEELR	9	75	687.3578	2	37.42	-0.6	44 43 45 90 97 96 95 96 31 89 91 72	[284.1]MVAEL[129.0]EL[156.1]
3184	M(+15.99)LHSVLPDAALANPHK	10.8	68	865.4587	2	37.439	2.8	71 71 87 31 31 97 79 73 73 79 89 78 64 52 69 31	[260.1]H[186.1]L[354.2]L[547.3]
3187	LLTENGEFGR	7.2	72	568.2914	2	37.482	1.2	92 95 95 91 58 62 76 85 31 31	LLTE[300.1]F[213.1]
3188	VLKY(+79.97)LKKVGAM(+15.99)TPWK	8.8	59	620.0077	3	37.491	1.4	70 70 68 51 50 58 84 79 66 45 38 40 42 61 49	[824.5]K[886.4]
3189	FNDARLWVSK	8.7	87	618.33	2	37.502	-0.2	85 80 94 96 96 97 88 98 98 31	FNDARLWVS[128.1]
3191	HHLVLAMMAEQLTR	9.5	68	550.6256	3	37.525	0.4	31 31 56 42 50 62 89 97 94 91 78 79 80 62	[670.4]MMAE[241.1]T[156.1]
3193	LLGYTLYWFK	6.7	67	435.2417	3	37.559	1.6	44 46 38 48 67 94 89 69 85 89	[547.3]LY[186.1]FK
3194	YNKS(+79.97)RVLVSKLTR	7.7	59	548.6367	3	37.57	-2.1	43 39 36 33 40 42 61 31 96 95 90 89 64	[1039.5]SKLT[156.1]
3195	LLSLNSADMLK	9.1	83	602.8335	2	37.581	-0.7	96 95 95 95 90 72 68 84 79 79 52	LLSLN[158.1]D[372.2]
3196	LLDTEHCFFKDLVAAFK	11.8	70	666.3455	3	37.591	0.9	34 34 35 36 64 82 90 90 81 79 79 91 92 93 90 74 31	[571.3]HCFF[243.1]LVAA[275.2]

3197	LKDLVDQLQLK	9.1	82	656.8947	2	37.603	-0.9	89 86 93 96 97 95 81 75 56 76 56	LKDLVDQ[482.3]
3199	KLDLVSGVVSAPK	8.6	66	438.266	3	37.636	0	43 42 46 80 90 88 79 79 69 73 64 70 31	[356.2]LVS[638.4]
3200	Y(+79.97)RRKYTVMGAELR	8.1	63	574.9544	3	37.645	-1.2	34 34 32 48 48 70 84 94 86 82 72 70 54	[947.4]VMGA[398.2]
3202	MVSLLQEK	6.6	83	474.2649	2	37.667	-0.5	97 97 97 31 95 79 85 76	MVS[113.1]L[128.1]E[128.1]
3203	WHYVAFSRAADLMR	11.4	81	861.9279	2	37.677	-2.7	31 80 80 92 97 97 96 96 96 95 92 71 69 40	[186.1]HYVAFSRAAD[400.2]
3205	LLPVLYPRQNLSNPR	9.1	61	890.5176	2	37.711	2.9	31 56 56 97 97 98 89 40 43 55 75 47 39 48 35	[323.2]VLYP[965.5]
3212	WEKRAAELEELR	8.5	71	510.6085	3	37.79	2.6	55 44 39 36 73 95 96 97 31 95 97 85	[670.4]AEL[129.0]ELR
3214	LLGLNSADMLK	9.3	84	587.8289	2	37.812	0.3	96 95 96 95 90 88 86 86 72 71 44	LLGLNSAD[372.2]
3215	SSFDDYVEGLR	8.6	78	644.2963	2	37.822	0.2	54 61 61 95 93 97 97 92 73 86 39	[321.1]DDYVE[57.0]L[156.1]
3218	LVLSDVVSK	5.4	59	480.292	2	37.863	-0.5	31 31 31 85 83 79 81 78 31	[325.2]SD[99.1]V[215.1]
3219	MELDDLSSNMEAVSK	12.7	85	834.876	2	37.873	-0.5	76 75 87 96 98 97 98 96 91 94 92 78 74 79 31	[260.1]LDDLSSNME[385.2]
3220	MNRRQCMTSTMTLDGNK	10.3	61	662.9713	3	37.884	0.8	83 53 47 41 44 64 61 60 62 87 83 60 53 59 61 73 31	M[976.4]TM[628.3]
3224	VT(+79.97)VVKKNTSLLNSK	9	64	537.6339	3	37.94	-0.3	31 31 31 70 57 64 57 85 94 93 87 64 79 45	[848.5]TSLL[329.2]
3225	WKMTGLADVSK	7.6	69	412.5521	3	37.951	-2.8	34 43 38 51 83 93 93 94 96 96 31	[546.3]GLADVS[128.1]
3226	LVDSMQATLDSEVR	12.6	90	782.3875	2	37.96	-0.3	68 77 91 91 91 89 97 97 96 97 94 89 89 88	[212.2]DSMQATLDSEVR
3227	DFETLSQLSK	7	70	584.2985	2	37.971	0.6	31 31 97 95 64 63 49 92 94 78	[262.1]ET[328.2]LS[128.1]
3229	RRVWQLLELVPYVAYYK	11.5	68	732.7477	3	38.006	-1.8	31 41 32 37 38 42 82 96 95 92 93 92 73 67 80 84 63	[838.5]LELVPY[170.1]YY[128.1]
3230	TRLLFVAAHT(+79.97)YK	7.2	60	500.5964	3	38.017	-1.5	32 32 34 46 61 76 76 84 91 87 31 61	[800.5]AHT(+79.97)[291.2]
3232	QPQEKEALVSQLEK	10.2	73	813.9391	2	38.039	0.8	50 50 43 90 70 95 81 79 94 94 79 71 85 31	[353.2]E[128.1]EA[113.1]VS[241.1]E[128.1]
3236	VQLLENQLK	6.9	76	542.8217	2	38.096	0.1	60 55 85 85 80 85 78 90 65	[227.1]LLEN[128.1]L[128.1]
3238	RDRHNNDAVR	6.1	61	418.2139	3	38.117	1.5	32 32 32 60 63 81 77 77 87 62	[678.3]N[186.1]V[156.1]
3239	MFAPYANK	5.6	70	471.2307	2	38.127	-0.9	94 94 94 31 31 94 31 81	MFA[260.1]A[114.0]K
3241	QLLGTLEEMR	8.8	88	595.3159	2	38.16	0.1	56 60 95 98 97 97 97 94 96 83	[241.1]LGTLEEMR
3243	M(+15.99)EEKWKNAKWR	6.9	63	507.9266	3	38.178	1.5	31 56 48 43 39 69 76 93 88 84 58	[961.4]AKW[156.1]
3247	SLSTELFK	6	76	462.7556	2	38.23	0.2	31 95 93 91 84 83 92 31	[87.0]LSTELF[128.1]
3248	VVKASVLPDAALCSDNK	13.5	79	865.4598	2	38.239	-1.7	31 52 58 74 91 96 98 95 89 88 91 91 92 92 90 84 31	[397.3]SVLPDAALCSDN[128.1]
3249	VNAMVAELEELR	8.7	73	687.358	2	38.25	-0.4	37 36 38 90 97 96 95 96 31 88 90 70	[284.1]MVAEL[129.0]EL[156.1]
3251	LQEAEEQLEAVNSK	12	85	794.3967	2	38.269	0.1	67 61 93 96 98 95 84 95 96 96 95 76 88 49	[241.1]EAEEQLEAV[114.0]S[128.1]
3253	LLTEENGFGR	7.4	74	568.2911	2	38.303	0.8	95 96 96 96 48 45 51 90 85 31	LLTE[300.1]FG[156.1]
3254	FWRNKFRGKHAPWK	8.4	60	620.0075	3	38.312	-3.1	31 41 58 44 56 52 61 89 73 67 82 64 64 49	[1034.6]G[265.2]A[411.2]
3256	YNVAGVLWASR	8.7	80	618.33	2	38.33	-0.2	67 57 60 91 95 94 94 95 91 93 31	[376.2]AGVLWAS[156.1]

3257	QMS(+79.97)ENENSACGT(+79.97)R	7.3	56	529.5049	3	38.342	-0.7	58 58 49 60 54 67 49 42 42 67 66 74 39	[1567.5]
3259	RLMFLYWFK	5.7	63	435.24	3	38.376	2.7	34 34 31 31 96 89 71 88 90	[547.3]LY[186.1]FK
3260	HRYEKNLVSQLTR	7.8	60	548.6368	3	38.388	-1	31 31 32 36 36 47 63 92 93 81 84 85 66	[940.5]VSQLT[156.1]
3261	LLSLNSADMLK	9.4	85	602.8339	2	38.399	-0.1	97 96 95 95 86 87 85 82 79 78 55	LLSLNSAD[372.2]
3263	WWPVT(+79.97)RNLVNLVAAM(+15.99)K	10.4	65	665.3422	3	38.42	1.9	31 37 37 39 48 51 51 93 89 79 90 89 88 80 79 56	[1019.4]LV[114.0]LVAA[275.1]
3265	QLDLVSGVLQLK	8.1	68	438.2657	3	38.455	-0.6	54 53 55 49 96 89 86 82 79 56 63 46	[469.3]VSGV[482.3]
3266	VM(+15.99)RSLTDEVMGAELR	9.8	66	574.9539	3	38.464	-2.4	31 31 34 35 38 53 62 73 94 96 91 89 88 88 71	[947.4]VMGAEL[156.1]
3268	KVWWAMMAEELKK	9.9	76	550.6242	3	38.486	2.3	71 71 31 79 78 86 97 96 96 86 79 81 31	[670.4]MMAEE[113.1]K[128.1]
3269	LLPVLYPVVSLYNYK	9.3	62	891.0174	2	38.497	1.6	31 36 36 96 96 96 98 38 38 57 82 72 67 49 31	[323.2]VLYP[285.2]L[568.3]
3271	LLPVLYPVPTTLYYK	9.7	65	890.5165	2	38.532	-2.1	31 55 55 97 97 98 99 31 51 51 58 89 92 31 31	[323.2]VLYP[398.2]LY[291.2]
3273	QLDLVDQLKLK	8.8	80	656.8955	2	38.553	0.3	73 84 93 93 98 96 66 88 72 82 31	[128.1]LDLVD[128.1]L[128.1]L[128.1]
3274	MVSLLQEK	6.1	77	474.2648	2	38.563	-0.6	98 98 98 31 92 62 73 57	MVS[113.1]L[385.2]
3275	FMPKKENLKGQGPAPHNK	10.7	60	674.3616	3	38.573	-2.3	31 68 65 42 38 37 46 61 70 88 64 77 72 67 63 59 68 49	[1115.6]G[829.4]
3277	YNLQQDVLLPK	6.7	61	444.2513	3	38.608	2.1	46 42 45 46 52 89 90 88 81 58 31	[646.3]DVLL[225.1]
3278	WQTRVAELEELR	8.8	73	510.6082	3	38.618	1.9	56 45 45 63 74 91 96 98 31 95 96 84	[670.4]AEL[129.0]ELR
3279	LLGLNSADMLK	8.5	77	587.8289	2	38.628	0.3	96 94 96 95 89 72 67 70 61 61 44	LLGLN[645.3]
3280	TGYDDYVEGLR	9.1	82	644.2961	2	38.638	-0.2	66 76 90 96 96 97 97 92 69 84 38	[158.1]YDDYVE[57.0]L[156.1]
3281	SSLAQVAM(+15.99)SQVADLMR	12.8	80	861.9269	2	38.648	-2.7	31 79 77 73 68 90 96 97 90 67 81 93 94 88 87 60	[486.2]VAM(+15.99)S[128.1]VADLM[156.1]
3283	LVLSTLGEK	6.2	69	480.2921	2	38.683	-0.2	31 31 95 93 92 88 71 72 43	[212.2]LSTL[314.2]
3285	MELDDLSSNMEAVSK	12.6	84	834.8752	2	38.704	-1.4	80 79 92 97 98 97 97 90 67 74 89 89 84 87 31	M[129.0]LDDLSS[245.1]EAVS[128.1]
3286	QT(+79.97)YRKKAAMVER	8.1	67	520.9276	3	38.715	-2.2	56 59 46 43 39 49 79 88 89 84 84 84	[955.5]AMVER
3289	LLVPLYPPVKTLTYYK	11.3	70	636.7117	3	38.757	-2.1	90 90 90 89 81 82 90 69 54 55 56 82 64 65 31 31	LLVPLYP[425.3]L[555.3]
3290	NM(+15.99)RSVLADVSK	8.7	79	412.5521	3	38.767	0.3	72 84 72 31 97 96 93 93 97 96 31	[114.0]M(+15.99)[243.1]VLADVS[128.1]
3291	RRAHAAWTSLLNSK	8.8	63	537.6335	3	38.776	-0.8	33 44 44 52 55 60 60 77 93 93 78 61 76 45	[949.5]SL[442.3]
3292	LVDSMQATLDSEVR	12.6	90	782.3873	2	38.786	-0.5	69 76 90 92 93 90 97 97 97 97 94 87 88 87	[212.2]DSMQATLDSEVR
3293	DM(+15.99)ETVTKLSK	8.5	85	584.2986	2	38.797	-2.2	31 98 98 95 86 84 87 95 95 80	[115.0]M(+15.99)ETVTKLSK
3295	FKKRAAHLELVPYVAYYK	12.3	69	732.747	3	38.832	-2.7	32 32 42 46 54 45 63 84 96 91 76 75 90 84 81 85 86 64	[838.5]LEL[196.1]YVAYY[128.1]
3296	WWLLMAARGMHK	7.5	62	500.5962	3	38.843	-1.5	31 49 68 58 81 83 82 77 70 56 54 31	[598.3]MAA[609.3]
3298	Y(+79.97)DHYHPRVLLEVANYR	9.9	62	532.007	4	38.865	2.3	41 33 38 45 48 89 60 51 59 82 91 91 84 62 68 43	[795.2]P[368.3]LEVA[433.2]
3299	ESHEKEALVSKELK	10.7	77	813.9376	2	38.877	-1	47 57 68 90 95 96 86 84 94 96 86 68 69 31	[353.1]EKEALVSK[370.2]
3301	VQLELNQLK	6.6	74	542.8218	2	38.911	0.4	61 57 89 77 72 76 76 88 64	[227.1]L[484.2]L[128.1]

3302	DRRHNNEGVR	6.1	61	418.2139	3	38.92	1.5	61 61 38 71 65 84 58 61 73 31	[678.3]N[441.2]
3305	MFFSPANK	5.5	68	471.2307	2	38.953	-0.8	31 31 31 93 94 93 89 79	[425.2]SPAN[128.1]
3307	QLLGTLEEMR	8.7	87	595.3158	2	38.987	-0.1	56 60 95 98 97 97 97 92 95 79	[241.1]LGTLEEM[156.1]
3308	RHS(+79.97)KMKNAKWR	6.7	61	507.9266	3	38.995	2.2	36 36 34 37 50 64 73 94 89 88 61	[961.4]AKW[156.1]
3313	SLSTELFK	6.2	77	462.756	2	39.059	1.1	31 94 93 93 90 88 94 31	[87.0]LSTELF[128.1]
3314	NGLMVAELEELR	9.1	76	687.3591	2	39.067	1.2	47 48 54 93 97 97 96 97 31 86 89 68	[284.1]MVAEL[129.0]EL[156.1]
3315	M(+15.99)LHSVLWPALSCTKK	10.6	71	865.461	2	39.077	1.1	70 70 84 31 31 98 93 91 93 90 91 71 53 53 31	[260.1]H[186.1]LWPALS[460.2]
3317	HRAENKGDGR	7.3	73	570.2855	2	39.097	-2.2	44 70 82 92 86 87 86 75 68 31	[293.2]AENKG[328.1]
3319	LLTEGNEFGR	7	70	568.2914	2	39.129	1.3	95 95 95 85 51 50 64 93 31 31	LLTE[300.1]F[213.1]
3320	VLNALWKQM(+15.99)ACVQPLK	10.1	63	620.0078	3	39.138	0.5	97 96 92 91 77 61 41 35 35 40 90 74 46 41 50 31	VLNA[773.4]C[565.4]
3321	YGRAGVLWADK	9	82	618.33	2	39.149	-0.2	47 52 65 94 96 96 96 96 93 93 70	[376.2]AGVLWAD[128.1]
3325	LLYASLYWFK	6.5	65	435.2421	3	39.202	2.5	44 48 42 41 44 89 90 71 86 88	[547.3]LY[186.1]FK
3326	KVY(+79.97)M(+15.99)PLLVSKLTR	8.4	64	548.6373	3	39.213	1.1	32 32 31 48 46 49 80 88 95 93 87 86 64	[827.4]LVSKLT[156.1]
3327	LLSLNSADMLK	8.8	80	602.8342	2	39.224	0.5	96 96 95 95 82 88 88 72 64 61 41	LLSLNSA[487.2]
3329	KLYT(+79.97)AHNNLVDLVAAFK	11.8	69	666.3454	3	39.245	-1.9	32 32 40 40 51 76 89 84 86 80 85 92 91 92 91 80 31	[793.4]NNLVDLVAAF[128.1]
3331	KLDLVSGVVSAPK	8.1	62	438.2658	3	39.28	-0.3	42 41 44 53 94 89 82 78 67 65 56 61 31	[469.3]VSG[581.4]
3332	HYM(+15.99)FKPNLMGAELR	9.6	68	574.9543	3	39.289	1.7	64 64 47 51 43 42 44 75 95 88 85 88 89 74	[1046.5]MGAEL[156.1]
3335	KLATDAAMMAEELKK	10.8	72	550.6248	3	39.323	-0.1	82 50 51 53 49 50 74 87 96 95 95 87 86 88 31	K[542.3]MMAEELK[128.1]
3337	LLPVLYPPVTTLYYK	10.5	70	890.5163	2	39.357	-2.3	31 51 51 97 97 97 98 98 55 55 67 88 92 31 31	[323.2]VLYPP[301.2]LY[291.2]
3338	RDYRRGELQQR	6.4	58	492.9318	3	39.368	2.2	31 31 32 35 72 91 90 71 57 63 57	[746.4]GE[525.3]
3339	MVSLLQEK	6.6	82	474.2649	2	39.379	-0.5	98 98 98 31 93 76 85 74	MVS[113.1]L[128.1]E[128.1]
3340	KLDLVDQLQLK	9.9	90	656.8956	2	39.388	0.4	94 93 96 95 97 95 82 91 82 90 71	KLDLVDQLQL[128.1]
3341	ALFRCKLESHGSELK	9.8	65	573.3056	3	39.398	-1.7	35 35 38 36 41 55 92 93 92 80 79 86 88 94 31	[718.4]LESH[57.0]SEL[128.1]
3343	KMKMPNLMLPK	6.8	62	444.2513	3	39.433	-1.1	31 62 55 57 55 55 76 80 84 85 31	[842.5]MLP[128.1]
3344	NGLRMVAELEELR	8.8	68	510.6082	3	39.443	-0.2	48 44 46 41 47 69 91 96 98 31 92 95 79	[670.4]AEL[129.0]EL[156.1]
3345	LLGLNSADMLK	8.9	81	587.8286	2	39.454	-0.2	95 93 95 95 89 83 78 82 67 67 42	LLGLNS[71.0]D[372.2]
3346	TGYDDYVEGLR	8.8	80	644.2958	2	39.465	-0.6	47 66 79 95 96 97 97 94 75 86 40	[321.1]DDYVE[57.0]L[156.1]
3352	LVLSTLGEK	5.9	65	480.2921	2	39.537	-0.3	31 31 95 90 87 81 63 64 40	[212.2]LSTL[314.2]
3356	NFWALVGDVSK	8.1	74	412.5521	3	39.591	0	50 50 48 71 86 93 92 93 95 97 31	[518.2]LVGDVS[128.1]
3358	VLDSMQATLDSEVR	12.5	90	782.3875	2	39.61	-0.4	63 72 87 91 93 90 97 97 97 97 94 89 90 89	[212.2]DSMQATLDSEVR
3359	MELDDLSSNMEAVSK	12.2	81	834.877	2	39.621	0.7	69 69 86 97 97 96 97 95 88 92 85 73 65 71 31	[260.1]LDDLSSNME[385.2]

3361	LERRRQLELVPYVAYYK	11.4	67	732.7474	3	39.655	-0.4	36 35 36 31 49 46 90 96 90 76 75 92 87 85 86 87 31	[838.5]LEL[196.1]YVAYY[128.1]
3364	VRLEM(+15.99)EM(+15.99)QCGGHSHVNK	10.3	60	662.9715	3	39.688	2.9	41 43 42 43 56 31 63 52 70 80 73 69 79 80 69 71 54	[1151.5]G[281.1]H[341.2]
3365	QPQEQEALVSKLEK	10.8	77	813.938	2	39.7	-0.5	56 58 57 68 69 95 86 83 95 96 93 91 92 31	[610.3]EALVSKLE[128.1]
3367	VQLELNQLK	7.1	79	542.8216	2	39.734	0	65 60 90 93 92 86 74 87 60	[227.1]LELN[128.1]L[128.1]
3369	FGTKMNNWVR	5.5	55	418.214	3	39.754	1.7	57 56 36 36 36 64 75 71 86 31	[978.4]V[156.1]
3370	YVENSDLLSK	8.8	88	584.2983	2	39.764	0.2	94 95 89 68 73 93 97 95 95 77	YVE[201.1]DLLS[128.1]
3373	QLLGTLEEMR	8.8	88	595.316	2	39.811	0.3	58 63 95 98 98 97 98 92 95 79	[241.1]LGTLEEM[156.1]
3375	ALTWM(+15.99)TQNAKWR	8	67	507.9268	3	39.827	1.8	74 74 77 35 43 57 48 77 87 85 83 58	[961.4]AKW[156.1]
3376	WHYVAFSQVADLMR	11.1	79	861.9279	2	39.838	3.8	31 92 92 96 97 54 75 52 93 92 91 88 88 63	[186.1]HYVA[362.2]VADLM[156.1]
3377	MFAYPANK	6.8	85	471.231	2	39.849	-0.2	92 92 92 31 97 95 90 82	MFA[163.1]PANK
3379	SLSTELFK	6	75	462.7556	2	39.883	0.3	31 94 91 88 85 86 94 31	[87.0]LSTELF[128.1]
3380	NVAMVAELEELR	8.8	73	687.3582	2	39.892	0	42 41 43 92 97 96 96 96 31 85 87 67	[284.1]MVAEL[129.0]EL[156.1]
3381	QTPASVLPDGKFLDNK	11.3	71	865.4597	2	39.902	0.2	54 43 46 68 86 95 96 80 62 56 57 87 92 90 82 31	[397.2]SVLP[300.1]FLDN[128.1]
3383	YYHRRVLKDAMVLDNK	10.6	66	674.3617	3	39.922	-2.2	53 60 43 48 58 76 93 81 75 72 73 71 70 80 73 31	[874.5]LK[529.3]D[242.1]
3385	LLTENGEFGR	6.9	69	568.2907	2	39.957	0	95 96 96 89 52 53 63 82 31 31	LLTE[300.1]F[213.1]
3386	VLNAWLKEVMMLPWK	9.8	65	620.0071	3	39.965	-2.7	79 56 53 61 60 71 51 67 86 76 73 73 61 61 48	[953.5]V[786.4]
3387	YRGAGVLWADK	9	82	618.33	2	39.976	-0.2	53 55 62 87 91 95 96 96 94 94 74	[376.2]AGVLWAD[128.1]
3391	HRKAKVNCCSKLTR	9.6	68	548.6371	3	40.028	1.3	32 56 42 45 55 70 68 77 95 89 87 85 86 63	[936.5]CSKLT[156.1]
3392	TFSVLLYWFK	7.5	75	435.2419	3	40.038	2	75 74 74 56 76 95 91 61 74 71	[547.3]LY[461.2]
3393	LLSLNSADMLK	8.9	81	602.8337	2	40.049	-0.3	97 96 95 95 92 91 88 67 61 60 42	LLSLNSA[487.2]
3394	M(+15.99)MKYNLVAAFK	7.6	69	666.3457	2	40.058	-0.6	31 84 82 75 63 89 91 90 87 31 31	[147.0]MK[277.1]LVAA[275.2]
3395	KYWHRS(+79.97)FLETCSPKPR	9.4	59	529.5045	4	40.07	-1.4	32 39 37 37 36 47 63 82 89 87 76 72 86 63 46 40	[1084.5]LET[190.0]P[381.2]
3397	KLDLVSLAASAPK	8.5	65	438.2657	3	40.105	-0.5	41 40 43 45 31 96 95 95 90 85 73 75 31	[568.4]SLAAS[296.2]
3398	NKWKHSS(+79.97)VMKELR	8.8	67	574.9542	3	40.114	-1.6	31 31 32 47 52 86 94 94 94 78 77 85 71	[693.4]SS(+79.97)VM[257.1]L[156.1]
3401	KFEEHMMARSKKK	9.3	72	550.6248	3	40.148	-0.8	79 79 48 65 73 91 96 83 79 71 67 67 31	[670.3]MMA[627.4]
3403	LLPVLYPVDALLYYK	9.4	62	890.5159	2	40.182	-2.8	31 58 58 98 96 91 91 39 39 43 49 86 86 31 31	[323.2]VLYP[398.2]LY[291.2]
3405	RKHLYAKSPYLLYK	8.3	59	890.5159	2	40.203	-1.3	31 48 43 86 75 47 40 42 79 88 86 61 59 31	[421.3]L[546.3]YL[404.2]
3406	MVSLLQEK	6.2	78	474.2647	2	40.215	-0.8	98 98 98 31 91 64 77 60	MVS[113.1]L[385.2]
3407	EEQM(+15.99)AAPALTAKER	8.2	59	520.9274	3	40.224	-0.6	53 53 43 48 67 65 61 81 89 89 44 40 41 40	[772.3]ALT[484.3]
3409	QLDLVDKMQLK	7.6	69	444.2513	3	40.257	-0.3	54 53 58 88 93 91 73 69 51 68 58	[356.2]LVD[628.4]
3410	RKSCPVAELEELR	9.5	73	510.6083	3	40.266	0	53 54 56 53 71 75 88 94 96 31 93 96 81	[670.4]AEL[129.0]ELR

3412	TGYDDYVEGLR	8.9	81	644.2959	2	40.288	-0.5	56 69 84 94 95 96 97 93 73 86 40	[158.1]YDDYVE[57.0]L[156.1]
3413	LLGLNSADMLK	9	81	587.8288	2	40.299	0.2	96 95 96 95 89 76 73 84 71 71 44	LLGLN[158.1]D[372.2]
3416	LVLSTLGEK	6	67	480.292	2	40.342	-0.4	31 31 97 95 93 86 61 62 40	[212.2]LSTL[314.2]
3422	M(+15.99)NSRVLADVSK	8.6	78	412.5526	3	40.414	1.6	61 58 79 74 83 90 90 93 96 96 31	[504.2]VLADVS[128.1]
3424	LVDSMQATLDSEVR	12.6	90	782.3885	2	40.431	1	69 76 91 92 93 90 96 96 96 97 93 87 88 87	[212.2]DSMQATLDSEVR
3427	HRHVKT(+79.97)LYPPVMVLLGKK	10.3	57	732.7474	3	40.475	1.8	31 41 39 50 40 36 57 82 98 88 77 78 84 59 40 40 46 31	[951.5]YPP[230.1]V[539.4]
3429	LLVLPGHAAHT(+79.97)YK	7.7	59	500.5962	3	40.495	-2	43 43 38 56 65 54 55 80 83 82 81 31 55	[729.5]AAHT(+79.97)[291.2]
3430	RCLY(+79.97)FNRCEANLKR	8	57	622.6282	3	40.505	2.1	53 53 53 32 46 53 53 76 88 74 66 52 56 36	[1135.4]E[582.4]
3431	MELDDLSSNMEAVSK	12	80	834.8762	2	40.516	-0.3	68 68 86 95 98 97 97 88 60 70 86 86 82 85 31	[260.1]LDDLSS[245.1]EAVS[128.1]
3433	RALRCPQLK	7.6	85	542.8249	2	40.55	1.6	82 86 94 90 82 87 78 90 69	RALRCP[128.1]L[128.1]
3434	WQLHNWNVR	6.2	69	418.2162	3	40.559	0.4	65 59 59 74 87 84 61 72 53	[564.3]NW[369.2]
3436	LKDLVDKLVNR	9.3	85	656.8995	2	40.58	-2.2	94 94 97 98 97 95 94 79 61 61 55	LKDLVDK[482.3]
3439	LQLGTLEEMR	8.7	87	595.3176	2	40.624	2.9	59 55 95 98 98 97 98 92 95 79	[241.1]LGTLEEM[156.1]
3441	REWFTQNAKWR	7.2	66	507.9282	3	40.641	-0.5	37 53 44 57 58 54 81 94 90 89 63	[847.4]NAKW[156.1]
3442	EKY(+79.97)T(+79.97)KKKGNVAFDGNK	10.2	64	662.9733	3	40.652	-1.5	41 47 41 45 37 39 81 84 85 89 89 86 73 67 81 31	[937.4]KGNVAF[172.0]N[128.1]
3445	SLSTELFK	6.3	78	462.7556	2	40.694	0.2	31 97 96 92 89 90 95 31	[87.0]LSTELF[128.1]
3447	NGLMVAELEELR	9	75	687.3577	2	40.711	-0.7	41 44 52 93 97 97 97 97 31 86 89 68	[284.1]MVAEL[129.0]EL[156.1]
3448	DFETTGGLLSK	8.1	73	584.298	2	40.722	-0.2	31 31 95 95 80 63 62 89 92 92 71	[262.1]ETT[114.0]LLS[128.1]
3449	M(+15.99)LHSVLWPALCSTKK	9.7	65	865.4595	2	40.731	-0.6	51 51 70 31 31 98 87 73 73 90 91 79 55 53 31	[583.3]LW[168.1]LC[444.3]
3451	LLTEEGNFGR	7.6	76	568.2908	2	40.765	0.2	93 96 96 96 65 55 49 86 88 31	LLTE[300.1]FG[156.1]
3452	DPNEKLEKVYVLPWK	10.1	68	620.0074	3	40.775	-1.8	91 91 37 35 35 57 59 60 89 88 87 89 68 68 52	DP[741.4]VYVL[411.2]
3453	NFDAGVLWVSK	9.7	88	618.3248	2	40.786	0.4	78 84 95 96 96 96 96 98 98 98 31	[114.0]FDAGVLWVS[128.1]
3454	DAQLHLDDAVR	8.1	74	626.8177	2	40.797	0.3	51 51 49 95 96 96 96 87 70 75 38	[314.1]LHLDD[326.2]
3455	M(+15.99)LAYYHK	4.2	61	471.231	2	40.807	-0.3	31 96 96 96 36 31 34	[147.0]LAY[428.2]
3457	SVLTFLYWFK	6.6	66	435.2417	3	40.839	1.7	31 73 48 51 68 91 86 60 74 76	[547.3]LY[461.2]
3458	TRFS(+79.97)QKLVSKLTR	8.6	66	548.6366	3	40.85	-2.3	32 32 35 45 46 49 81 96 95 93 91 90 70	[827.4]LVSKLT[156.1]
3459	LLSLNSADMLK	9	81	602.8339	2	40.861	-0.1	93 91 91 95 94 94 88 76 65 64 41	LLSLNSA[487.2]
3460	LQDLVDLKQMK	7.3	66	665.8737	2	40.871	0.2	70 66 91 97 31 92 55 45 47 71 55	[241.1]DL[99.1]D[628.4]
3463	KLDLVSGVVSAPK	9.3	72	438.2658	3	40.917	-0.3	49 48 59 79 89 87 86 87 87 83 70 72 31	[469.3]VSGVVS[296.2]
3465	VYRWRDGNMGAELR	8.4	60	574.954	3	40.934	-1.1	31 32 32 32 42 44 65 79 96 94 88 74 72 56	[1046.5]MGA[398.2]
3466	Y(+79.97)YYWYFLVEVRGK	7.6	58	467.2224	4	40.945	1	31 42 36 41 44 65 94 90 86 68 60 52 40	[1065.4]LVE[440.3]

3469	LLPVLYPVPTTLYYK	10	67	890.5161	2	40.987	-2.6	31 69 69 95 95 97 98 31 55 55 61 85 91 31 31	[323.2]VLYP[398.2]LY[291.2]
3471	WSRVAAMMAEKLTR	8.2	58	550.6252	3	41.008	-0.3	31 31 50 51 67 79 87 96 90 55 45 43 44 40	[670.4]MMA[627.4]
3472	WTFRRGEGSPKR	6.8	56	492.9313	3	41.019	-1.5	32 32 32 53 74 92 71 65 62 59 59 42	[746.4]G[654.3]
3475	QLDLVDQLKMK	6.8	62	444.2518	3	41.063	0.7	53 50 51 52 93 92 63 74 53 60 31	[469.3]VD[628.4]
3479	LSELSTFK	6.5	82	924.5044	1	41.102	0.8	86 84 85 93 90 88 92 31	LSELSTF[128.1]
3487	LLPVLYPLRKPGHYNK	10.4	65	636.7115	3	41.206	-0.9	31 88 88 71 76 79 70 60 61 78 79 82 46 42 35 44	[113.1]LP[966.6]G[542.3]
3488	NFREGLADVSK	8.9	81	412.552	3	41.217	2.8	73 85 63 72 85 94 95 95 96 96 31	[114.0]F[285.1]GLADVS[128.1]
3490	LVDSMQATLDSEVR	12.3	88	782.3875	2	41.239	-0.4	66 74 89 92 92 89 97 97 97 96 90 81 82 82	[212.2]DSMQATLDSEVR
3491	LVLSTLGEK	6	67	480.292	2	41.25	-0.4	31 31 94 93 89 82 66 66 42	[212.2]LSTL[314.2]
3493	RLRQWVLELVPYVAYYK	10.9	64	732.7474	3	41.282	-2.2	31 35 34 37 39 49 67 92 90 89 92 93 84 70 64 64 48	[951.6]ELVPYV[525.3]
3494	RKTWSEVPEELR	8.7	72	510.6084	3	41.293	2.3	34 33 41 45 73 92 93 95 95 91 94 77	[658.4]EVPEEL[156.1]
3496	LLGSLDMALNGMHK	9	64	500.5959	3	41.312	1.5	91 88 51 49 59 71 83 81 79 58 55 47 49 31	LL[372.2]MA[680.3]
3499	VQLLENQLK	6.8	75	542.8217	2	41.356	0.1	56 52 90 83 79 82 77 88 63	[227.1]LL[129.0]N[128.1]L[128.1]
3500	RRDHNNDAVR	6.6	66	418.2137	3	41.366	1	31 32 64 63 87 89 86 77 78 53	[564.3]NND[326.2]
3502	LLGLNSDAMLK	8.8	80	587.8284	2	41.388	-0.5	95 95 95 94 89 90 79 75 63 62 41	LLGLNS[558.3]
3506	QLLGTLEEMR	8.8	88	595.3159	2	41.436	0.1	59 63 96 98 98 97 98 94 96 82	[241.1]LGTLEEMR
3509	QLDLVDQLKLK	8.3	75	656.8958	2	41.463	0.7	71 81 93 92 97 91 59 75 62 73 31	[128.1]LDLVD[610.4]
3511	SLSTELFK	5.1	63	462.7556	2	41.496	0.2	31 95 93 77 55 50 71 31	[87.0]LS[618.3]
3514	T(+79.97)VYYLKNAKWR	6.4	58	507.9265	3	41.521	2.3	31 31 56 49 39 42 59 92 87 86 61	[961.4]AKW[156.1]
3517	LLTENGEFGR	6.8	68	568.2906	2	41.562	-0.1	95 96 95 89 49 49 61 84 31 31	LLTE[300.1]F[213.1]
3518	VLNELKKFAQCVSNHK	8.8	55	620.0068	3	41.572	2.9	45 45 44 35 35 36 45 46 58 75 76 76 88 57 73 39	[1372.8]S[379.2]
3520	FDANVKDLASR	7.4	67	618.3243	2	41.593	2.9	31 95 81 69 73 67 51 54 88 90 31	[147.1]DA[569.3]AS[156.1]
3523	KHKGPLYADFK	6.1	56	435.2423	3	41.637	-2.7	33 37 34 41 58 92 86 82 80 31 31	[547.3]LYAD[275.2]
3525	YT(+79.97)QARKLVSKLTR	8.5	65	548.637	3	41.656	-1.7	32 39 35 43 43 56 75 89 93 92 88 88 64	[940.5]VSKLT[156.1]
3527	QVGMVAELEELR	9.6	80	687.3587	2	41.675	0.7	58 63 86 95 95 95 90 92 31 89 91 72	[227.1]GMVAEL[129.0]EL[156.1]
3529	KLDLVSLAASPAK	8.5	66	438.267	3	41.709	2.3	42 41 44 52 31 92 90 92 91 89 76 75 31	[568.4]SLAAS[296.2]
3531	LLSLNSADMLK	8.8	80	602.8352	2	41.727	2.1	96 95 95 96 90 82 78 70 65 64 42	LLSLNS[558.3]
3533	T(+79.97)WHRVSTVMGTVLR	7.8	55	574.9559	3	41.746	1.2	48 48 31 31 31 31 95 94 90 64 53 53 68 31	[846.4]TVM[526.3]
3535	LLPVLYKPRYLSCSK	8.3	55	890.5156	2	41.78	2.7	31 32 32 86 85 93 50 50 32 62 63 85 62 31 31	[323.2]VLY[657.4]S[318.1]
3536	YLRGLCVNFGS(+79.97)FSCVNK	10.3	61	662.9711	3	41.791	1.2	31 48 45 69 59 58 71 65 59 66 78 64 60 64 61 70 52	[1967.9]
3541	QLDLVDKLQMK	6.7	61	444.2512	3	41.855	-0.8	53 49 50 50 89 88 71 65 45 59 47	[469.3]VD[628.4]

3544	SSFDDYVEGLR	8.2	75	644.2959	2	41.882	-0.5	51 56 56 95 89 96 97 92 69 82 36	[321.1]DDYVE[57.0]L[156.1]
3545	QLDLVDQLKMK	7.9	71	665.8736	2	41.892	0	69 78 88 94 97 95 58 58 52 60 31	[241.1]DLVD[628.4]
3549	DM(+15.99)ETLSKLSK	8	80	584.2987	2	41.944	-2	31 97 97 95 82 67 72 88 92 72	[115.0]M(+15.99)ETL[215.1]LS[128.1]
3551	KMDRDASYVY(+79.97)VNK	9.1	70	834.8772	2	41.966	1.2	81 80 60 52 79 84 94 95 96 31 66 31 51	KM[386.2]ASYV[584.2]
3559	APWLKRMGPGWRR	8	62	537.6335	3	42.067	0.9	31 55 54 45 34 52 55 82 89 87 71 68 75	[882.5]GPG[498.3]
3560	NWFRLWASR	6.8	76	412.552	3	42.078	-1.5	70 81 70 85 93 74 84 90 31	[114.0]W[147.1]RL[186.1]AS[156.1]
3561	LVDSMQATLDSEVR	12.6	90	782.3873	2	42.089	-0.6	69 76 90 91 92 89 96 95 96 97 94 89 89 89	[212.2]DSMQATLDSEVR
3562	FLRLYYKPYLVPVAYYK	10.2	60	732.7474	3	42.099	1	31 31 31 40 40 46 47 91 94 90 79 77 79 66 66 76 31	[983.6]PYL[820.4]
3563	RQWTVAELEELR	8.2	68	510.6082	3	42.111	2	43 43 39 60 70 90 94 96 31 87 92 71	[670.4]AEL[129.0]EL[156.1]
3565	VQLELNQLK	7.2	80	542.8216	2	42.145	0	68 63 96 86 85 87 78 90 64	[227.1]LELN[128.1]L[128.1]
3566	EQLLNAHGWYLR	7.2	60	500.5962	3	42.155	-0.9	43 37 38 67 53 46 62 93 93 63 91 31	[805.4]GW[163.1]L[156.1]
3572	QLLGTLEEMR	8.7	87	595.3156	2	42.222	-0.4	56 61 95 98 98 97 98 92 95 79	[241.1]LGTLEEM[156.1]
3575	DRRHNNDAVR	5.6	56	418.2135	3	42.253	0.5	32 32 31 68 64 79 71 65 69 46	[1233.6]
3577	VTSTELFK	4.5	56	462.7558	2	42.286	0.7	31 94 89 65 47 42 47 31	[99.1]TS[618.3]
3579	SPVRLS(+79.97)KNAQWR	7	58	507.9268	3	42.302	-1.6	31 31 32 33 33 34 81 65 93 86 91 83	[719.3]K[114.0]AQWR
3583	LLTENGEFGR	6.8	68	568.2901	2	42.356	-1.1	96 97 96 85 49 50 58 84 31 31	LLTE[300.1]F[213.1]
3585	NFADGVLKCLR	8.7	79	618.33	2	42.377	-3	77 81 95 95 94 93 91 71 65 72 31	[114.0]FADGVL[500.3]
3586	LLGLNMGDLTK	7.5	69	587.8279	2	42.388	-1.2	88 88 86 87 93 88 77 43 36 31 31	LLGLNM[514.3]
3587	MVSLLQEK	5.9	74	474.2642	2	42.4	-1.9	97 97 97 31 85 54 74 51	MVS[113.1]L[385.2]
3590	LLYADFK	5.1	73	435.2416	2	42.441	-0.8	98 97 90 82 80 31 31	LLYAD[275.2]
3591	RAY(+79.97)TKKLVSGALTR	9.1	65	548.6371	3	42.45	-1.4	31 31 32 33 33 73 72 94 90 81 81 90 90 70	[940.5]VSGALT[156.1]
3592	LNGMVAELEELR	9	75	687.3575	2	42.461	-1.1	47 52 86 96 97 96 96 96 31 69 72 52	[227.1]GMVAEL[527.3]
3595	KLDLVSGVVSPAK	9.7	74	438.2658	3	42.502	-0.3	72 72 81 61 82 80 78 80 83 85 74 78 31	[241.2]D[113.1]VS[57.0]VVS[296.2]
3598	LLSLNSAPDFK	9.2	83	602.8338	2	42.532	2.6	94 94 94 95 91 90 87 77 68 91 31	LLSLNSA[212.1]F[128.1]
3599	LFQS(+79.97)HVRVMGAELR	10	72	574.9537	3	42.542	-2.3	55 53 52 57 62 31 93 93 95 90 86 80 81 65	[791.3]RVMGAEL[156.1]
3601	LLPVLYPTSPLLYYK	8.9	60	890.5164	2	42.576	-2.3	31 49 49 96 95 91 77 32 32 32 68 85 86 31 31	[323.2]VLY[495.3]LY[291.2]
3602	MFFSPANK	5.5	69	471.2309	2	42.587	-0.5	31 31 31 95 95 95 90 80	[425.2]SPANK
3604	QLDLVDQLKLK	8.6	78	656.8953	2	42.608	-0.1	81 93 96 95 98 95 62 72 61 70 31	QLDLVD[610.4]
3607	LKDLVDQLQMK	8.7	79	444.2516	3	42.65	0.3	94 91 81 81 87 86 68 78 70 74 56	LKDLVD[628.3]
3609	GTYDDYVEGLR	9.1	83	644.2963	2	42.668	0.2	69 78 91 95 93 95 97 91 72 83 39	[158.1]YDDYVE[57.0]L[156.1]
3610	LLRERMMAEELKK	7.5	58	549.6411	3	42.678	0.4	35 40 40 43 39 60 69 91 93 75 65 66 31	[929.5]AE[498.3]

3611	DNAAVPSR	5.2	65	415.2115	2	42.69	-0.6	31 69 73 90 93 94 31 31	[300.1]AVP[243.1]
3620	LVLSTLGEK	5.5	61	480.292	2	42.803	-0.4	31 31 96 91 84 62 53 54 40	[212.2]LST[427.2]
3623	YPHWLVLANFLSNR	9.4	67	865.4603	2	42.832	-2.2	75 75 75 31 96 65 63 40 40 79 82 75 79 55	[583.3]L[544.3]L[357.2]
3625	FTQQVLADASR	6.4	58	412.5522	3	42.866	3.5	35 36 33 36 46 80 86 86 81 84 31	[603.3]LADAS[156.1]
3626	VVS(+79.97)KLKNTSLLNSK	9	65	537.6338	3	42.876	-0.5	77 58 57 46 39 46 52 85 94 93 83 56 71 40	[848.5]TSLL[329.2]
3628	LVDSMQATLDSEVR	12.6	90	782.3882	2	42.895	0.5	65 74 90 94 95 91 97 97 97 96 93 89 90 89	[212.2]DSMQATLDSEVR
3629	FFFLRKLELVPYVAYYK	10	59	732.7471	3	42.906	0.6	31 31 32 34 33 47 63 94 88 76 78 76 58 55 76 84 31	[951.6]EL[692.4]Y[128.1]
3631	VQLELNQLK	6.5	73	542.8226	2	42.941	1.9	66 61 94 82 80 64 60 84 60	[227.1]LEL[242.1]L[128.1]
3634	WWLLMAARGMHK	7.6	63	500.597	3	42.967	0	31 57 68 54 66 68 70 86 83 70 71 31	[871.4]RG[396.2]
3635	KWWAVAELEELR	7.9	66	510.6086	3	42.978	0.3	32 32 36 46 53 87 93 97 31 95 96 84	[670.4]AEL[129.0]ELR
3638	LQLGTLEEMR	8.4	84	595.3159	2	43.02	0	48 46 89 96 96 96 96 93 95 79	[241.1]LGTLEEM[156.1]
3641	YVGCAVMPLSK	7.8	71	584.2983	2	43.052	-0.6	31 95 86 52 52 58 95 95 95 31 81	[163.1]VG[273.1]MPL[87.0]K
3643	SLSTELFK	6.1	76	462.7551	2	43.085	-0.8	31 95 93 88 86 88 95 31	[87.0]LSTELF[128.1]
3645	ALTWQTFNAQWR	8	67	507.9267	3	43.103	3.9	71 71 77 39 34 35 36 71 94 88 92 85	[961.5]AQWR
3650	LLTENGEFGR	7.1	71	568.2908	2	43.165	0.2	92 95 95 93 58 59 63 87 31 31	LLTE[300.1]F[213.1]
3651	WCVNGHPKLGKAHAALR	9.7	57	620.0068	3	43.175	2.3	56 56 55 42 40 41 59 69 87 84 63 50 50 65 65 52 31	[921.4]LG[747.5]
3653	LLGLNSADMLK	8.4	76	587.8284	2	43.197	-0.5	98 97 96 96 89 63 51 52 70 74 49	LLGLN[645.3]
3657	LLTTLT(+79.97)K	4.3	62	435.2419	2	43.248	2.5	98 98 95 44 31 31 31	LLT[523.2]
3659	KVY(+79.97)PFLLVSQLTR	8	62	548.6367	3	43.266	2.2	32 32 31 31 54 62 83 93 91 77 77 79 53	[827.4]LVS[498.3]
3662	KLDLVSGVVSPAK	8	61	438.2657	3	43.309	-0.5	43 41 41 36 83 68 66 71 86 86 68 70 31	[469.3]V[243.1]VS[296.2]
3663	NYVAGVLWASR	8.2	74	618.33	2	43.319	-0.2	40 40 40 91 93 93 95 97 94 96 31	[376.2]AGVLWAS[156.1]
3664	NLGMVAELEELR	9.5	79	687.3578	2	43.33	-0.5	51 54 89 97 97 96 92 93 31 87 90 70	[227.1]GMVAEL[129.0]EL[156.1]
3665	Y(+79.97)RYRTVKMGAELR	8.3	64	574.9542	3	43.341	-1.5	54 33 34 47 41 47 60 93 91 88 84 83 67	[1046.5]MGAEL[156.1]
3667	HTSSS(+79.97)R	3.4	56	377.6472	2	43.375	-1.1	80 80 80 31 31 31	HTS[410.1]
3668	EPPVLYPLALTLQTPK	9.8	62	890.515	2	43.385	-1.4	31 31 31 96 96 96 86 80 54 41 54 70 62 50 67 31	[323.1]VLYPL[852.5]
3671	LLSLNSADMLK	8.8	80	602.8339	2	43.417	0	93 92 91 93 90 83 77 73 68 69 46	LLSLNS[558.3]
3673	KLDLVDKMSGPK	7.6	64	444.2514	3	43.451	-0.3	75 75 75 34 80 78 77 74 60 50 47 31	[469.3]V[743.4]
3677	QEDRGPK	4.3	62	415.2114	2	43.49	-0.8	52 54 55 88 75 74 31	[372.1]R[282.2]
3685	LLRTKSPPVKAVGNWNK	10.1	60	636.712	3	43.592	2	87 87 48 39 39 45 83 62 66 73 47 52 89 67 40 43 39	LL[472.3]P[494.3]G[542.3]
3686	VLLSTLGEK	5.9	66	480.2923	2	43.603	0.2	31 31 96 95 93 88 58 59 36	[212.2]LSTL[314.2]
3687	TGYDDYVEGLR	9	82	644.2971	2	43.613	1.3	59 71 86 94 96 97 98 94 74 87 39	[158.1]YDDYVE[57.0]L[156.1]

3689	YRLCAPVPCSVLR	7.8	60	492.932	3	43.633	0	32 56 40 49 47 58 68 92 92 94 84 31 31	[802.4]PCSV[269.2]
3691	FNGWVLADVSK	7.5	69	412.5522	3	43.667	0.2	54 43 37 38 90 86 84 93 96 96 31	[504.2]VLADVS[128.1]
3692	WFKRKCTSLLNSK	7.5	58	537.6339	3	43.677	2.3	31 33 33 33 38 43 79 95 94 82 61 76 45	[949.5]SLL[329.2]
3693	VLDSMQATLDSEVR	10.5	75	782.3879	2	43.688	0.2	46 47 46 44 50 74 97 97 97 96 92 87 87 87	[673.3]ATLDSEVR
3697	VQLELNQLK	7.4	82	542.8218	2	43.742	0.4	67 62 95 88 88 88 83 92 69	[227.1]LELNQL[128.1]
3699	LLWWVCARGMHK	6.8	57	500.5963	3	43.76	-1.3	31 40 31 53 57 55 69 84 80 71 71 31	[871.4]RG[396.2]
3701	RGFNPVAELEELR	8.9	69	510.6084	3	43.78	2.4	37 36 38 40 60 85 93 97 98 31 94 96 82	[571.3]VAEL[129.0]ELR
3704	QLLGTLEEMR	8.5	85	595.3161	2	43.822	0.4	48 50 93 97 96 96 96 93 95 80	[241.1]LGTLEEMR
3709	SLSTELFK	5.6	70	462.7558	2	43.885	0.7	31 95 90 76 68 76 90 31	[87.0]LS[343.2]F[128.1]
3711	RHLHM(+15.99)DGVAKEGR	8.1	63	507.9268	3	43.903	-2.9	36 36 42 65 65 78 78 82 90 79 57 59 37	[862.4]VA[470.3]
3715	LLTEQATTCR	7.1	71	568.2916	2	43.956	-1.5	97 97 96 96 45 41 42 73 74 49	LLTE[660.3]
3716	WTQRLHRGGKHAPWK	8.8	58	620.0078	3	43.966	-0.4	33 40 36 42 44 39 51 72 93 88 77 70 66 66 51	[1034.6]GK[619.3]
3718	LLGLNTGDMLK	7.7	70	587.8294	2	43.986	1.2	96 94 95 94 85 69 68 49 41 40 33	LLGLN[645.3]
3719	MVEALTVGK	5.8	65	474.265	2	43.997	-0.3	86 86 82 66 60 50 56 61 31	MVE[569.4]
3722	LLYGEFK	4.8	69	435.2419	2	44.04	-0.1	98 97 87 69 63 31 31	LLY[461.2]
3723	QVNWWNLVSKLTR	9.6	74	548.6373	3	44.051	-2.4	38 38 49 67 70 80 80 95 96 95 90 89 68	[713.3]NLVSKLT[156.1]
3724	DQLRAVVNASCR	7	58	666.3455	2	44.062	-0.7	39 37 73 63 66 86 44 40 70 73 71 31	[583.3]V[630.3]
3725	QLDLVDKLQLK	8.2	74	656.8951	2	44.074	-0.3	67 73 86 78 97 96 71 63 48 76 57	[241.1]D[113.1]VD[610.4]
3728	KLDLVSGVVSPAK	8.6	67	438.2663	3	44.116	0.8	50 49 53 43 91 91 79 77 74 84 67 68 31	[469.3]VS[255.2]S[296.2]
3729	YRGAGVLWADK	8.4	76	618.33	2	44.126	-0.2	54 59 64 81 86 92 94 90 81 82 51	[376.2]AGVLWAD[128.1]
3730	QVGMVAELEELR	9.4	79	687.3585	2	44.137	0.4	51 56 80 95 97 97 97 97 31 84 87 65	[227.1]GMVAEL[129.0]EL[156.1]
3731	SSWM(+15.99)WPKKMGAELR	8.7	62	574.9545	3	44.148	2.1	62 62 62 31 31 57 72 93 95 78 70 55 52 44	[918.4]KM[526.3]
3734	LLPVLYPGEVLLYYK	9.9	66	890.5165	2	44.19	-2.1	31 80 80 97 95 87 83 61 37 36 61 84 81 31 31	[113.1]LPVLYP[398.2]LY[291.2]
3737	CMGCAAAK	4.9	61	377.657	2	44.22	3	48 49 54 58 80 81 81 31	[394.1]AAA[128.1]
3739	YLKMGHLMLPK	6.3	57	444.251	3	44.253	0.9	32 40 35 37 48 73 92 82 74 76 31	[729.4]LM[338.2]
3740	LLSLNSADMLK	8.7	79	602.8337	2	44.264	-0.3	95 95 94 95 91 86 83 69 59 56 38	LLSLNSA[487.2]
3742	TQAASSHK	5.2	65	415.2108	2	44.284	-2.4	31 69 82 88 89 92 31 31	[229.1]AASS[265.2]
3757	M(+15.99)NEKLRDVSK	6.7	67	412.5518	3	44.472	-0.4	53 42 42 46 85 89 91 94 95 31	[518.2]LRDVS[128.1]
3759	LVDSMQATLDSEVR	11.7	83	782.3873	2	44.493	-0.6	61 67 82 69 69 76 95 96 97 96 92 86 86 85	[212.2]D[346.1]ATLDSEVR
3761	DFETTNLLSK	6.4	64	584.2974	2	44.516	-1.3	31 31 65 87 84 61 61 73 81 58	[391.1]TT[340.2]S[128.1]
3764	VQLELNQLK	7.2	80	542.8225	2	44.557	1.7	68 63 95 88 88 86 76 89 64	[227.1]LELN[128.1]L[128.1]

3767	WTRNLAELEELR	7.4	61	510.6086	3	44.588	2.7	32 47 40 47 48 87 94 97 31 70 82 55	[670.4]AEL[258.1]L[156.1]
3770	QLLGTLEEMR	8.6	86	595.3159	2	44.63	0	51 53 94 97 97 97 98 93 95 80	[241.1]LGTLEEMR
3775	SLSTELFK	5.7	72	462.7556	2	44.693	0.4	31 95 90 78 72 81 91 31	[87.0]LS[230.1]LF[128.1]
3777	RHTM(+15.99)MM(+15.99)VSKLTR	8.4	70	508.2611	3	44.711	2.4	38 45 41 50 64 96 96 91 81 80 87 70	[672.3]M(+15.99)VSKLT[156.1]
3781	LLTEQDGFGR	7.4	74	568.2905	2	44.762	-0.3	94 96 95 92 49 49 54 89 86 31	LLTE[300.1]FG[156.1]
3782	LWWKPNDTPDTAPWK	8.6	58	618.9781	3	44.772	1.4	31 31 47 65 41 46 57 62 86 76 67 68 64 65 49	[1040.5]P[698.3]
3788	LLYADFK	5.3	76	435.2417	2	44.842	-0.6	98 97 92 90 90 31 31	LLYAD[275.2]
3790	RRGLHCAM(+15.99)VSKLTR	9.4	67	548.6371	3	44.861	1.4	36 43 43 46 48 31 83 84 84 94 94 90 90 63	[722.4]AM(+15.99)VSKLT[156.1]
3794	LKDLVSLAASPAK	8.8	67	438.2664	3	44.911	1	83 49 47 54 31 82 81 88 91 87 73 73 31	L[455.3]SLAAS[296.2]
3797	NLGMVALEEELR	8.5	71	687.3587	2	44.945	0.7	44 45 59 93 97 96 90 91 31 70 77 53	[284.1]MVALE[527.3]
3799	LLVPLYPPSTLLYYK	10.4	70	890.5157	2	44.979	-2.9	82 82 82 94 92 90 91 69 38 38 45 86 86 31 31	LLVPLYP[398.2]LY[291.2]
3803	MFAPYANK	5.4	67	471.2315	2	45.02	0.8	90 90 90 31 31 92 31 77	MFA[260.1]A[242.1]
3805	QLYNQDVLLPK	6.7	60	444.2515	3	45.052	2.6	53 44 39 40 63 86 83 82 77 62 31	[646.3]DVL[338.2]
3806	LLSLNSADFPK	9.7	88	602.834	2	45.062	2.9	96 95 95 95 91 89 89 92 92 92 31	LLSLNSADFP[128.1]
3808	CCGMANR	4.1	59	377.6434	2	45.081	0.4	31 33 50 57 88 88 64	[394.1]AN[156.1]
3809	NFDKVLADWK	7.7	77	618.325	2	45.091	0.7	76 82 90 89 82 71 71 86 88 31	[114.0]FDKV[184.1]DW[128.1]
3815	LLGLNSADMLK	8.9	81	587.8284	2	45.163	-0.5	92 91 94 94 92 93 80 71 65 66 44	LLGLNSA[487.2]
3817	HNRKKKWKLAGTRER	8.3	55	636.7114	3	45.197	2.5	58 36 35 31 31 48 47 46 54 69 81 88 80 82 31	[1289.8]GTRE[156.1]
3823	RYGQVLADADK	7.4	67	412.5514	3	45.271	1.3	33 35 36 49 64 87 90 93 90 91 66	[603.3]LADAD[128.1]
3825	VLDSMQATLDSEVR	12.2	87	782.3879	2	45.293	0.2	78 83 93 93 93 90 97 97 97 95 87 69 70 68	[99.1]LDSMQATLDS[384.2]
3826	WWFYRLYPTKTLRPLR	9	56	732.7463	3	45.304	0.7	31 31 31 32 32 71 77 86 78 65 67 75 68 61 58 31	[1114.5]P[965.6]
3830	VQLELQQVK	6.2	69	542.8217	2	45.358	0.1	85 79 96 93 81 52 38 53 38	V[128.1]LEL[483.3]
3832	FFVKTK	3.8	63	385.2348	2	45.379	2.3	63 63 67 75 77 31	[750.4]
3833	RQWTVAELEELR	7.9	66	510.6085	3	45.39	2.6	45 44 39 44 55 85 95 97 31 87 91 70	[670.4]AEL[129.0]EL[156.1]
3836	QLLGTLEEMR	8.5	85	595.3159	2	45.432	0	48 50 95 98 97 97 97 91 94 77	[241.1]LGTLEEM[156.1]
3844	WWWM(+15.99)LVNTLTR	8	73	507.9263	3	45.523	-1.8	31 31 31 91 91 95 90 92 90 85 65	[558.2]M(+15.99)LVNTLT[156.1]
3847	LLTENGEFGR	7.4	74	568.2905	2	45.569	-0.3	92 95 94 92 63 67 81 87 31 31	LLTE[171.1]EF[213.1]
3849	VLKRSLKEYCTGFWK	9.3	62	620.0068	3	45.588	0.9	94 92 59 44 43 66 59 58 43 63 84 62 56 55 46	VL[1007.5]T[518.3]
3853	VLFGMLSVYFK	6.5	59	435.2411	3	45.641	-2.4	31 38 41 56 69 90 92 88 80 31 31	[547.3]LSVY[275.2]
3862	NVAMVALEEELR	8.8	73	687.3581	2	45.747	-0.2	50 50 52 93 96 94 80 81 31 87 89 69	[284.1]MVALE[129.0]EL[156.1]
3865	LLVPLYPPVTTLYYK	10.4	69	890.5157	2	45.791	-2.9	64 64 64 93 93 96 97 98 37 37 50 85 90 31 31	[325.2]PLYPP[301.2]LY[291.2]

3867	VFT(+79.97)QVHRVMGAELR	9.4	67	574.9543	3	45.812	-1.4	31 78 42 39 39 65 95 94 92 87 74 67 71 59	[791.3]RVMG[469.3]
3874	MFAYPANK	6.7	83	471.2311	2	45.896	0.1	92 92 92 31 97 94 89 78	MFA[163.1]PAN[128.1]
3875	LLSLLAANM(+15.99)DK	7.7	70	602.8338	2	45.908	-0.2	95 93 75 75 76 78 47 45 66 81 31	LL[716.3]D[128.1]
3884	LVLSTLGEK	5.6	62	480.2922	2	46.022	0.1	31 31 95 88 80 71 59 60 39	[212.2]LST[427.2]
3886	LLGLNGTDMLK	8.4	77	587.829	2	46.04	0.6	95 92 90 85 82 79 66 65 66 70 46	LLGLN[645.3]
3889	NM(+15.99)SRVLADVSK	8.8	80	412.5519	3	46.085	0	72 79 81 69 75 89 91 91 96 97 31	[261.1]S[255.2]LADVS[128.1]
3892	LVDSMQATLDSEVR	10.6	76	782.3872	2	46.115	-0.7	56 62 78 53 53 67 96 96 96 93 75 68 81 81	[673.3]ATLD[216.1]VR
3893	WRYWFLYPVMPVGLLKK	9.5	56	732.7462	3	46.126	2.2	32 31 37 39 42 88 76 90 58 56 59 76 61 56 55 57 31	[838.4]L[163.1]P[965.6]
3896	VQLELNQLK	6.3	70	542.8214	2	46.169	-0.4	59 55 74 94 93 69 54 75 52	[340.2]EL[483.3]
3898	LREFLEANSPPTR	8.5	66	510.6079	3	46.187	1.3	37 36 38 68 86 88 93 90 95 89 49 49 31	[545.3]LEANSP[354.2]
3899	LLKKFNAGHT(+79.97)YK	6.6	55	500.5962	3	46.198	-2.1	35 35 35 67 43 44 54 70 93 90 31 62	[871.5]HT(+79.97)[291.2]
3903	QLLGTLEEMR	8.4	84	595.3157	2	46.248	-0.3	48 50 93 97 97 97 97 90 92 74	[241.1]LGTLEEM[156.1]
3907	SLSTELFK	5.4	67	462.7552	2	46.301	-0.5	31 92 89 85 67 58 78 31	[87.0]LST[517.3]
3909	AELVSQLTR	6.1	68	508.7906	2	46.319	0.5	42 48 54 88 56 52 89 93 81	[313.2]V[215.1]LTR
3913	LLTEEGNFGR	7.4	74	568.2904	2	46.374	-0.5	92 94 93 93 55 51 49 86 88 31	LLTE[300.1]FG[156.1]
3915	LVKY(+79.97)HRTNKGLRHR	7.9	56	620.0085	3	46.394	2	75 75 65 53 42 46 51 72 76 58 54 53 31 31	[1839.0]
3916	FNWGVLWWK	7.6	85	618.32	2	46.405	-2.6	79 73 72 89 94 94 93 81 83	[447.2]GVLWWK
3920	LLYDAFK	4.5	65	435.2415	2	46.458	-1.1	96 95 77 63 57 31 31	LL[624.3]
3923	YPHSVLLVAALCSSNR	11.8	74	865.4572	2	46.49	1	81 81 81 31 94 96 69 46 58 66 89 89 88 72 77 50	YPH[87.0]VL[354.2]LCS[357.2]
3926	LQDLVSLAAAALK	9.4	72	438.266	3	46.533	0.1	90 56 63 76 31 90 90 93 93 88 70 64 31	L[455.2]SLAAA[312.2]
3927	WREREALVSQLTR	8	62	548.6379	3	46.543	0.9	34 34 32 44 42 49 59 92 88 80 87 88 68	[940.5]VSQLT[156.1]
3933	QVGMVALEEELR	8.4	70	687.3582	2	46.62	0	44 46 83 92 94 96 93 94 31 50 65 43	[227.1]GMVALE[527.3]
3938	QLYNPNLDLLK	6.4	58	444.2512	3	46.684	1.9	54 66 46 46 57 60 82 76 49 66 31	[729.3]L[469.3]
3940	HS(+79.97)KEVMRVMKELR	8.3	64	574.9551	3	46.703	-2	31 50 40 37 51 51 65 89 91 85 83 85 68	[947.4]VMKEL[156.1]
3953	KVVGSK	3.5	58	309.2034	2	46.852	2.3	31 79 69 69 69 31	[598.4]
3955	WNFGVLADVSK	8.1	74	412.5524	3	46.885	0.7	57 53 53 75 82 88 87 91 95 95 31	[504.2]VLADVS[128.1]
3957	VVS(+79.97)LKKNTSLLNSK	8.2	59	537.6331	3	46.904	-1.7	35 35 35 52 55 64 64 93 95 88 63 44 56 36	[848.5]TSL[442.3]
3959	LVLSTLGEK	5.3	59	480.292	2	46.925	-0.4	31 31 93 91 88 67 44 44 33	[212.2]LST[427.2]
3963	VQLELNQLK	6.5	72	542.8213	2	46.974	-0.6	86 83 96 81 75 60 50 71 45	VQLE[596.4]
3964	VLDSMQATLDSEVR	12.6	90	782.387	2	46.984	-0.9	75 76 88 87 88 86 97 97 97 96 94 89 90 89	[212.2]DSMQATLDSEVR
3970	QLLGTLEEMR	8.6	86	595.3152	2	47.054	-1	51 53 94 97 96 96 97 94 95 81	[241.1]LGTLEEMR

3971	LLGLNRM(+15.99)WR	6.7	74	587.8286	2	47.063	-1.1	96 94 95 94 93 94 31 31 31	LLGLNR[489.2]
3973	SLSTELFK	5.6	70	462.7556	2	47.098	0.2	31 95 94 86 69 65 86 31	[87.0]LST[242.1]F[128.1]
3975	KPKAHHDMLK	6.6	66	602.8355	2	47.116	1.6	31 93 92 92 94 31 68 57 57 39	[128.1]PKAH[624.3]
3980	LLTEQDGFGR	7.2	72	568.2906	2	47.182	-0.1	94 95 95 94 47 45 50 86 78 31	LLTE[300.1]F[213.1]
3981	YYAWLALPGGKAHAALR	10.2	60	620.0072	3	47.192	-2.8	54 53 48 44 68 47 40 54 71 87 80 74 68 80 66 45 31	[1034.5]GK[208.1]A[340.2]
3983	EALVSQLTR	6.9	77	508.7899	2	47.214	-0.9	44 59 63 91 88 77 90 93 81	[313.2]VS[128.1]LTR
3986	LLYADFK	4.5	64	435.242	2	47.257	0	97 97 82 56 50 31 31	LLY[461.2]
3988	LVRDNYACVRYK	6.7	56	500.5968	3	47.278	-1.9	32 36 37 50 57 73 51 51 71 84 64 62	[1033.5]R[291.2]
3989	MEAKGFMK	4.5	56	471.2315	2	47.288	-2.7	31 96 95 67 39 39 44 31	[131.0]EA[591.3]
3993	EYLMHPGLVSKLTR	9.2	66	548.637	3	47.339	1.6	31 31 38 39 46 55 65 87 95 95 93 89 88 64	[827.4]LVSKLT[156.1]
3994	NFEGRLWVSK	7.7	77	618.33	2	47.35	-0.2	70 76 67 74 87 89 81 96 97 31	[447.2]RLWVS[128.1]
3997	LLPVLYSLLPYPTYK	10.3	69	890.5163	2	47.395	-2.3	31 32 32 97 97 97 83 81 70 72 85 82 67 64 31	[323.2]VLYSL[210.1]YP[392.2]
4007	SNFADGRLR	5.8	64	518.27	2	47.508	-0.1	31 73 79 89 89 81 70 31 31	[348.1]ADG[425.3]
4011	RAGMVALENWAR	9.3	77	687.3574	2	47.563	-2.2	55 61 79 95 96 95 81 79 84 75 91 31	[284.2]MVAL[129.0]N[186.1]A[156.1]
4022	QKM(+15.99)TVLADASR	6.4	58	412.5517	3	47.704	-0.6	31 33 32 34 56 78 79 89 85 88 31	[787.4]DAS[156.1]
4023	WHLHFKTVTLNSK	8.3	64	537.6331	3	47.715	2.8	31 31 31 31 63 67 74 85 89 88 83 89 63	[949.5]VTLNS[128.1]
4028	QVLELNQLK	6.6	74	542.8214	2	47.777	-0.3	60 66 95 92 88 59 57 81 60	[227.1]LEL[242.1]L[128.1]
4030	LVDSMQATLDDTVR	11.3	81	782.3871	2	47.795	-0.8	64 71 87 89 89 86 96 96 96 96 71 62 71 49	[212.2]DSMQATLD[471.2]
4036	QLLGTLEEMR	8.4	84	595.3157	2	47.864	-0.2	50 52 94 97 95 95 96 91 92 75	[241.1]LGTLEEM[156.1]
4037	ETLSHSR	4	57	415.211	2	47.874	-1.8	70 70 81 83 31 31 31	[230.1]LS[380.2]
4039	SLSETLFK	4.4	55	462.7552	2	47.908	-0.6	31 96 86 59 48 53 31 31	[87.0]LS[618.3]
4043	LLSTPM(+15.99)SVNVK	8	73	602.8347	2	47.946	1.2	86 88 85 87 89 71 59 51 51 62 67	LLSTP[674.3]
4045	LLTEMNRCR	5.8	65	568.2903	2	47.979	2	85 89 86 87 91 39 38 32 31	LLTEM[529.3]
4046	M(+15.99)VT(+79.97)NEK	3.5	59	409.1618	2	47.988	0.3	31 93 93 66 31 34	[147.0]VT(+79.97)[371.2]
4058	KLDLVSGVVSAPK	9.3	72	438.2662	3	48.136	0.5	74 74 76 36 87 82 81 78 77 77 73 81 31	[469.3]VSG[356.2]P[128.1]
4059	YYTRLPKLGYWRNK	7.8	55	620.0078	3	48.146	-1.9	48 46 41 48 65 52 55 63 89 85 59 45 36 36	[1034.6]GY[584.3]
4060	EPM(+15.99)YRLVCVFVK	6.9	58	500.5963	3	48.157	-0.4	31 31 31 73 62 56 84 85 87 81 31 31	[805.4]VCVF[227.2]
4061	YERNKHLVSQLTR	8.3	64	548.6368	3	48.168	-1.1	31 63 40 39 40 55 61 96 91 82 83 84 61	[940.5]VSQLT[156.1]
4067	FLPLKKKAKLK	6.7	61	657.4569	2	48.245	2.7	31 56 82 89 92 31 31 77 70 73 31	[260.2]PLK[696.5]
4076	S(+79.97)MHT(+79.97)EGQY(+79.97)K	5	56	660.6697	2	48.363	-33.8	31 31 31 94 84 83 48 54 42	[435.1]T(+79.97)EG[499.2]
4077	QM(+15.99)MSLVGWGPTGLY(+79.97)R	9	60	896.4	2	48.375	-1.7	57 40 35 36 50 68 71 79 63 73 94 88 77 31 31	[1102.5]TG[512.2]

4087	WFNGVLADVSK	7.6	69	412.5526	3	48.506	1.2	31 44 57 71 83 85 79 85 95 96 31	[504.2]VL[71.0]DVS[128.1]
4088	T(+79.97)LLAKKNTSLLNSK	9.1	65	537.6337	3	48.516	-0.6	31 31 42 53 75 74 68 80 95 93 83 60 75 43	[848.5]TSLL[329.2]
4089	LVLSTLADK	5.4	60	480.2925	2	48.527	0.6	31 31 96 91 85 73 47 44 32	[212.2]LST[427.2]
4094	VQLELNQLK	6.5	73	542.8212	2	48.589	-0.8	63 58 91 79 75 80 65 82 57	[227.1]L[242.1]N[128.1]L[128.1]
4102	QLLGTLEEMR	8.6	86	595.3158	2	48.681	-0.1	59 63 93 97 97 97 98 90 91 73	[241.1]LGTLEEM[156.1]
4105	SLSTELFK	5.4	68	462.7552	2	48.725	-0.5	31 94 88 69 63 75 87 31	[87.0]LS[343.2]F[128.1]
4106	DATKMNK	4	57	404.2063	2	48.735	2.9	52 52 58 92 55 55 33	[287.1]K[373.2]
4107	VLDSMQATLDSEVR	11	78	782.3868	2	48.746	-1.2	54 58 68 53 53 66 95 95 97 97 93 86 87 86	[673.3]ATLDSEVR
4108	MMDS(+79.97)NGMPER	5.5	55	416.4801	3	48.757	0.2	37 34 54 51 67 80 79 81 31 31	[658.2]G[131.0]P[285.1]
4111	LLTEEGNFGR	7	70	568.2899	2	48.803	-1.5	89 92 90 90 54 52 51 70 74 31	LLTE[660.3]
4112	LLSLNASDLMK	7.7	70	602.8336	2	48.814	-0.6	79 81 81 84 77 76 78 79 47 47 32	[113.1]LSL[759.4]
4115	ASYDDYVEGLR	8.4	77	644.2961	2	48.849	-0.1	88 88 83 82 92 96 95 76 49 56 31	ASYDDYV[455.2]
4118	TLYLGLYWFK	6.4	64	435.24	3	48.893	-2.3	42 44 48 39 63 92 85 63 79 85	[547.3]LY[333.1]K
4119	EALVSQLTR	7.1	79	508.7904	2	48.904	0.1	54 67 82 93 80 76 88 89 74	[200.1]LVS[128.1]LT[156.1]
4124	LKDLVSLQTAPK	6.9	58	438.266	3	48.967	0.1	80 42 39 39 31 86 85 56 72 63 65 31	L[455.3]SL[525.3]
4125	MVS(+79.97)SVLLAPGGKAHAVLK	11.1	62	620.0066	3	48.977	1.8	76 77 77 83 72 69 49 48 60 69 70 72 60 54 46 43 44 31	[397.1]S[1354.8]
4130	Y(+79.97)RRFGSTVLGTMVR	8.3	59	574.954	3	49.041	-2	32 32 44 48 61 64 81 94 90 85 55 53 54 31	[846.4]TVLG[487.3]
4131	KQFRT(+79.97)SLVSKLTR	7.7	60	548.637	3	49.052	-1.7	43 43 39 54 36 36 45 31 96 94 90 89 72	[1039.5]SKLT[156.1]
4132	TLWNRAELEELR	7.5	63	510.6084	3	49.063	2.3	32 32 39 42 57 78 91 96 31 87 92 71	[741.4]EL[129.0]EL[156.1]
4136	T(+79.97)PALLKPVTVSDR	8.1	62	492.9318	3	49.119	-0.9	73 70 48 48 63 66 70 89 31 73 66 73 31	[800.4]V[558.3]
4138	DM(+15.99)ETTVKLSK	8.1	81	584.2987	2	49.141	-2	31 96 95 94 79 74 81 91 93 75	[115.0]M(+15.99)ET[200.1]KLS[128.1]
4142	NYVAGVLWASR	8.6	79	618.33	2	49.195	-0.2	59 60 64 86 93 92 93 96 92 94 31	[376.2]AGVLWAS[156.1]
4143	LLGLNSADMLK	7.9	72	587.8292	2	49.206	0.8	95 92 79 76 75 72 62 63 65 66 42	LL[929.5]
4144	YPHSVLPTRLLT(+79.97)PR	9.5	68	865.4593	2	49.218	-2	93 93 93 31 31 97 87 83 84 94 45 40 44 31	YPH[186.1]LPTRL[547.3]
4150	NVAMVAELEELR	9.7	81	687.3585	2	49.292	0.4	60 64 73 97 97 97 95 95 31 90 90 73	[284.1]MVAEL[129.0]EL[156.1]
4153	NFGWVLADVSK	8.5	77	412.5521	3	49.335	-0.1	69 77 66 31 97 97 93 93 96 96 31	[504.2]VLADVS[128.1]
4155	LVLSTLGEK	5.1	57	480.2921	2	49.356	-0.2	31 31 93 84 71 57 50 50 36	[212.2]LS[528.3]
4159	VQLELNQLK	6.6	73	542.8216	2	49.411	0	56 52 85 84 82 79 71 85 58	[227.1]LEL[242.1]L[128.1]
4162	RHKNYSFFLKKRR	8.1	62	890.516	2	49.441	0.3	31 43 40 63 79 90 91 92 86 87 37 31 34	[698.4]SFFLK[440.3]
4165	QLLGTLEEMR	8.7	87	595.3159	2	49.487	0	53 56 95 98 97 97 97 94 96 83	[241.1]LGTLEEMR
4168	WYKSNNWVR	5.8	64	418.214	3	49.517	4.2	62 65 56 58 61 77 72 91 31	[978.4]V[156.1]

4169	FMQYNLVAAFK	7.9	72	666.3455	2	49.527	1.6	31 93 82 83 75 90 91 91 88 31 31	[147.1]MQY[114.0]LVAA[275.2]
4171	SLSTELFK	6	75	462.7556	2	49.562	0.3	31 93 91 87 85 83 93 31	[87.0]LSTELF[128.1]
4172	LVDSMQATLDSEVR	12.6	90	782.3873	2	49.571	-0.5	68 76 90 92 92 86 97 97 98 98 94 89 89 88	[212.2]DSMQATLDSEVR
4174	MELDDLSSNMEAVSK	12.9	86	834.8767	2	49.59	0.4	77 77 89 97 98 97 97 93 86 92 93 87 82 85 31	[260.1]LDDLSSNMEAVS[128.1]
4175	MKRRNCNGYNCTLDGNK	9.5	56	662.9719	3	49.601	-2.2	80 32 32 50 51 81 65 52 58 83 76 44 40 41 53 69 31	M[554.3]C[334.1]N[731.3]
4177	LLTENGEFGR	7.1	71	568.2906	2	49.636	-0.1	91 94 94 86 57 60 75 84 31 31	LLTE[300.1]F[213.1]
4178	RKFKMRHPYLVPVAYYK	9.9	58	732.7474	3	49.646	0.6	31 31 31 32 32 56 75 96 93 89 79 68 55 52 63 70 31	[983.6]PYL[820.4]
4180	LLSLNSADMLK	8.8	80	602.8337	2	49.669	-0.3	94 95 95 95 78 65 64 83 79 79 52	LLSL[272.1]D[372.2]
4181	ASYDDYVEGLR	9.1	83	644.2965	2	49.679	0.5	51 51 81 96 97 97 96 94 89 92 62	[158.1]YDDYVEGL[156.1]
4184	RETRM(+15.99)SGQAKWR	7.1	59	507.9267	3	49.724	-3	65 61 59 61 31 66 56 51 87 58 66 40	[961.4]A[470.3]
4185	RRTWAMSDRNTKK	7.7	60	550.6249	3	49.734	-3	31 72 52 49 66 71 90 90 57 43 46 69 31	[801.4]SD[627.4]
4186	MVVTLQEK	5.9	73	474.2652	2	49.745	0.1	97 97 97 86 76 42 49 38	MVVT[498.3]
4187	MMGYKELAVSKLTR	10	72	813.9383	2	49.755	-0.7	40 43 52 58 86 76 86 84 93 94 87 76 73 49	[482.2]K[129.0]LAVSK[370.2]
4189	MCVKGPPVKLLK	7.7	64	438.2661	3	49.789	-0.6	95 90 62 55 51 54 37 84 69 70 65 31	MC[478.3]V[482.4]
4190	LVNAWLQPLGQAHPWK	9	56	620.0072	3	49.799	-2.8	47 45 39 39 47 54 41 51 57 77 57 71 73 68 69 55	[1839.0]
4193	MFAPYANK	5.3	67	471.231	2	49.829	-0.2	91 91 91 31 31 90 31 72	MFA[260.1]A[242.1]
4195	LLPVLYPCCVKKLYK	9.4	62	890.5162	2	49.862	-0.7	31 41 41 84 91 95 98 94 83 76 64 34 34 31 31	[323.2]VLYPCC[759.5]
4197	TWHREHTVMGAELR	8.8	63	574.9539	3	49.884	-1.2	32 32 32 33 42 45 76 86 95 94 90 79 77 59	[947.4]VMGA[398.2]
4198	KWWAVAELEELR	8.2	68	510.6081	3	49.895	-0.7	32 32 41 65 69 87 95 97 31 91 94 77	[670.4]AEL[129.0]EL[156.1]
4202	DFETLSQLSK	6.6	66	584.2985	2	49.948	0.5	31 31 97 95 48 46 45 89 94 79	[262.1]ET[328.2]LS[128.1]
4203	AKFSEEVAGASKPR	9.4	67	492.9323	3	49.96	1.2	72 77 89 55 51 61 74 90 86 83 68 46 47 34	[199.1]F[444.2]AGA[468.3]
4205	FLCPRDAGVLR	6.1	56	416.23	3	49.981	2.3	31 31 31 45 57 70 82 83 72 75 31	[731.3]AG[368.3]
4208	TFKKKMDADGWLVASR	10.5	66	618.33	3	50.024	0.9	34 35 37 35 48 48 67 80 82 91 91 72 75 88 90 69	[878.5]ADGW[212.2]AS[156.1]
4210	LLGLNSADMLK	8.7	79	587.8291	2	50.047	0.7	93 90 86 86 88 82 75 72 70 72 48	LLGLNS[558.3]
4211	YYASVLPATKFLDNK	11.1	74	865.4591	2	50.058	-2.9	63 63 85 94 97 96 82 57 47 61 88 86 77 71 31	[326.1]ASVLP[300.2]FL[357.2]
4216	QVGMVALEEELR	9.1	76	687.3583	2	50.121	0.2	42 45 71 95 97 96 90 91 31 87 89 69	[284.1]MVALE[129.0]EL[156.1]
4219	WNFRLWASR	6	67	412.5521	3	50.165	-1.2	52 50 50 51 95 83 91 93 31	[603.3]LWAS[156.1]
4220	HSRRPTNTSLGTKR	7.9	57	537.6334	3	50.175	1.6	31 70 70 36 38 45 62 86 91 76 47 46 49 38	[848.4]TS[555.3]
4221	LVLSTLGEK	5.3	59	480.2924	2	50.186	0.5	31 31 95 93 88 72 42 42 31	[212.2]LST[427.2]
4223	QLDLVDKLQLK	8.5	77	656.8955	2	50.204	0.3	67 75 89 93 92 91 62 74 55 83 65	[241.1]DLVD[369.2]L[128.1]
4225	VQLELNQLK	6.4	71	542.8216	2	50.238	0	54 51 86 88 86 69 62 83 57	[227.1]LEL[242.1]L[128.1]

4227	WRYLPHEMVRSLPETR	9	56	518.2717	4	50.256	-2.4	32 32 37 37 44 67 68 54 50 70 83 88 75 51 51 47	[1367.7]SL[483.2]
4231	QLLGTLEEMR	8.7	87	595.316	2	50.312	0.3	54 57 95 97 96 95 96 94 96 82	[241.1]LGTLEEMR
4232	SVKYSNNDAVR	7.2	65	418.2139	3	50.322	-0.7	31 42 47 53 80 71 76 89 82 86 57	[477.3]S[228.1]DAV[156.1]
4235	LDQYHHDNLNVLVAAFK	11.5	68	666.3456	3	50.352	-0.7	48 47 59 41 43 45 78 86 89 66 72 93 92 92 87 70 31	[908.4]NL[213.1]LVAA[275.2]
4237	SLSTLEFK	5.9	74	462.7554	2	50.387	-0.1	31 96 95 91 76 73 92 31	[87.0]LST[242.1]F[128.1]
4238	LVDSMQATLDSEVR	12	86	782.3871	2	50.396	-0.8	69 74 87 67 67 79 97 97 97 97 94 90 90 90	[212.2]D[346.1]ATLDSEVR
4241	MELDDLSSNMEAVSK	12.1	80	834.8763	2	50.428	-0.1	62 62 77 93 90 89 94 95 82 80 82 90 85 88 31	[373.2]DDLSSNMEAVS[128.1]
4243	LLTENGEFGR	6.8	68	568.291	2	50.462	0.4	94 95 95 92 51 51 58 81 31 31	LLTE[300.1]F[213.1]
4244	KKRKYTFELYVPVAYYK	10.7	63	732.7472	3	50.471	2.6	31 35 31 38 37 47 63 92 94 69 86 86 77 75 73 74 53	[951.6]EL[163.1]VP[624.3]
4245	LLSLNSADMLK	7.9	72	602.8338	2	50.483	-0.2	94 93 93 94 87 66 63 56 51 51 41	LLSLN[645.3]
4247	ASYDDYVEGLR	9.1	82	644.2961	2	50.504	-0.1	52 52 87 97 97 97 97 94 85 90 54	[158.1]YDDYVEGL[156.1]
4249	RHS(+79.97)KMKNAKWR	6.6	60	507.9268	3	50.538	2.7	37 37 34 41 52 70 78 85 81 80 58	[961.4]AKW[156.1]
4251	FNRKNEMECGGHSHVNK	11.1	65	662.972	3	50.56	-0.3	58 42 43 47 45 48 77 90 90 89 83 76 77 65 60 61 54	[919.4]ECGG[702.4]
4252	MVSLPSSVK	5.1	57	474.2649	2	50.571	-0.5	98 98 98 31 31 40 40 40 31	MVS[611.4]
4255	GRKKVSGVWAPK	7.4	62	438.2657	3	50.615	-1.7	31 46 46 42 78 86 86 86 92 81 31 31	[568.4]SGVWA[225.1]
4256	LVKGSVLKEHEYDNVK	9.9	62	620.007	3	50.625	-0.2	72 73 56 48 55 59 69 62 57 59 88 76 55 51 67 40	[1090.6]E[619.3]
4257	MKLLLVSSHT(+79.97)YK	8.1	68	500.596	3	50.637	2.9	70 55 55 59 80 82 85 85 84 69 31 51	[485.3]LVSSH[472.2]
4259	QALTWAMHGHELKK	8.5	61	550.6245	3	50.656	0.6	47 44 43 42 38 50 74 91 91 85 73 66 68 31	[801.4]HGH[498.3]
4261	QYT(+79.97)RKALVSKLTR	8.9	69	548.6371	3	50.69	-1.4	56 40 43 41 47 66 76 92 94 92 88 87 63	[940.5]VSKLT[156.1]
4262	M(+15.99)QLNLGSSTVMGAELR	10.2	64	574.9542	3	50.701	-1.8	51 51 41 41 48 51 52 31 91 91 96 93 84 70 69 53	[846.4]TVMGA[398.2]
4264	RQTWVAELEELR	8.2	68	510.6085	3	50.723	2.5	38 37 40 47 90 90 95 97 31 86 91 69	[571.3]VAEL[129.0]EL[156.1]
4267	QLDLVDKLQMK	6.4	58	444.2514	3	50.765	-0.3	43 41 41 41 88 87 70 71 45 58 45	[469.3]VD[628.4]
4269	RM(+15.99)M(+15.99)PRVPKHHR	6.4	58	492.9318	3	50.787	1.5	32 48 42 62 31 31 93 88 74 56 74	[802.4]PK[430.2]
4270	DFETTNLLSK	6.7	67	584.298	2	50.797	-0.3	31 31 95 89 46 46 63 94 95 78	[262.1]ET[328.2]LS[128.1]
4276	YYEHAKAAEPVAFGR	10.2	68	570.2851	3	50.871	-2	57 44 39 56 77 63 87 95 92 79 74 70 74 76 31	[791.4]AAE[627.3]
4277	S(+79.97)S(+79.97)S(+79.97)CDECDWTAPASR	8.5	57	618.82	3	50.882	-37.4	31 31 31 31 31 31 79 72 70 71 91 88 69 77 40	[1353.2]AP[314.2]
4281	TTKKTFGFALCK	7.4	62	448.9168	3	50.934	1.2	76 76 76 42 37 46 62 92 76 60 60 31	[763.4]F[415.2]
4282	TLEDQLSELK	7.2	72	588.3115	2	50.944	0.3	82 85 93 67 57 58 70 79 90 31	TLE[572.2]L[128.1]
4285	RLLHNTNTSGSVRR	8	57	537.6339	3	50.988	2.5	32 33 61 58 47 48 55 89 93 81 74 65 31 31	[848.5]TSG[498.3]
4286	LVLSTLADK	5.3	59	480.2921	2	50.999	-0.3	31 31 96 88 77 64 51 50 36	[212.2]LS[528.3]
4287	M(+15.99)NSRVLADVSK	7.7	70	412.5521	3	51.008	0.4	55 44 45 48 84 87 90 94 95 95 31	[504.2]VLADVS[128.1]

4288	QLEAEEQLEAVNSK	11.8	84	794.3969	2	51.019	0.3	63 65 83 93 97 95 86 95 96 96 94 75 87 50	[241.1]EAEEQLEAV[114.0]S[128.1]
4292	LNLELNQLK	6.5	72	542.8218	2	51.072	0.4	60 57 84 86 85 83 61 81 49	[227.1]LELN[128.1]L[128.1]
4294	T(+79.97)M(+15.99)MSCY(+79.97)K	4	57	520.14	2	51.094	-0.8	31 73 73 73 82 31 31	[546.1]C[371.1]
4297	EARAHYHNVR	6.7	67	418.2143	3	51.14	-0.9	35 35 36 60 71 92 91 82 88 77	[564.3]YHNV[156.1]
4301	S(+79.97)KLYT(+79.97)RGFKVLAETPK	9.7	61	666.6655	3	51.177	-2	31 31 32 36 41 41 62 67 82 85 88 91 89 80 76 31	[1112.5]KVLAET[225.1]
4304	ALT(+79.97)ES(+79.97)VRVDRRK	7.2	60	530.5912	3	51.221	1.8	72 72 72 42 42 72 78 72 72 51 35 31	[1570.7]
4306	TTHTFPR	4.1	58	430.2238	2	51.24	-2.1	53 52 52 89 96 31 31	[339.2]TF[253.2]
4309	LLTENGEFGR	7	70	568.2911	2	51.283	0.8	93 94 94 92 53 55 67 85 31 31	LLTE[300.1]F[213.1]
4310	SNMQTVSSQFR	8.5	78	642.8037	2	51.292	0.1	60 60 63 80 85 95 99 93 70 86 56	[332.1]QTVSS[128.1]F[156.1]
4311	VLRRYLMVVFAS(+79.97)K	7.7	59	554.6375	3	51.303	1.1	32 32 32 31 32 47 53 90 94 92 86 87 60	[931.5]VVFAS(+79.97)[128.1]
4312	KNRRENLDASER	7	59	496.5947	3	51.314	1.5	32 32 32 42 42 52 91 96 91 74 71 42	[797.4]LDA[372.2]
4315	WLFTLYSVFK	6.5	65	435.2419	3	51.357	2.1	78 34 43 59 91 86 75 75 76 31	[547.3]LY[461.3]
4317	EALVSQLTR	6.9	77	508.7906	2	51.38	0.4	47 52 68 88 85 81 91 92 81	[313.2]VSQLTR
4319	S(+79.97)GDNGQDHR	5.2	58	533.1919	2	51.402	1.9	53 47 53 77 80 58 56 66 31	[453.1]G[536.2]
4329	M(+15.99)RVHLLAALNR	6.3	57	437.2556	3	51.524	0.1	31 31 31 42 70 83 84 79 63 64 47	[652.3]LA[454.3]
4336	Y(+79.97)PAM(+15.99)VS(+79.97)KK	5.1	63	550.217	2	51.609	-2.4	31 63 77 77 77 68 78 31	[1080.4]
4337	LLWSKKS(+79.97)HMPNAPK	7.9	56	572.96	3	51.62	0	31 31 31 88 88 77 31 31 92 89 52 52 58 31	[412.2]SK[432.2]MP[410.2]
4339	KHHERDAVVR	5.6	56	416.2298	3	51.654	-1.1	34 34 31 63 74 56 72 75 84 31	[972.5]V[156.1]
4340	RRM(+15.99)T(+79.97)RHELEKTR	7	58	570.2855	3	51.666	-0.2	31 34 33 47 52 70 82 86 76 65 68 47	[933.4]EL[514.3]
4343	NRQWFRLRR	5.4	60	444.59	3	51.697	-0.1	71 65 60 56 58 90 75 31 31	[731.4]R[425.3]
4353	LVLATSVEK	5.4	60	480.2925	2	51.816	0.7	31 97 91 77 69 31 54 31 54	[113.1]VL[615.3]
4354	M(+15.99)DELRK	3.4	57	404.2061	2	51.828	2.6	31 31 81 81 81 31	[262.1]ELR[128.1]
4361	VDSCGGK	4.7	67	333.15	2	51.909	0.6	77 77 77 65 65 75 31	[646.3]
4376	LLTEEGNFGR	8.1	81	568.2913	2	52.097	1.1	95 96 96 96 84 67 59 89 90 31	LLTEE[171.1]FG[156.1]
4381	RRPM(+15.99)QLLDGTER	7.1	59	496.5955	3	52.16	-1.8	31 35 42 36 40 84 93 90 72 63 66 49	[684.3]LLD[443.2]
4401	QNANS(+79.97)R	3.5	58	385.1527	2	52.418	-0.9	54 55 58 55 62 63	[750.3]
4402	MMT(+79.97)GEST(+79.97)M(+15.99)R	5	56	610.1843	2	52.429	1.7	31 72 50 58 60 88 77 31 31	[629.2]S[484.1]
4410	NY(+79.97)LTCGPLR	5.8	65	558.75	2	52.526	1.9	57 55 67 61 86 87 72 62 31	[571.2]CG[366.2]
4411	RT(+79.97)DLGYS(+79.97)K	4.4	55	550.2156	2	52.538	1.8	43 42 47 64 90 90 31 31	[565.2]GY[295.1]
4439	CMEESPQK	5.1	64	476.1988	2	52.91	-0.6	31 31 94 91 91 71 31 64	[234.0]EES[353.2]
4451	M(+15.99)M(+15.99)VGR	3	61	313.1427	2	53.071	-2.4	69 70 56 75 31	[606.3]

4463	LLTEKGDM(+15.99)GR	6.3	63	568.2914	2	53.215	-1.7	95 95 94 91 47 40 40 46 47 34	LLTE[660.3]
4499	Y(+79.97)NCM(+15.99)MK	3.5	58	443.14	2	53.7	2.5	55 72 72 80 31 31	[460.1]M(+15.99)[259.1]
4504	S(+79.97)TVDCCR	4.6	66	432.1427	2	53.767	-0.6	76 76 78 82 82 31 31	[367.1]DC[259.1]
4519	VPS(+79.97)KKKVR	4.6	58	511.3	2	54.009	1	31 31 31 31 94 86 86 66	[491.2]KKV[156.1]
4541	WECGM(+15.99)K	3.6	60	385.1532	2	54.297	-2.1	65 65 65 75 31 55	[750.3]
4548	WFEDPSSVLKLS(+79.97)NR	8.6	61	586.6119	3	54.382	-2.7	31 31 31 31 83 80 80 78 72 75 92 52 73 39	[577.2]PSS[340.2]L[437.1]
4554	WT(+79.97)DAGS(+79.97)M(+15.99)K	4.9	61	536.1652	2	54.468	-2	31 89 86 85 69 63 31 31	[186.1]T(+79.97)DA[499.1]
4577	CT(+79.97)CGGNTK	4.5	57	432.1433	2	54.791	0.8	31 36 35 50 86 77 78 56	[444.1]G[343.2]
4582	TCQADK	4.5	75	333.15	2	54.853	0.6	75 75 75 81 91 53	[332.1]AD[128.1]

APPENDIX N
DE NOVO SEQUENCING RESULTS FOR ELASTASE

De novo summary report (generated by Peaks DB software)

1. Notes

2. Result Statistics

Figure 1: The distribution of de novo ALC score: **(a)** histogram of score **(b)** The plot of error vs. score

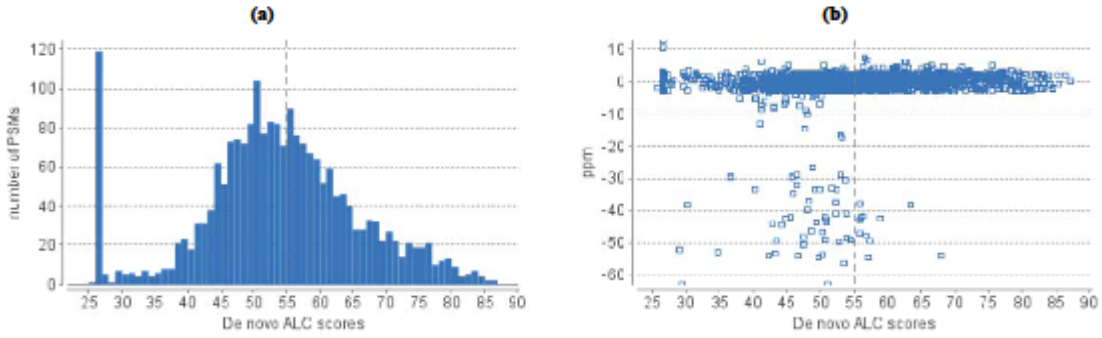

Table 1. Statistics of data and result.

# of MS Scans	854
# of MS/MS Scans	3505
Peptides after filter	962

Table 2. Result filtration parameters.

De Novo ALC ≥55%
De Novo TLC ≥3

3. Other Information

Table 3. Search parameters.

Parent Mass Error Tolerance: 3.0 ppm
Fragment Mass Error Tolerance: 0.5 Da
Enzyme: Elastase_fish
Variable Modifications:
  Phosphorylation-STY: 79.97
  Oxidation M: 15.99
Max variable PTM per peptide: 3
Report # peptides: 2
Data Refine dependencies: 6

Table 4. Instrument parameters.

Fractions: EL.RAW
Ion Source: ESI(nano-spray)
Fragmentation Mode: CID, CAD, IRMPD (y and b ions)
MS Scan Mode: FT-ICR/Orbitrap
MS/MS Scan Mode: Linear Ion Trap

Peptide results for elastase digested myosin – derived by De novo sequencing with PEAKS DB software

Scan	Sequence	TLC	ALC (%)	m/z	z	RT	ppm	local confidence (%)	tag (>=80%)
1746	KCSSLRSFASW	9.6	87	636.3137	2	22.483	0	89 89 89 79 79 91 85 85 90 91 86	KCS[200.1]RSFASW
1354	EHLKGLKVCPHCY	11.2	86	763.8854	2	18.089	1.8	97 95 95 98 97 92 73 59 78 88 81 81 81	EHLKGL[330.2]PHCY
1910	MVKEASGPLNFTVF	12	86	770.3969	2	24.293	-0.6	72 80 89 94 95 97 94 82 82 70 78 79 91 90	[131.0]VKEASGPL[362.2]VF
1815	SSLKVAELENHF	10.2	85	687.3579	2	23.227	1.9	26 91 92 96 97 97 97 97 94 77 90 64	[87.0]SLKVAELE[114.0]H[147.1]
2658	AFKGKGYAELLTY	11	85	730.8914	2	33.664	-1.9	82 87 96 93 91 91 95 96 96 96 81 63 26	AFKGKGYAELL[264.1]
2790	FAKGKGYAELLTY	11	85	730.8913	2	35.3	-2	83 88 96 95 95 95 96 96 96 97 82 48 26	FAKGKGYAELL[264.1]
2724	FAKGKGYAELLTY	11	84	730.8911	2	34.47	-2.3	82 87 96 95 95 95 98 97 97 96 77 51 26	FAKGKGYAEL[377.2]
2526	AFKGKGYAELLTY	10.9	84	730.8918	2	32.022	-1.3	84 89 97 95 95 95 97 97 97 96 79 39 26	AFKGKGYAEL[377.2]
2134	MRTGMKSMLW	8.4	84	620.8049	2	27.014	2	92 86 64 57 79 96 95 92 94 78	MR[289.1]KSML[186.1]
3252	AFKGKGPHELVMF	10.9	84	730.8903	2	41.112	0.9	81 87 96 95 95 94 88 90 98 90 75 67 26	AFKGKGPHEL[377.2]
2328	FAKGKGYAELLTY	10.8	83	730.8914	2	29.487	-1.9	81 86 95 95 96 96 97 97 97 96 74 43 26	FAKGKGYAEL[377.2]
1555	MKPRLVLGW	7.5	83	550.3265	2	20.336	1.1	94 93 85 86 95 96 85 85 26	MKPRLVLG[186.1]
1917	QDPEDVLVAAKF	10	83	666.3453	2	24.37	-0.5	59 70 91 91 91 91 98 96 96 95 88 26	[243.1]PEDVLVAAK[147.1]
3582	FAKGKGYAELLTY	10.8	83	730.891	2	45.144	-2.4	82 86 95 95 96 95 97 97 96 94 70 44 26	FAKGKGYAEL[377.2]
2046	NFESFLKPPF	8.3	83	613.3177	2	25.924	2.5	78 84 96 98 97 95 88 82 80 26	[114.0]FESFLKPP[147.1]
1450	AFKGKRPDW	7.5	83	552.8016	2	19.153	0.9	73 79 91 94 99 97 92 90 26	[218.1]KGKRPD[186.1]
1992	SGGVPAFTVF	8.3	83	981.5058	1	25.281	1.9	30 82 93 88 85 85 89 89 89 90	[87.0]GGVPAFTVF
1920	DHAVKSDGVGVDFLW	12.3	82	822.9041	2	24.413	-0.5	80 84 95 96 96 96 95 96 94 70 69 78 75 75 26	DHAVKSDGV[717.3]
1470	FAKLEYAEKKY	9	82	695.3725	2	19.381	-2.5	83 89 90 77 77 78 95 94 94 94 26	FAK[405.2]AEKK[163.1]
1327	FLGFESAGLM(+15.99)GY	9.8	82	654.304	2	17.787	2.4	87 88 95 97 95 90 91 91 90 65 63 28	FLGFESAGL[367.1]
3516	AFKGKGYAELLTY	10.6	82	730.8909	2	44.347	-2.6	81 87 96 95 95 95 97 97 95 93 61 34 26	AFKGKGYAEL[377.2]
1554	MESLKSHKPF	8.1	81	602.3138	2	20.329	1	98 98 97 96 96 96 68 64 71 26	MESLKS[509.3]
3642	LELLEQVLW	7.3	81	571.8276	2	45.88	2.1	73 93 99 98 95 78 82 83 26	[113.1]ELLE[128.1]VL[186.1]
1761	DSNAFQMF	6.5	81	959.3922	1	22.635	-0.6	77 78 74 94 96 79 80 69	[316.1]AF[128.1]M[147.1]
2856	AFKGKGYAELLTY	10.5	81	730.8912	2	36.137	-2.1	86 89 96 93 90 90 97 98 97 95 60 27 26	AFKGKGYAEL[377.2]
3384	FAKGKGYAELLTY	10.5	81	730.8909	2	42.745	-2.6	82 88 96 94 93 93 96 96 94 92 58 33 26	FAKGKGYAEL[377.2]
1622	MMGLM(+15.99)W	4.8	81	784.321	1	21.106	2.4	91 91 77 66 80 76	MM[170.1]M(+15.99)[186.1]
2196	AFKGKGYAELLTY	10.5	80	730.8918	2	27.812	-1.3	81 86 95 92 91 91 95 96 96 94 59 37 26	AFKGKGYAEL[377.2]

1846	QLLGTLEMVW	8	80	595.3162	2	23.566	-2.9	46 49 96 99 98 98 96 96 95 26	[241.1]LGTLEMV[186.1]
2121	HLEVTFNLGPSAKPPF	12.8	80	877.4645	2	26.849	-3.1	77 77 78 95 98 97 89 90 89 90 95 86 75 67 49 26	[379.2]VTFNLGPSA[469.3]
1762	EYGYALPHALPRF	10.4	80	767.3971	2	22.643	1.4	60 60 82 91 95 97 99 86 87 94 84 76 26	[292.1]GYALPHALP[303.2]
1834	YSHNFFKKLKENTY(+79.97)	11.2	80	949.9477	2	23.433	2.3	71 71 71 92 98 94 97 85 94 79 77 63 72 52	[387.2]NFFKKL[715.3]
2050	CLKLLDLTPF	8	80	581.8304	2	25.968	-0.4	75 77 92 93 82 90 95 86 81 26	[216.1]KLLDLTP[147.1]
1880	MPLLGM(+15.99)TSPKVF	9.6	80	668.8531	2	23.953	-1	95 94 95 99 98 95 93 87 72 73 26 26	MPLLGM(+15.99)TS[471.3]
1851	LDLLGM(+15.99)TRSRW	8.8	80	682.3593	2	23.621	-2.8	48 79 97 99 98 98 97 69 77 83 26	[228.1]LLGM(+15.99)T[243.1]R[186.1]
3120	FAKANGYVTLLTY	10.4	80	730.8907	2	39.453	-2.8	79 80 94 94 94 97 96 73 62 93 84 58 26	[147.1]AKANGY[200.1]LL[264.1]
1838	NMSFAVKCVGVRDLW	12	80	862.9358	2	23.483	1.9	69 75 94 98 98 97 88 74 74 92 92 72 60 62 42	[245.1]SFAVK[202.1]GV[570.3]
1941	AESTFKGAMW	8	80	564.2634	2	24.66	0.4	87 78 80 94 96 92 76 66 95 26	A[129.0]STFK[128.1]M[186.1]
2592	FAKANGYVTLLTY	10.3	79	730.8916	2	32.853	-1.6	84 84 95 95 92 94 93 81 74 90 71 47 26	FAKANGYV[101.0]L[377.2]
930	FAQEEEFFTF	7.9	79	647.787	2	13.088	3.1	89 91 85 98 99 26 91 91 91 26	FAQEE[129.0]FFT[147.1]
3054	FAKANGYVTLLTY	10.3	79	730.8907	2	38.61	-2.8	83 83 94 93 93 96 96 80 71 91 74 43 26	FAKANGYV[101.0]L[377.2]
1088	KGKLKMGVVLY(+79.97)	8.7	79	658.3637	2	14.974	-0.4	26 95 95 96 94 80 63 70 69 89 89	[128.1]GKLKM[255.2]LY(+79.97)
1566	FAKANGGPPQLVMF	11.1	79	738.8877	2	20.459	0.9	82 82 92 91 90 94 80 69 77 77 90 77 73 26	FAKANGG[322.2]L[377.2]
1629	SM(+15.99)QLSLDTFSLKAF	11.1	79	802.403	2	21.18	-3	80 80 74 94 94 91 64 60 70 92 93 91 92 26	SM(+15.99)[128.1]LSL[363.1]SLKA[147.1]
1276	MQSQELF	5.5	79	882.402	1	17.18	-0.6	95 85 95 76 85 88 26	MQS[128.1]EL[147.1]
2329	KRGVLVAMFSVGALS(+79.97)W	12.7	79	900.9639	2	29.497	-1.4	70 53 66 87 96 97 97 97 84 77 78 80 81 80 88 26	[341.2]VLVAMF[186.1]GALS(+79.97)[186.1]
2587	LELLEQVLW	7.1	79	571.8276	2	32.786	2.2	77 93 99 98 96 68 74 76 26	[113.1]ELLE[526.3]
1232	AEGAELVDASVVW	10.3	79	673.3348	2	16.671	-0.6	49 52 62 72 85 97 97 97 97 95 96 94 26	[328.1]ELVDASVV[186.1]
1974	TTRCADLVKPF	8.7	79	625.8314	2	25.057	-0.6	92 96 95 97 96 87 83 82 83 26 26	TTRCADLVK[244.1]
1720	SMPVLVAGNVDGAVQY	12.6	79	810.408	2	22.201	-0.6	87 93 93 97 94 92 92 90 72 83 86 69 49 46 53 53	SMPVLVAG[114.0]VD[518.2]
2262	AFKKGGYAELLTY	10.2	79	730.8909	2	28.649	-2.6	74 74 91 63 92 91 95 96 97 97 76 41 26	[218.1]K[128.1]GGYAEL[377.2]
2011	SVYPLGGLPPW	8.6	78	1185.635	1	25.504	3.7	89 89 93 97 96 91 85 81 83 26 26	SVYPLGGLP[283.1]
957	DCQVSVMTFF	7.8	78	588.7553	2	13.413	-2.5	86 86 80 96 90 88 86 70 71 26	DCQVSVM[395.2]
3504	APLPVNAW	6.3	78	434.2397	2	44.201	-0.1	94 93 93 78 73 61 73 57	APL[567.3]
1371	WAKHRW	4.7	78	442.2376	2	18.279	-0.6	79 67 66 83 77 95	[385.2]H[156.1]W
2037	MTLVQGVLLEYSKPDW	12.5	78	939.988	2	25.811	1	65 73 88 91 69 84 90 95 98 98 85 90 77 58 56 26	[232.1]LV[128.1]GVLLEYS[526.3]
2221	MTVKLVELAYEGW	10.2	78	769.9	2	28.121	0.4	70 69 88 94 88 75 78 85 73 68 72 88 62	[232.1]VKL[228.1]L[363.1]G[186.1]
2058	LFVKLM(+15.99)SEGW	7.8	78	613.3184	2	26.069	0.8	26 26 82 80 96 89 98 97 99 83	[260.2]VKLM(+15.99)SEGW
3181	LELLEKPGPF	7.8	78	571.8277	2	40.223	2.3	74 93 99 99 96 94 88 70 35 26	[113.1]ELLEKP[301.1]

1446	MTELCLKNKPRW	9.3	78	759.9005	2	19.119	1.1	73 77 89 94 94 88 87 88 83 70 61 26	[232.1]ELCLKNK[439.2]
1827	VHVQSDGVVGDLW	10.1	78	705.8545	2	23.355	0.4	26 99 96 79 91 93 92 90 65 57 66 81 69	[99.1]HV[128.1]SDGV[271.1]L[186.1]
2922	FAKANGYVTLLTY	10.1	78	730.8927	2	36.972	-0.1	82 81 94 94 94 97 97 84 73 88 60 32 26	FAKANGYV[101.0]L[377.2]
1936	MLLKLAAW	6.2	78	945.5618	1	24.598	3	93 93 97 80 74 75 79 26	MLLK[441.2]
1800	FNTNEKLQQFF	8.5	77	708.3521	2	23.075	1.1	84 78 96 81 88 71 93 72 82 75 26	F[114.0]TNE[128.1]L[128.1]Q[294.1]
2144	YLSM(+15.99)LLVLGW	7.7	77	605.8316	2	27.146	1.6	26 95 92 87 86 98 86 84 88 26	[163.1]LSM(+15.99)LLVLG[186.1]
1137	CPAKSSVFLAAAW	10	77	675.8481	2	15.552	1.2	26 81 72 75 96 96 96 95 93 84 78 78 26	[103.0]P[199.1]SSVFLA[328.2]
1122	MNKENYDKMKTLW	10	77	850.9083	2	15.369	-2.4	57 54 91 95 89 88 94 82 95 87 76 65 26	[245.1]KENYDKMK[400.2]
1753	LSVLLGM(+15.99)TNWW	8.5	77	668.3436	2	22.556	2.6	26 26 90 98 99 98 98 97 81 88 41	[200.1]VLLGM(+15.99)TNW[186.1]
3578	WPLTFLDGNNW	8.5	77	681.8281	2	45.089	0.9	26 74 83 92 96 93 88 83 66 77 61	[283.1]LTFLDG[414.2]
1627	KNLLTRPMW	6.9	77	579.8265	2	21.163	0.4	85 84 94 94 78 75 74 77 26	KNLL[671.3]
2718	LELLEQLVW	6.9	77	571.8281	2	34.394	3	49 87 98 98 94 72 81 81 26	[113.1]ELLE[128.1]LV[186.1]
2155	LELLTPPKTMALY	10	77	745.4205	2	27.285	0.2	26 71 96 97 89 88 93 92 86 83 72 71 26	[242.1]LLTPPKTM[347.2]
2004	STGSFAVKSDGVRDFLW	13	77	936.4686	2	25.42	0.7	27 39 61 94 99 98 98 97 97 97 96 94 91 81 44 59 26	[245.1]SFAVKSDGVRD[446.2]
2036	LADLLGTF	6.1	77	849.4714	1	25.802	-0.2	57 59 73 87 97 84 92 62	[299.1]LLGT[147.1]
2988	AFKANGYAKKLCF	10	77	730.8905	2	37.78	1.3	82 88 93 92 92 97 97 96 95 53 39 40 26	AFKANGYAK[491.3]
3977	FAKANGYVTLLTY	10	77	730.891	2	50.053	-2.4	86 86 95 95 94 96 96 81 72 84 52 27 26	FAKANGYV[101.0]L[377.2]
3577	LELLEKPGPF	7.7	77	571.8275	2	45.079	1.9	72 92 98 98 94 91 83 67 40 26	[113.1]ELLEKP[301.1]
3511	LELLEKPGPF	7.7	77	571.8272	2	44.283	1.5	65 91 99 99 95 94 89 73 30 26	[113.1]ELLEKP[301.1]
3247	LELLEQVLW	6.9	77	571.8277	2	41.05	2.3	45 86 98 98 92 77 80 81 26	[113.1]ELLE[128.1]VL[186.1]
1117	SVVKFACLW	6.9	77	526.7848	2	15.308	2.4	96 96 96 97 95 77 51 51 26	SVVKF[473.2]
3313	LELLEQLVW	6.9	77	571.8279	2	41.862	2.7	44 88 98 98 96 72 81 81 26	[113.1]ELLE[128.1]LV[186.1]
1850	SHYFQM(+15.99)MLTDRENKW	11.5	76	1001.453	2	23.611	2.4	62 46 46 56 89 89 88 98 98 97 89 62 73 85 62	[534.2]QM(+15.99)MLTDR[243.1]K[186.1]
1723	NFTNEAGLKQFNF	9.9	76	765.372	2	22.239	-1	76 82 95 83 87 82 74 80 69 56 47 73 83	[114.0]FTNEA[57.0]L[517.3]F
1878	GNKLLGFTNERW	9.2	76	717.8771	2	23.937	-1.2	28 45 50 92 99 98 98 97 89 94 95 26	[299.2]LLGFTNER[186.1]
2893	FAKYSRAELTLY	9.2	76	731.3922	2	36.605	2.4	79 85 95 94 84 83 85 85 87 78 29 26	[147.1]AKYSRAEL[377.2]
1310	NPLLEAYGPAVF	9.2	76	645.8384	2	17.586	-2.5	63 68 73 98 92 83 80 91 79 69 63 50	[324.2]LEAYG[414.2]
2259	MWDYLPMCRTLVNSPLW	13	76	1063.008	2	28.603	0.8	39 35 56 85 98 88 84 80 85 95 97 97 91 90 74 67 26	[432.1]YLPMCRTLVNS[396.2]
2460	AFKKGGYAGGKMVF	10.7	76	730.8901	2	31.174	0.7	84 84 95 77 95 96 97 90 76 58 58 62 62 26	AFK[128.1]GGYA[619.3]
3648	AFKGKGHPELMVF	9.9	76	730.8899	2	45.956	0.4	76 83 93 91 90 88 80 69 97 78 63 51 26	[71.0]FKGKGH[97.1]E[490.3]
1993	FRVLM(+15.99)SVSGTAAM(+15.99)QF	11.4	76	838.9096	2	25.29	-0.9	30 45 52 83 89 90 89 82 64 65 88 91 91 77 96	[402.2]LM(+15.99)SVS[158.1]AAM(+15.99)[128.1]F

3838	LELLEQVLW	6.8	76	571.8276	2	48.285	2.2	75 93 99 98 95 60 66 67 26	[113.1]ELLE[526.3]
1617	YGKLSLDKNELYF	9.8	76	795.4141	2	21.052	-0.1	72 84 94 98 98 95 77 64 65 87 92 26 26	[163.1]GKLSL[357.2]EL[310.1]
1394	CALKVGGTLEHEESKPVW	13.6	76	992.0058	2	18.531	2	40 43 54 47 47 66 94 95 98 98 99 99 97 95 94 84 78 26	[571.3]GTLEHEESKP[285.1]
3445	LELLEQLVW	6.8	76	571.8276	2	43.481	2.1	43 87 98 98 95 72 78 80 26	[113.1]ELLE[241.1]V[186.1]
1578	FAKANGYSLKAKY	9.8	76	730.9	2	20.599	2.2	81 81 95 95 95 98 98 79 68 75 59 26 26	FAKANGY[690.4]
1104	LSLEEPKW	6.1	76	501.2674	2	15.171	-2.6	26 99 99 99 93 80 80 26	[113.1]SLEEPK[186.1]
1359	YPAGYSLLLTY	8.3	76	630.8323	2	18.148	5	70 77 83 95 97 90 89 97 51 51 26	[260.1]AGYSLL[377.2]
1712	MVKGLVLEYSKELSY(+79.97)	11.3	76	919.9548	2	22.119	0.9	58 60 75 82 65 88 99 99 89 95 91 80 53 55 36	[358.2]G[113.1]VLEYSKE[443.1]
1200	LFEASDVW	6	76	966.4563	1	16.302	-0.4	99 99 95 91 68 65 58 26	LFEA[487.2]
1831	YPLWSAM(+15.99)GAVDPNPVDKSRF	15.1	75	1133.555	2	23.405	2.9	36 39 40 94 95 96 98 98 95 95 95 94 76 88 90 93 62 52 32 31	[373.2]WSAM(+15.99)GAVDP[114.0]PVD[518.3]
2172	AFKANPGLAANPLLEAYLFFY	15.8	75	1165.616	2	27.507	0.8	27 44 53 91 67 61 74 97 99 99 90 82 83 97 98 98 98 94 37 35 48	[346.2]A[268.1]LAANPLLEAYL[457.2]
1142	RNDNKMAFGKLF	9	75	720.8762	2	15.614	2.5	93 90 95 90 87 73 59 61 67 70 86 26	RNDNK[534.3]L[147.1]
1692	MGVLPM(+15.99)ASVSHAF	9.8	75	681.8307	2	21.918	-0.2	47 43 42 84 99 99 95 95 97 85 79 79 26	[287.1]LPM(+15.99)ASVS[355.2]
2127	LELLEKPGPF	7.5	75	571.8278	2	26.928	2.5	43 86 98 98 96 94 90 79 36 26	[113.1]ELLEKP[301.1]
1106	ALYKTF	4.5	75	371.7108	2	15.187	1.2	90 90 93 67 82 26	ALY[128.1]T[147.1]
2202	SGTLMPLFSKPF	9	75	662.8521	2	27.885	-0.1	27 46 50 94 93 95 99 97 94 87 88 26	[245.1]LMPLFSKP[147.1]
1260	VSLPDGKFLDVRW	9.8	75	766.4169	2	16.998	-0.1	26 26 98 95 91 85 85 93 94 93 78 78 26	[186.1]LPDGKFLD[441.2]
1996	LQGEVEDLMVDVAVW	11.3	75	851.9213	2	25.319	-0.1	45 42 63 66 90 96 97 97 97 98 96 89 64 53 27	[427.2]VEDLMVDV[356.2]
3241	MESLSKHKPF	7.5	75	602.313	2	40.979	-0.3	95 93 93 89 79 83 63 58 65 26	MESL[87.0]K[509.3]
1351	YSLKGLNLGDFHF	9.7	75	755.8883	2	18.065	0.4	49 57 77 95 97 92 89 87 71 66 75 88 26	[363.2]KGLNL[319.1]H[147.1]
1480	MCLLEM(+15.99)M(+15.99)W	6	75	544.7172	2	19.488	-1.1	58 59 78 93 93 84 65 65	[347.1]LEM(+15.99)[333.1]
1424	LM(+15.99)SLKDKHW	6.7	75	1173.612	1	18.866	2.6	94 83 81 81 92 84 64 64 26	LM(+15.99)SLKD[451.2]
1560	QNGAKELDLVLQW	9.7	75	757.4044	2	20.39	0.4	43 44 59 83 88 95 95 97 93 83 63 64 61	[299.1]AKELDLV[427.2]
2438	MESLAGAKHLF	8.2	75	602.3139	2	30.887	1.2	96 96 95 94 89 73 65 66 59 58 26	MESLA[653.4]
1514	FAKKGGYAELLTY	9.7	75	730.8914	2	19.871	-1.9	68 69 88 91 93 94 96 93 86 81 52 31 26	[218.1]KKGGYAEL[377.2]
2274	DVQLLGGSALKHW	9.7	75	712.3868	2	28.798	-2.1	93 92 86 84 69 67 81 79 69 68 72 78 26	DVQL[170.1]G[722.4]
3675	MESLKPNAKW	7.5	75	602.3143	2	46.277	1.9	95 95 94 89 76 57 56 75 79 26	MESL[724.4]
1368	APPNALVW	6	75	867.4739	1	18.255	1.9	26 97 95 86 85 86 92 26	[71.0]PPNALV[186.1]
1057	TSGKTFAKKGRTYF	10.4	75	796.434	2	14.606	1	28 42 58 88 93 98 98 98 99 92 88 68 42 44	[245.1]KTFAKKGR[411.2]
895	FDLTGEVSSVFDF	9.7	74	731.8383	2	12.651	-2.9	26 95 93 93 95 94 95 96 84 60 54 49 26	[147.1]DLTGEVSS[508.2]
3370	MPSDGKLF	6	74	447.7235	2	42.566	1	87 87 69 64 81 88 89 26	MP[202.1]GKL[147.1]

2110	NNQNLEKVLW	7.4	74	629.3322	2	26.706	-1.2	60 60 59 72 93 97 96 90 86 26	[470.2]LEKVL[186.1]
3997	MESLTPLARW	7.4	74	602.3143	2	50.295	1.9	95 95 92 91 75 64 58 64 77 26	MESL[724.4]
1341	VRDALAKKKELEKPNF	11.9	74	943.5441	2	17.947	-2.5	59 43 43 74 89 97 98 99 97 95 96 94 84 39 40 33	[441.2]LAKKKELEK[358.2]
1887	RRSDFVTGVLSDKNPKRY(+79.97)	13.4	74	1109.562	2	24.029	2	29 74 82 97 99 97 94 89 80 76 88 96 92 56 44 44 64 26	[312.2]SDFVTGV[113.1]SDK[738.3]
1105	ECSAKPLY	5.9	74	455.721	2	15.178	0.9	81 82 80 69 73 83 95 26	ECS[199.1]PL[163.1]
3846	FAKANGYALKKCF	9.6	74	730.8904	2	48.379	1.2	72 73 91 90 88 93 97 96 89 74 35 35 26	[218.1]KANGYAL[506.3]
1628	YGKLALSSGLAAEFF	11.1	74	787.4177	2	21.17	1.4	73 84 94 98 96 90 90 68 68 79 66 60 51 42 42	[163.1]GKLALS[822.4]
1999	LLNPESKTPGLMENVLF	12.6	74	951.507	2	25.361	1.3	73 67 57 64 73 93 96 97 90 85 91 92 78 54 56 56 26	[566.3]SKTPGLM[602.3]
2323	LELLEKPGPF	7.4	74	571.8278	2	29.419	2.5	47 87 98 99 96 94 87 69 28 26	[113.1]ELLEKP[301.1]
2161	MLKLWPTPF	6.6	74	1132.625	1	27.363	2.5	89 87 89 90 72 90 90 26 26	MLKL[186.1]PT[244.1]
1280	CPLWKLDARHF	8.1	74	693.3589	2	17.23	-2.8	26 26 96 96 93 92 95 83 78 92 26	[200.1]LWKLDA[156.1]H[147.1]
3779	FAKANGYAKLKCF	9.6	74	730.8904	2	47.562	1.2	84 83 95 95 94 95 96 96 88 46 26 26 26	FAKANGYAK[491.3]
2562	FAKKGGYAGCAKLF	10.3	74	487.596	3	32.472	1.2	57 57 79 76 87 82 89 94 91 86 77 64 59 26	[474.3]GGYAGC[459.3]
2040	MTLVKGDPLEYSKEEKW	12.5	74	1027.021	2	25.853	1.4	55 62 81 94 82 81 73 88 98 98 89 93 85 68 32 32 31	[232.1]LVKG[115.0]PLEYSK[572.3]
2652	LELLEKPGPF	7.3	73	571.8277	2	33.591	2.3	47 88 98 98 95 92 87 66 32 26	[113.1]ELLEKP[301.1]
1382	HPVVGYAELLTY	8.8	73	681.3569	2	18.393	-2.5	26 26 90 93 93 97 97 97 97 84 48 26	[234.1]VVGYAELL[264.1]
2394	FAKANGYVTLLTY	9.5	73	730.8911	2	30.331	-2.3	76 76 94 95 94 95 94 70 56 85 60 27 26	[218.1]KANGY[200.1]L[377.2]
1279	KFLPRW	4.4	73	423.7527	2	17.222	-0.3	84 85 92 78 72 26	KFL[439.2]
3914	FAKANGYVTLTLY	9.5	73	730.8907	2	49.239	-2.8	77 78 92 91 91 95 94 76 66 80 40 40 26	[218.1]KANGY[200.1]L[377.2]
1438	STKSDGVRDLW	8.1	73	632.3195	2	19.024	-0.8	75 83 93 96 96 93 86 47 45 46 41	[87.0]TKSDGV[570.3]
3186	AFKANGYAKCKLF	9.5	73	730.8904	2	40.288	1.2	79 86 94 93 92 95 98 94 85 45 29 29 26	[71.0]FKANGYAK[491.3]
3923	LELLEAGVLW	7.3	73	571.8276	2	49.358	2.2	49 86 98 97 93 81 76 61 60 26	[113.1]ELLEA[455.3]
3106	YGKLPKVAALALCY(+79.97)	10.3	73	795.4128	2	39.267	1.5	65 74 88 90 63 48 62 84 85 81 83 74 75 47	[220.1]KL[324.2]AALA[459.1]
888	CSSAGGANPKVTW	9.5	73	639.3018	2	12.568	1.6	26 94 95 93 94 95 95 89 91 58 42 46 26	[103.0]SSAGGANP[514.3]
4043	FAKANGYVTLLTY	9.5	73	730.8914	2	50.882	-1.9	80 80 94 94 90 91 92 78 70 81 37 30 26	FAKANGY[200.1]L[377.2]
3451	AFKGKGYAKMRGF	9.5	73	730.8956	2	43.549	0.5	78 84 95 94 94 94 96 92 78 46 30 37 26	[71.0]FKGKGYA[619.3]
2017	MNTMLKVSVLTYF	9.5	73	773.9056	2	25.572	2.1	79 76 81 96 97 98 88 82 63 55 45 48 35	[245.1]TMLKVS[623.3]
1620	NGVLGVLLW	6.6	73	485.7904	2	21.089	1.5	82 93 93 97 84 75 74 26 26	NGVLG[511.3]
3151	AFKALGARGGHMVF	10.2	73	731.3919	2	39.844	-1.2	77 85 95 95 91 85 64 54 51 86 87 90 26 26	[71.0]FKALG[284.2]GHM[246.1]
3020	YGKLALTDVGNFLY	10.2	73	787.415	2	38.172	-2.1	68 79 91 97 96 81 64 63 86 65 55 69 73 26	[220.1]KLAL[216.1]V[594.3]
1728	DALLVGQPY	6.6	73	975.5158	1	22.298	1.3	52 52 89 89 83 80 57 88 60	[186.1]LLVG[128.1]P[163.1]

2209	CLKLEVLM(+15.99)VVF	8	73	655.3662	2	27.972	-0.5	74 73 93 92 86 86 78 60 62 64 26	[216.1]KLEV[605.3]
3625	FAKKGGYAELTLY	9.4	72	487.5965	3	45.674	-2.2	51 52 74 86 82 82 87 93 91 86 78 47 26	[346.2]KGGYAEL[377.2]
2126	MDPTKLLAANPLLEAYVWW	13.8	72	1116.081	2	26.917	-0.7	28 43 40 40 54 89 98 99 98 84 78 78 96 97 97 97 86 26 39	[572.3]LLAAN[210.1]LEAYV[372.2]
3769	MESLATLPRW	7.2	72	602.3134	2	47.432	0.3	95 94 93 91 87 61 54 55 63 26	MESLA[653.4]
1227	RLLTENGEGF	7.2	72	568.2902	2	16.611	-0.9	28 54 94 95 89 71 83 84 95 26	[269.2]LTE[114.0]GEG[147.1]
1309	RSSVLVALPM(+15.99)HF	8.7	72	458.2527	3	17.576	2.4	26 82 82 82 84 63 70 84 87 73 64 64	[156.1]SSVL[170.1]LP[431.2]
1790	NNTVLVAALKPAVEY	10.8	72	801.45	2	22.958	2	68 67 85 92 74 49 59 61 72 68 57 63 86 90 85	[228.1]TV[763.5]VEY
2338	AFQANGPGLPLLTY	10.1	72	731.393	2	29.604	3.5	87 89 82 93 83 88 67 64 77 89 84 49 29 26	AFQANG[267.2]PL[377.2]
1526	SDNAFQF	5.1	72	828.3517	1	20.007	-0.6	69 69 68 92 95 82 26	[316.1]AFQ[147.1]
1297	MFEKSKLKEYT(+79.97)F	8.7	72	815.8851	2	17.436	2.8	26 26 95 94 96 97 98 96 96 84 26 26	[278.1]EKSKLKEY[328.1]
2133	ARYSM(+15.99)LARNKVVDTAHVF	13	72	1047.55	2	27.003	0.5	28 28 29 86 96 96 59 50 49 88 90 95 95 93 91 94 94 26	[390.2]SM(+15.99)L[341.2]KVVDTAHV[147.1]
2028	FVVVKGDPLEYSPRW	10.8	72	896.4739	2	25.703	-1.3	26 80 80 84 65 65 76 93 98 98 88 84 55 57 26	[147.1]VVV[300.1]PLEYS[439.2]
1821	MPNAALGPGLPVKGF	10.8	72	734.9043	2	23.29	2.2	92 92 89 97 97 92 87 69 64 76 54 40 42 55 26	MPNAALG[795.5]
2851	LELLEQVLW	6.5	72	571.8281	2	36.071	3	39 80 97 98 91 59 75 77 26	[113.1]ELLE[526.3]
1604	VPPVEEVLY	6.5	72	1044.562	1	20.908	0.2	26 26 96 94 94 94 93 94 26	[196.1]PVEEVL[163.1]
1975	FLELVSAVW	6.5	72	532.2962	2	25.067	2.8	76 65 71 91 85 76 63 68 46	[389.2]LV[443.2]
913	VRHKELEKKLHW	8.6	72	801.9665	2	12.876	2	26 56 89 71 94 93 91 93 86 63 66 26	[255.2]H[128.1]ELEKK[436.2]
1633	NKLHVGAPKF	7.2	72	555.8245	2	21.232	-0.1	81 79 89 92 81 78 67 60 59 26	N[128.1]LHV[500.3]
1842	KEASGLPNFTVF	8.6	72	655.3433	2	23.532	0.5	41 41 63 90 89 50 51 56 89 92 96 96	[328.2]SG[324.2]FTVF
1933	FLLWSAFGAVDPNPVDM(+15.99)GKW	14.3	72	1133.553	2	24.565	-0.9	27 27 75 64 85 89 97 98 95 95 95 92 84 91 92 90 37 32 32 26	[559.3]SAFGAVDPNPVD[518.2]
1719	FAKANGYSLLLLATY	10.7	72	822.9525	2	22.193	-1.2	61 60 91 97 96 98 97 88 88 98 60 39 33 34 26	[218.1]KANGYSLL[561.3]
1387	Y(+79.97)KKDTRAELKAKSFPGKVHF	14.3	72	810.759	3	18.452	-2.8	63 45 37 56 73 75 79 85 95 97 98 97 93 87 80 65 61 55 54 26	[942.4]ELKAKSFP[568.3]
1274	VEAAALAQKQELEKKF	11.4	71	601.6728	3	17.159	1.6	78 82 97 99 96 84 73 33 31 33 64 86 83 83 88 26	[99.1]EAAAL[584.3]LEKK[147.1]
3144	MTELDTKPGPLLGF	10	71	759.8977	2	39.757	0.6	61 74 88 93 93 90 89 83 69 68 72 44 44 26	[232.1]ELDTKP[584.3]
3538	FLSLGPCLPAW	7.9	71	602.3154	2	44.603	0.5	91 91 91 92 77 70 84 61 50 48 26	FLSL[154.1]C[467.3]
1048	KKLNPTNKEVPGW	9.3	71	755.9247	2	14.496	3	26 68 66 82 89 85 76 92 92 98 95 26 26	[369.3]NPT[114.0]KEVP[243.1]
1400	KNLKGCVHF	6.4	71	523.2844	2	18.6	0.2	82 81 94 88 80 81 80 26 26	KNLKGCV[284.1]
2805	FAQAGGGVLRDVRW	10	71	766.4092	2	35.478	-1	87 88 78 83 70 59 70 75 68 66 70 72 79 26	FA[128.1]A[1095.6]
1676	KKNFFQQLKENTY(+79.97)	9.3	71	884.4256	2	21.728	-1.5	89 91 87 97 89 79 49 72 42 48 46 76 53	KKNFF[1084.5]
1689	SWLETYLPGRF	7.8	71	684.8499	2	21.881	-1.4	26 88 97 89 97 95 92 76 56 35 26	[87.0]WLETYL[457.2]
4145	HGPAGY	4.3	71	301.14	2	52.173	-0.1	26 79 76 79 77 88	[419.2]Y

1885	FNTVTLF	5	71	841.4457	1	24.01	0.3	92 85 89 87 88 26 26	FNTVT[260.2]
1243	AMLKAPGAAPF	7.8	71	1073.586	1	16.796	4.7	90 90 83 84 85 79 71 70 58 39 26	AMLKA[540.3]
3460	MESLPGRVVW	7.1	71	587.3094	2	43.644	2.8	94 93 93 92 72 69 66 74 26 26	MESL[694.4]
2047	MTLVKGDPLEYSQELSKW	12.8	71	1062.539	2	25.934	0.8	75 62 64 81 69 71 88 96 99 99 86 87 69 74 47 39 36 26	[345.2]V[185.1]DPLEYS[771.4]
3416	MPAMVKLW	5.7	71	975.515	1	43.123	-0.4	85 78 82 92 74 60 65 26	M[97.1]AM[526.3]
3710	LELLEKPPGF	7.1	71	571.8279	2	46.704	2.7	46 88 99 98 96 94 89 36 31 26	[113.1]ELLEKP[301.1]
910	NVLKKKELEKTAW	9.2	71	793.9686	2	12.834	2.2	36 34 35 78 97 85 84 90 92 94 77 70 42	[454.3]KKELEK[358.2]
4230	VT(+79.97)HDFTCY	5.7	71	533.19	2	53.296	-1.8	26 26 96 96 94 81 93 50	[280.1]HDFTC[163.1]
3049	KNLLGFKHW	6.4	71	571.8287	2	38.544	2.8	84 82 94 98 77 73 72 26 26	KNLL[655.3]
1027	MVPGVRF	5	71	403.2244	2	14.256	3.4	94 94 94 76 54 54 26	MVP[459.3]
1818	MSKMLSGNLGLRFHF	10.6	71	869.4524	2	23.267	2.7	79 58 59 93 96 74 71 65 78 96 95 92 44 26 26	[346.2]ML[371.2]GLR[431.2]
3379	LELLEKGPPF	7.1	71	571.8279	2	42.68	2.8	40 86 98 98 95 91 72 64 32 26	[113.1]ELLEK[398.2]
1755	RAVLMTTLSVFY	8.5	71	700.8842	2	22.572	0.3	74 72 66 64 78 83 76 45 61 97 97 26	[570.3]T[301.2]VF[163.1]
3702	APNPAVLW	5.6	71	434.2396	2	46.613	-0.4	98 97 77 77 63 58 65 26	AP[680.4]
1402	ALFKVNY	4.9	71	427.7429	2	18.618	1.6	26 98 97 97 54 64 54	[71.0]LFK[376.2]
1708	DHAVKSGDVVGDLW	9.9	71	749.3697	2	22.075	-0.7	80 83 94 92 88 84 75 75 72 52 45 51 53 38	DHAVKS[841.4]
2533	FAKAHATGAPLCVVF	10.6	71	766.4086	2	32.109	0.6	78 75 89 91 77 65 70 76 84 90 85 49 49 46 26	[218.1]KA[366.2]APL[448.2]
1162	CPLGALW	4.9	70	759.387	1	15.846	1.6	26 95 94 93 83 71 26	[103.0]PLGA[299.2]
4126	MRCGPALF	5.6	70	447.72	2	51.928	0.3	68 74 85 82 65 66 92 26	[287.1]CG[168.1]L[147.1]
2108	CLKLFPLFSWW	7.7	70	720.3828	2	26.687	2.7	78 79 94 87 88 26 94 77 77 40 26	[216.1]KLF[97.1]L[606.3]
2239	LNYLSM(+15.99)LLLGW	7.7	70	669.8592	2	28.352	-1.1	63 58 68 70 85 85 96 98 59 59 26	[503.3]SM(+15.99)LL[356.2]
2166	MVLFNELLATTKSEKKY	11.9	70	1008.05	2	27.429	2.1	50 45 58 89 82 90 93 78 76 91 96 83 76 49 49 54 26	[343.2]FNEL[184.1]TTK[635.3]
1305	FEGMESVPSEELW	9.1	70	770.3394	2	17.528	2.8	26 71 69 72 74 83 95 95 89 89 89 26 26	[593.2]SVPSEE[299.2]
1202	DSVVQLYPVF	7	70	583.8084	2	16.321	0.4	52 66 71 95 83 94 86 97 26 26	[301.1]VQLYP[246.1]
2599	FAKGKGEGKGPGRGW	10.5	70	766.4096	2	32.939	-0.5	79 81 91 86 79 77 81 77 77 72 55 52 52 59 26	[147.1]AKG[185.1]E[795.4]
3368	FAKMKRGEYLF	7.7	70	695.3717	2	42.544	1	72 80 91 92 83 69 80 73 74 26 26	[147.1]AKMK[156.1]G[552.3]
1855	MGKDRSTALAKAAW	9.8	70	753.3974	2	23.668	-1.1	76 78 89 89 86 89 95 95 79 51 46 37 37 26	[188.1]KDRSTA[640.4]
2232	KCVM(+15.99)FLPPFVVGW	9.1	70	769.9	2	28.266	2	65 69 69 63 41 78 89 89 89 82 72 72 26	[737.4]PPFV[342.2]
1623	MPLGFTATARW	7.7	70	625.8208	2	21.114	-0.5	93 93 92 86 83 90 69 36 39 56 26	MPLGFT[585.3]
3270	HHTFKVLY	5.6	70	1044.56	1	41.341	-2.2	80 85 85 92 80 53 55 26	HHTFK[375.2]
3471	FAKLEPATGAVELW	9.8	70	766.4091	2	43.784	-2.9	76 79 91 94 91 79 69 51 48 65 60 65 77 26	[218.1]KLE[924.5]

1432	HVQLSLASAKGKT(+79.97)W	9.8	70	803.4122	2	18.955	1.4	85 85 81 94 94 92 76 65 69 85 34 34 37 38	HVQLSL[229.1]K[552.2]
3714	FAKANGYACLKKF	9.1	70	730.8904	2	46.759	1.1	84 84 95 94 94 97 95 87 49 42 28 26 26	FAKANGYA[619.4]
2080	STGLFPLFSQPF	8.4	70	670.849	2	26.334	1.7	30 47 53 94 96 26 99 96 93 65 79 53	[245.1]LF[97.1]LFS[372.2]
1971	GACGAVRGPFASSVAHF	11.8	70	817.3963	2	25.013	-3	50 42 55 86 95 92 61 51 57 93 92 91 74 69 69 71 26	[231.1]GAV[310.2]FAS[541.3]
4042	APVLPGQW	5.6	70	434.2397	2	50.873	-0.1	95 95 95 45 55 52 63 52	APV[581.3]
1911	YSLLGLNTGDPKAF	9.7	70	748.3937	2	24.302	0.7	26 90 90 95 94 94 86 62 67 86 57 53 40 26	[163.1]SLLGLN[158.1]D[443.3]
3350	FAKANGYLSLSKY	9	70	731.3923	2	42.322	2.5	62 62 86 87 87 93 93 74 64 64 50 51 26	[218.1]KANGY[691.4]
3099	MESHVGGVKLF	7.6	70	602.3132	2	39.177	0.1	98 97 97 99 64 59 52 50 55 62 26	MESH[700.4]
3601	HHTYLVKF	5.6	69	1044.562	1	45.372	-0.5	62 62 72 90 88 75 76 26	[375.2]YL[374.2]
2785	KNLLGKHFW	6.3	69	571.8287	2	35.233	2.8	86 84 94 97 79 71 58 26 26	KNLL[655.3]
1632	FAHKNKLVW	6.3	69	1142.65	1	21.222	2.4	26 77 78 76 82 87 88 81 26	[483.3]NKLV[186.1]
1641	YGKLALDNKELFY	9	69	787.4178	2	21.316	1.5	45 65 82 97 96 69 58 55 61 76 85 81 26	[220.1]KLA[599.3]LF[163.1]
2480	FAQANGGPPLLLTY	9.7	69	731.392	2	31.419	2.1	87 89 82 88 82 94 73 50 53 60 84 47 47 26	FAQANG[364.2]L[377.2]
3000	FAKAKMAFGLWVY	9	69	766.4097	2	37.923	-0.6	84 82 92 71 58 57 71 79 80 81 86 26 26	FAK[548.3]GLW[262.1]
1308	RACESLKPLGLW	8.3	69	686.8757	2	17.569	2.7	54 68 76 96 96 97 97 82 59 38 34 26	[330.1]ESLKP[469.3]
2176	MVKEASGPLNFTVLF	10.4	69	826.939	2	27.55	-0.5	45 50 52 88 93 94 92 44 45 49 91 82 83 95 26	[358.2]EASG[324.2]FTVL[147.1]
1107	CPDSLATELDATW	9	69	711.3181	2	15.195	2.7	26 26 62 51 47 45 67 90 97 97 96 97 89	[687.3]ELDATW
1825	LEMWSAFPPVW	7.6	69	681.8299	2	23.338	-1.8	46 46 65 76 78 95 98 99 99 26 26	[646.3]AFPP[285.1]
1634	KNLLKGHFW	6.2	69	571.8287	2	21.241	2.9	78 72 87 96 91 80 61 26 26	[242.1]LLKG[470.2]
1230	KGKLKGSLLMMFF	9	69	750.4268	2	16.654	-0.8	26 71 70 90 93 86 72 73 80 83 95 26 26	[313.2]LKG[200.1]LMM[294.1]
2131	AFKAGGGYACKLKF	9.6	69	730.8904	2	26.982	1.3	74 84 90 87 64 72 91 94 93 70 52 34 26 26	[71.0]FKA[114.0]GYA[619.4]
3074	AFQANGPGPLLLTY	9.6	69	731.3922	2	38.859	2.3	55 54 66 89 77 89 82 68 79 89 87 48 48 26	[346.2]A[114.0]GP[154.1]LL[377.2]
3171	MESLSKHKPF	6.9	69	602.3141	2	40.094	1.6	93 93 93 91 81 80 41 40 44 26	MESLSK[509.3]
2336	FAKLGPGALPLMMW	9.6	69	766.4096	2	29.582	-2.9	80 83 92 87 74 62 63 56 62 91 66 52 50 38	FAKL[395.2]P[561.2]
1642	AFKGKGYAELLSTF	9.6	69	766.4096	2	21.324	-2.2	67 73 89 78 75 73 85 90 82 65 52 39 39 48	[218.1]K[242.1]YAE[561.3]
1249	SSAKTFAKKGRSGY	9.6	69	744.4023	2	16.865	0.7	29 43 52 95 96 96 95 96 98 85 52 50 42 26	[245.1]KTFAKKG[463.2]
2119	SKWATLTVVLSVALM(+15.99)SEGW	13.1	69	698.7034	3	26.827	0.8	27 39 35 65 76 84 81 87 26 26 93 90 89 79 79 81 89 90 61	[573.3]LTV[212.2]SVA[260.1]SEG[186.1]
1759	YVHFAKDVPFVTY	8.9	69	793.408	2	22.618	2.5	49 49 49 87 78 52 56 60 96 91 82 90 47	[399.2]F[413.2]PFVT[163.1]
1696	LELLFTLFF	6.2	69	571.8293	2	21.948	1.6	45 78 91 94 85 77 60 58 26	[242.1]LLF[508.3]
1924	APVPLGQW	5.5	69	434.2393	2	24.455	-1.1	93 93 93 46 56 48 71 44	APV[581.3]
2380	MAPMVKLW	5.5	69	975.516	1	30.149	0.6	80 74 83 90 71 58 63 26	M[71.0]PM[526.3]

1988	EVLNGQEYLVRF	8.2	68	733.8862	2	25.228	0.9	28 64 86 83 75 56 79 60 94 82 83 26	[228.1]LN[477.2]LVR[147.1]
2060	LWELF	3.4	68	707.3768	1	26.089	0.8	26 96 96 96 26	[113.1]WEL[147.1]
1616	AM(+15.99)EAYKAFLKAKF	8.9	68	767.4125	2	21.043	2.8	79 84 81 84 84 90 91 79 57 46 48 33 26	[71.0]M(+15.99)EAYKA[734.4]
1261	TSSLKRKKEY	6.8	68	620.3568	2	17.006	0.6	26 26 96 92 89 77 57 58 87 71	[188.1]SLK[412.3]E[163.1]
1238	YGKLADTQFAF	7.5	68	630.8196	2	16.739	4.7	79 87 96 97 91 84 55 34 33 47 44	[163.1]GKLAD[594.3]
2703	FAKAPPGGPPHKW	8.9	68	695.3742	2	34.197	-1.1	76 74 77 65 69 84 82 56 49 76 72 76 26	[514.3]PG[702.4]
3216	AFKADGYKALLTY	8.9	68	730.8911	2	40.667	-2.3	81 87 95 82 63 61 62 66 63 87 74 35 26	AFKA[534.2]L[377.2]
2100	MPELLEKPPGF	7.5	68	629.3316	2	26.594	1	26 26 94 98 98 96 95 92 50 43 26	[228.1]ELLEKP[301.1]
3284	FAKANGYLSLSKY	8.9	68	731.3921	2	41.51	2.3	80 80 92 91 81 85 94 82 62 39 34 34 26	FAKANGYL[578.3]
1994	RVVTDSPLLGKNPTNKELYY	13.6	68	769.7479	3	25.299	-2.1	26 26 46 47 63 63 64 82 86 84 90 90 93 92 84 90 90 85 26 26	[754.4]LLGKNPTNKEL[326.1]
2580	APATKPPW	5.4	68	434.2398	2	32.698	0.1	26 94 82 62 78 82 91 26	[71.0]PA[229.1]PP[186.1]
1090	WETEAGLWPLY	7.5	68	682.8298	2	14.991	0.3	42 80 83 96 88 85 91 98 28 26 26	[186.1]ETEAGLW[373.2]
1711	M(+15.99)LPTYLLTGW	6.8	68	605.8143	2	22.113	3	26 53 74 90 93 96 94 61 61 26	[357.2]TYLL[344.1]
2392	SSNPVMLF	5.4	68	447.7231	2	30.297	0.1	75 77 67 85 93 92 26 26	[288.1]PVM[260.2]
1717	QPTEEAKY(+79.97)	5.4	68	1045.423	1	22.176	-0.6	62 72 92 97 62 62 67 26	[225.1]TE[571.2]
1242	TTLKHGNRF	6.1	68	537.2972	2	16.788	2	93 93 76 69 80 64 44 50 38	TT[241.2]H[474.2]
2377	VHPVGYAELLTY	8.2	68	681.3575	2	30.115	-1.5	26 26 26 97 97 96 93 93 96 79 55 26	[333.2]VGYAEL[377.2]
3066	FAKAKMFGAYVLW	8.8	68	766.4095	2	38.76	-0.8	75 74 85 77 77 80 48 61 67 90 92 26 26	[218.1]K[199.1]M[275.1]YV[299.2]
3268	HY(+79.97)S(+79.97)GS(+79.97)VCACDF	7.5	68	476.7603	3	41.307	-54.2	67 67 67 90 88 88 88 67 47 47 26	[547.1]GS(+79.97)VC[436.1]
3417	MALLVKHDF	6.1	68	537.2953	2	43.132	1.9	78 77 88 59 55 69 74 82 26	[202.1]L[477.3]D[147.1]
3805	KNLEGLAVW	6.1	68	515.29	2	47.879	0	77 65 90 86 59 53 47 67 64	[242.1]LE[526.3]
967	HMAPVLELETVEAVW	10.2	68	575.2952	3	13.544	-0.7	34 37 44 61 78 95 95 97 88 84 80 80 56 56 26	[535.3]LELETVE[356.2]
2160	TLSNDLLPPEWVPF	9.5	68	814.4218	2	27.352	-0.2	37 40 51 60 78 94 91 82 89 84 71 71 70 26	[530.2]LLPPE[529.3]
961	AFYVYSVT(+79.97)F	6.1	68	1176.502	1	13.467	0.8	26 26 26 90 88 89 88 90 83	[381.2]VYSVT(+79.97)F
3342	TLFLDDLDKPRW	8.1	68	759.8992	2	42.223	-2.7	40 39 68 92 94 94 86 81 75 62 50 26	[361.2]LDDLD[567.3]
1940	LLPNESKTGPLMELNF	10.9	68	901.9723	2	24.649	0.9	26 77 51 47 78 90 92 96 77 67 77 92 75 42 42 48	[566.3]SKT[267.2]M[503.2]
1384	LVGAYAF	4.7	68	740.3981	1	18.412	0.5	65 64 73 74 77 91 26	[503.3]A[147.1]
2066	FAKKGGYAGKGMVF	9.5	68	730.8903	2	26.165	0.9	74 75 91 65 82 84 95 94 75 57 42 41 40 26	[218.1]K[128.1]GGYA[619.3]
4058	LELLFFTLF	6.1	68	571.8278	2	51.064	-1.1	46 87 96 99 83 60 57 51 26	[113.1]ELLF[508.3]
4320	DDDDGADY	5.4	68	443.14	2	54.494	-1.9	26 26 85 86 84 85 86 59	[230.1]DDGAD[163.1]
1756	NMKQLVAGVNDKCTW	10.1	67	853.9233	2	22.58	2.5	60 59 59 37 42 87 94 86 59 56 78 81 78 79 51	[614.3]VAG[328.1]K[390.1]

997	AQSSPVAAAATF	8.1	67	560.7848	2	13.904	-0.8	86 71 95 99 97 87 66 51 39 35 35 43	A[128.1]SSPV[532.3]
1303	FAQYEQTNLQEEF	8.8	67	823.8729	2	17.507	3.2	48 63 66 98 92 65 63 42 44 72 93 97 26	[346.2]YE[584.3]EE[147.1]
1362	SDDTFAATLPRW	8.1	67	690.3342	2	18.188	1.6	26 96 95 94 95 91 81 78 49 40 34 26	[87.0]DDTFAA[653.4]
2226	LSVAALAYSKLLGVEKTAW	12.8	67	674.0546	3	28.189	0.7	26 88 85 84 81 77 75 64 62 72 71 72 76 84 79 58 45 38 34	[113.1]SVAA[845.5]V[615.3]
1982	Y(+79.97)ATM(+15.99)AGPLEKEKW	8.8	67	810.3629	2	25.15	0.7	50 87 68 84 80 66 63 68 58 59 68 68 50	[243.0]A[101.0]M(+15.99)A[967.5]
1324	WTNGKTVNEVGAKLKYAF	12.1	67	1013.543	2	17.743	1.3	73 36 34 79 90 95 96 88 83 53 43 45 47 78 83 56 77 50	[458.2]KTVNE[468.3]K[381.2]
2948	MTELLSTVLVHEF	8.8	67	759.8987	2	37.281	1.9	75 81 92 84 59 57 52 52 82 70 70 70 26	[131.0]TEL[400.2]L[512.2]
3600	T(+79.97)TGYTLTTAAENY(+79.97)	8.8	67	522.532	3	45.361	0.5	55 55 61 64 70 77 77 76 76 76 61 63 59	[1546.6]
3242	KNVRGPGLGYF	7.4	67	403.2235	3	40.991	-1.7	67 57 56 60 82 73 74 84 70 69 43	[497.3]G[154.1]L[367.2]
3146	YEYGSRLVF	6.1	67	567.2852	2	39.779	0.5	26 96 91 91 73 63 59 76 26	[163.1]EYG[602.4]
1699	YGVVRLPAF	6.1	67	511.2947	2	21.985	-0.7	26 97 97 97 81 64 51 61 26	[163.1]GVVR[428.2]
2013	MTLVRLAGSNW	7.4	67	624.33	2	25.522	-2.9	80 80 87 90 74 44 53 61 72 48 47	MTLV[784.4]
1698	EPFWSAFPVPW	7.4	67	681.8288	2	21.977	-0.9	34 34 34 97 94 94 98 99 99 26 26	[373.2]WSAFPV[283.1]
1635	NKLLMGAGKGW	7.4	67	587.8234	2	21.249	-0.5	83 83 94 96 78 69 59 58 44 44 26	NKLL[687.3]
2290	MM(+15.99)TPGCM(+15.99)AVPW	7.4	67	419.1705	3	28.993	-0.5	79 75 62 54 64 73 75 73 73 80 26	[953.3]P[186.1]
1404	RVPHYAELLTY	7.4	67	454.5798	3	18.648	2.7	26 26 95 95 95 97 96 94 56 28 26	[255.2]PHYAEL[377.2]
2530	MGKSATVGVDFLW	8.7	67	705.86	2	32.063	2.9	62 66 78 78 68 67 75 81 76 78 88 26 26	[674.3]G[214.1]F[299.2]
2079	KSVATVGGCGSGAVTW	10.7	67	740.3647	2	26.324	-2.6	26 97 96 91 84 84 88 84 50 40 83 70 55 44 48 26	[128.1]SVATVGG[160.0]S[514.3]
3718	HKMYSAFRHW	6.7	67	681.8286	2	46.797	-1.8	47 46 50 66 86 86 94 76 58 58	[559.3]SAF[479.2]
954	SVAAGSY	4.7	67	654.3102	1	13.383	1.4	88 90 90 92 55 26 26	SVAA[307.1]
3013	VDFLDTKNHLGLF	8.7	67	759.8992	2	38.085	-2.6	73 76 76 87 81 79 82 68 67 61 46 44 26	[361.2]LD[101.0]K[681.4]
2257	LELLFTFLF	6	67	571.8282	2	28.581	-0.4	30 86 96 93 81 67 63 58 26	[113.1]ELLF[508.3]
1028	EAERLVVVW	6	67	367.5404	3	14.263	-2.8	26 90 58 58 75 93 86 86 26	[129.0]A[398.2]VVV[186.1]
1618	VATTVTGW	5.4	67	834.4356	1	21.06	0	26 57 80 86 85 84 87 26	[170.1]TTVTG[186.1]
1867	VKFTLTGNGGLQM(+15.99)NF	10	67	821.9147	2	23.806	-2.2	26 88 87 92 83 62 62 66 39 40 46 69 80 75 80	[99.1]KFTL[627.3]M(+15.99)[114.0]F
3318	AFQYKAYPRGLF	8	67	730.8907	2	41.926	3.9	88 87 77 77 79 94 96 85 31 29 27 26	AF[419.2]AYP[473.3]
1376	NMVLGKKAAVEVLKGPF	11.4	67	901.0239	2	18.332	0	66 71 88 95 92 94 92 81 61 60 81 72 40 33 32 44 26	[245.1]VLGKKA[170.1]E[641.4]
1561	DCKKGGAPVPLTLY	9.3	67	731.3929	2	20.398	1.1	71 71 84 84 85 81 58 55 50 88 81 67 26 26	[218.0]KKGG[267.2]PL[377.2]
3105	YGKLAKGSVVEEFF	9.3	67	787.4165	2	39.256	-0.1	53 66 81 95 92 73 66 68 77 68 69 56 32 32	[220.1]KLA[1022.5]
2852	HKMTM(+15.99)LATLDW	7.3	67	681.8295	2	36.081	-2.1	41 49 58 82 87 87 73 62 58 72 60	[396.2]TM(+15.99)L[586.3]
1212	KNPCRSELKAKSDETLPAW	12.7	67	725.0421	3	16.441	2.2	49 48 66 68 70 72 59 59 59 77 87 89 90 92 79 67 53 48 26	[1126.6]KSDE[568.3]

3115	NKLLKGFHW	6	67	571.8281	2	39.388	1.8	84 84 94 97 71 67 46 26 26	NKLL[655.3]
2072	KY(+79.97)KLEESRKKLLAANPLLEAYLFFY	16.7	67	1043.227	3	26.239	0.7	50 41 36 39 58 51 46 47 59 49 78 97 98 98 90 80 79 85 89 91 92 86 35 35 46	[1482.8]LAANP[113.1]LEAYL[457.2]
2737	FAKKGGHPELGMLF	9.3	67	766.4088	2	34.626	0.8	80 79 90 79 66 68 70 78 88 58 47 43 46 33	F[71.0]K[476.2]E[561.3]
3303	FAQAPLPGEALLY	8.7	67	695.3734	2	41.74	-1.2	90 91 81 78 74 62 58 59 50 52 61 76 26	FAQ[1024.6]
3566	EWVGLVKKNLQW	8	67	500.6197	3	44.946	5.1	42 42 58 77 72 74 80 81 79 65 67 58	[683.4]KK[541.3]
1525	AGLGMTSLGVRSTGW	10	66	746.8822	2	19.998	-0.4	73 77 65 70 88 86 65 61 48 47 55 74 75 80 26	[298.2]MT[700.4]G[186.1]
969	KNLETEAF	5.3	66	476.2426	2	13.566	-0.3	46 43 56 88 88 88 92 26	[355.2]ETEA[147.1]
3938	VMLGPFEVGNNW	8	66	681.8293	2	49.544	0.2	53 49 43 49 92 99 89 77 76 52 63 48	[400.2]PFE[570.3]
2076	TMFVTFPGVKHLF	8.6	66	762.4086	2	26.295	1.4	78 78 93 98 98 98 26 42 43 58 58 59 26	[232.1]FVTF[778.4]
1876	MWEPLPLDGKVW	8	66	735.8739	2	23.906	-3.1	51 77 66 96 35 89 96 90 69 55 40 26	[446.2]P[113.1]PLD[470.3]
1436	CNLESLKKLHAF	7.9	66	468.2558	3	19.007	1.2	64 59 81 76 83 94 98 52 46 47 63 26	[217.1]L[129.0]SLK[596.3]
4064	KCLLVSGLDDPPVY	9.3	66	759.8984	2	51.142	1.5	57 63 78 82 75 76 75 78 85 86 86 26 26 26	[344.2]L[356.2]DDP[359.2]
1774	KGMAFQM(+15.99)MLTDRKS(+79.97)Y	9.9	66	951.9189	2	22.775	-0.4	38 30 35 41 95 90 86 80 83 96 96 92 67 28 28	[387.2]FQM(+15.99)MLTDR[458.2]
2414	FAKADGYAKLSKY	8.6	66	731.3921	2	30.575	2.3	80 80 94 92 87 90 69 56 42 48 45 42 26	FAKADG[853.5]
2220	WVSPGGGLLKRF	7.9	66	658.8766	2	28.111	-1	73 73 89 87 75 73 76 74 50 44 46 26	[285.1]SP[828.5]
1764	EYGHPLPHALGPVF	9.3	66	511.9342	3	22.674	2.1	52 55 69 59 49 64 91 87 85 82 62 58 77 26	[696.3]PHAL[400.2]
3615	Y(+79.97)T(+79.97)EAAGNW	5.3	66	536.1647	2	45.548	0.1	28 71 59 90 85 72 72 46	[553.1]AA[357.1]
1015	NKRSHF	4	66	788.4161	1	14.122	-0.1	48 62 78 77 64 64	[769.4]
1314	KGKLAGSTLAELVHF	9.9	66	785.9508	2	17.636	-0.5	26 68 68 78 71 67 61 63 76 84 85 92 93 26 26	[855.5]AELV[284.1]
1686	STEFDRVGVSKW	7.9	66	705.856	2	21.857	2.6	81 81 81 26 95 94 94 68 68 46 26 26	STE[147.1]DRV[557.3]
3082	EVADFGPAVVSVDKW	9.9	66	809.9128	2	38.958	4.6	52 51 80 90 95 75 63 71 72 76 63 52 48 50 42	[228.1]ADF[1038.5]
3737	RVGKVEGNW	5.9	66	522.7841	2	47.04	2.3	45 52 73 85 92 91 60 60 30	[312.2]KVE[357.1]
1890	LEMWSAFPPVW	7.2	66	681.8296	2	24.071	-2.2	36 36 47 74 79 97 99 99 99 26 26	[646.3]AFPP[285.1]
3196	FKKDGAPSDFLW	7.9	66	705.8541	2	40.407	-3	35 72 54 85 88 85 86 76 75 75 26 26	[403.3]DGAP[648.3]
2509	ANPLLEAYGAPVF	8.5	66	681.3569	2	31.803	-2.5	62 57 56 59 96 93 92 86 75 49 41 54 26	[395.2]LEAY[471.2]
1938	VQFTNEQLKQFF	7.9	66	764.8939	2	24.629	0.7	52 43 43 96 83 92 72 93 67 67 48 26	[374.2]TNE[128.1]L[550.3]
2762	FAKAGYAPFLLTY	8.5	66	731.3926	2	34.938	0.3	80 79 84 65 52 59 89 92 77 64 42 38 26	F[71.0]K[291.1]AP[637.3]
1429	TTFVNAHSSAGAPF	9.2	66	703.8394	2	18.925	1.2	90 95 93 63 46 59 88 87 47 45 52 59 61 26	TTF[284.1]HS[530.2]
970	KPMVAANSY	5.9	66	490.7488	2	13.575	3.4	64 55 56 60 62 80 69 79 61	[526.3]A[364.1]
2266	VSPANFTVLF	6.6	66	547.7981	2	28.688	0.8	26 52 61 64 75 91 80 81 94 26	[468.2]FTVL[147.1]
956	WAKAALCRRKCFW	8.5	66	546.9539	3	13.402	-2.1	73 74 90 91 47 40 40 52 48 53 74 80 84	[257.1]KA[830.4]FW

3363	TSSVKLLSSKAF	7.9	66	634.3666	2	42.481	0.4	26 94 94 84 64 65 71 74 68 55 58 26	[101.0]SSV[874.5]
1593	FMPYLVKF	5.2	65	522.7842	2	20.772	2.6	26 26 82 80 91 94 95 26	[278.1]PYLVK[147.1]
4013	RPLPAAGLSVCTYY	9.2	65	504.2613	3	50.502	-1.8	59 58 62 70 76 73 62 62 67 95 71 62 66 26	[862.5]V[530.2]
1388	TLLSGPRRW	5.9	65	543.3141	2	18.464	-0.2	27 90 96 97 87 66 70 26 26	[101.0]LLSG[595.3]
1348	GCLKLPARTW	6.5	65	1144.626	1	18.025	-2.9	60 65 75 82 85 86 72 52 45 26	[273.1]KLP[514.3]
2055	APVGALGPW	5.9	65	434.2403	2	26.027	1.3	97 97 97 72 65 47 45 38 26	APV[581.3]
3331	DALLVGQPY	5.9	65	975.5138	1	42.08	-0.8	79 79 90 82 42 42 36 82 51	[186.1]LL[284.1]P[163.1]
3211	MTKPKNAGGGKLMW	9.1	65	759.8983	2	40.603	-1.8	67 63 70 66 71 65 55 54 69 59 63 74 77 52	[1499.8]
2246	NDAVPRAELLTY	7.8	65	681.3575	2	28.44	1.3	46 48 56 63 74 94 95 96 90 50 38 26	[496.2]RAEL[377.2]
3448	HQMTMPCRLVF	7.2	65	681.8286	2	43.508	1.5	68 46 50 78 97 95 90 61 49 52 26	[497.2]MPC[515.3]
1893	YLLGLEACALVPF	8.5	65	704.88	2	24.094	-1.1	37 90 94 94 95 83 62 57 59 58 59 26 26	[163.1]LLGLE[701.4]
1210	VTNSASGPGLF	7.2	65	525.2677	2	16.409	2	66 66 57 77 75 82 84 58 58 63 26	[472.2]SG[414.2]
2520	LELLSPPNLF	6.5	65	571.8288	2	31.946	4.3	42 88 98 96 96 50 41 40 44 52	[113.1]ELLS[568.3]
2575	WTLPM(+15.99)LATNNW	7.2	65	681.83	2	32.634	1.2	50 55 65 91 95 94 77 44 43 48 47	[400.2]PM(+15.99)L[586.2]
2175	LLRRKVGPPAADDAALPDVLY(+79.97)	13.7	65	777.4128	3	27.539	-1.3	27 26 26 36 44 65 78 86 76 80 86 88 96 97 91 85 69 55 49 51 41	[822.6]P[97.1]AADDAAL[667.3]
2654	GSCGKGVKFPVPW	8.5	65	681.356	2	33.611	1.1	26 26 93 77 76 81 84 84 80 80 80 26 26	[144.1]C[185.1]GVKFPV[283.1]
3172	YGKLASGTPKEFLY	9.1	65	787.416	2	40.105	-0.9	68 79 90 96 88 56 51 56 74 50 50 39 78 26	[220.1]KLA[1022.5]
996	YGMMAASPPF	6.5	65	536.2346	2	13.892	-1.8	43 43 66 78 80 91 94 96 26 26	[482.2]AASP[244.1]
2546	MTELDTLAGLLVGW	9.1	65	759.8991	2	32.267	2.4	78 84 94 93 77 56 63 71 73 60 44 38 43 26	[131.0]TEL[1025.6]
2900	VMGGTALLW	5.8	65	474.2541	2	36.686	-1	49 49 67 79 77 75 78 79 26	[928.5]
3614	KNLEQVLW	5.2	65	515.29	2	45.536	0	79 67 93 87 53 54 56 26	[242.1]LE[526.3]
1837	YPAPTKLVPLVF	7.8	65	672.9002	2	23.475	0.5	75 75 65 79 90 91 94 97 26 26 26 26	[428.2]TKLV[456.3]
3514	WDVPFLATNNW	7.1	65	681.8287	2	44.314	1.8	26 26 98 98 98 88 85 63 40 47 36	[301.1]VPFLA[515.2]
3670	FAKGKGYSNLLTY	8.4	65	731.3917	2	46.215	1.7	69 71 80 78 81 80 74 59 51 72 67 28 26	[218.1]K[57.0]KG[854.4]
1886	AMPKSDNHEPAQY	8.4	65	496.558	3	24.018	0.6	45 60 56 56 66 71 67 78 80 75 60 60 60	[880.4]E[459.2]
1444	MELFFLF	4.5	65	946.4745	1	19.089	0.3	94 90 91 96 26 26 26	MELF[407.2]
2642	RVMAPPTAPQW	7.1	65	627.3262	2	33.464	-0.6	57 67 74 87 87 86 80 61 36 36 34	[386.2]APPT[482.2]
998	QSSAAAAVPTF	7.1	65	525.2663	2	13.914	-0.7	81 82 94 90 76 66 46 48 70 26 26	QSSA[657.3]
3985	FAKMKFAELTLY	7.8	65	731.3928	2	50.147	-1.8	36 50 61 74 81 67 92 90 89 75 29 26	[477.2]K[147.1]AEL[377.2]
1076	TTAAPAY	4.5	65	694.3418	1	14.833	1.8	89 93 93 96 26 26 26	TTAA[331.2]
2984	WTLPM(+15.99)LATNNW	7.1	65	681.8295	2	37.725	0.4	49 44 65 88 91 88 81 58 43 55 45	[400.2]PM(+15.99)LA[515.2]

1693	YLEVHFTLPF	6.5	65	633.3312	2	21.926	-1	34 34 90 98 95 90 71 56 46 26	[276.1]EVHF[458.3]
3356	KPQGSCAALLW	7.1	65	587.3093	2	42.392	2.6	53 57 52 83 82 72 71 64 72 72 26	[353.2]GS[657.3]
2606	GYKLALANGDLYLY	9	65	787.4164	2	33.022	-0.3	47 48 84 83 96 79 62 54 61 70 67 60 60 26	[220.1]KLA[1022.5]
1294	KNGLKRNAPALF	7.7	65	664.8925	2	17.396	-1.6	48 60 72 83 95 94 63 74 65 43 45 26	[299.2]LKR[613.3]
1986	LLPVLYPSPTLLYKY	9.7	65	890.5174	2	25.206	-1.1	26 85 85 99 98 96 95 39 38 37 49 84 78 26 26	[113.1]LPVLYP[398.2]L[454.2]
3669	FAKKNYAYKGVGW	8.4	65	766.4085	2	46.205	2.7	81 79 87 78 69 53 72 82 80 56 40 29 26	F[71.0]K[476.2]YK[399.2]
2194	FALRAVGSLAKRY(+79.97)	8.4	64	766.4099	2	27.778	-1.2	67 69 47 41 33 38 56 81 85 88 83 84 60	[714.4]SLAKR[243.0]
2289	NFDVLPCAAVHEY	8.4	64	493.2321	3	28.983	2.5	71 78 86 84 89 26 64 64 57 62 51 52 47	[261.1]DVL[870.4]
1329	CKLVSGGACGGLLRW	9.7	64	760.3973	2	17.805	0.2	60 72 88 86 80 74 73 62 63 79 69 56 44 27 26	[231.1]LVS[970.5]
3314	WLTPFLDGNNW	7.1	64	681.8291	2	41.871	2.4	55 52 43 67 26 95 93 89 66 65 52	[644.3]LDG[414.2]
3699	CDVFNGY	4.5	64	409.1622	2	46.569	-1.6	50 50 50 92 83 95 26	[317.1]FNG[163.1]
2385	WNGQACANNMF	7.1	64	419.1703	3	30.211	-1.6	63 58 61 47 61 71 74 82 62 77 47	[730.3]N[392.2]
2823	TSFAGAFVSLLY	7.7	64	425.8933	3	35.708	2.8	72 68 53 53 49 66 73 91 70 63 80 26	[681.3]V[200.1]L[163.1]
2878	WAVSGCLVGVPRQF	9	64	506.9347	3	36.404	0.7	42 42 42 56 80 67 63 63 70 90 94 65 65 53	[443.2]G[372.2]VP[431.2]
1608	SSLQRYNLGKMLTVHF	10.3	64	632.0051	3	20.958	0.1	26 74 69 45 47 39 45 78 97 98 90 87 85 85 26 26	[961.5]GKMLTV[284.1]
2740	GELLVGQPY	5.8	64	975.5142	1	34.66	-0.3	73 73 93 45 45 61 46 82 54	[186.1]L[397.2]P[163.1]
1626	LELLFLTFF	5.8	64	571.8292	2	21.156	1.3	65 91 97 99 81 44 40 30 26	[113.1]ELLF[508.3]
1441	HNVPPKRVVNKGCPEPRW	11.5	64	705.0458	3	19.061	-0.3	48 50 51 78 59 54 52 81 94 80 66 61 70 83 79 57 56 26	[828.5]VVN[288.1]P[568.3]
1251	YNKFLEKVLW	6.4	64	447.2518	3	16.883	-0.1	48 79 79 96 98 83 51 43 32 26	[405.2]FLE[526.3]
1718	LKVDTSVGFHF	7	64	625.3333	2	22.185	1.6	44 62 75 93 94 87 83 83 26 26 26	[340.2]DTSVG[431.2]
1407	FLVLKAPGTKS(+79.97)F	7.7	64	694.3743	2	18.674	2.1	26 66 59 70 82 89 84 60 50 54 55 66	[472.3]KAP[600.2]
3032	GYKLSEVAGSVGLFY	9.6	64	795.4134	2	38.32	-0.9	56 56 88 80 93 64 45 42 49 53 73 73 77 78 26	[220.1]KLS[1022.5]
2413	MTELDVGNPLLVAF	9	64	759.8992	2	30.564	2.5	75 80 87 88 91 74 69 44 47 47 66 45 45 33	[131.0]TELD[910.5]
1832	VKGTLAKGVDAHPSM(+15.99)GGW	11.5	64	609.6463	3	23.416	1.4	36 40 48 41 43 54 57 69 68 70 72 71 90 90 87 88 93 26	[1176.7]PSM(+15.99)GG[186.1]
3663	T(+79.97)PQCRCAVS(+79.97)Y(+79.97)	6.4	64	684.2026	2	46.126	1.2	26 83 51 89 75 64 54 53 73 69	[181.0]P[128.1]C[839.3]
879	KHVLGETDALHTF	8.3	64	489.9255	3	12.456	2.1	26 26 33 44 54 66 94 91 89 87 72 70 74	[663.4]TDAL[385.2]
3051	EAVYKAAPLNAPAVLVLF	11.5	64	629.3647	3	38.564	0.6	80 78 55 47 44 69 85 80 80 84 87 66 61 77 70 26 26 26	E[532.3]APLNA[739.5]
2601	MADGLGALF	5.8	64	447.723	2	32.959	-0.3	72 64 50 50 64 77 70 82 42	[615.3]L[147.1]
2130	MFVTFGKVPHLF	7.7	64	711.8846	2	26.972	1.2	26 94 95 95 97 93 82 73 26 26 26 26	[131.0]FVTFGK[593.3]
3980	CNQLPYSVSSALRVY	9.6	64	567.2858	3	50.083	-2.6	55 54 56 76 82 86 83 63 63 52 56 68 66 63 26	[458.2]PYS[875.5]
3267	TVSTRAFAARLF	7.7	64	447.2545	3	41.296	0.6	26 26 54 54 65 76 77 89 89 87 90 26	[762.4]AARL[147.1]

991	KGSYGY(+79.97)	3.8	64	377.643	2	13.826	-2.5	65 63 77 66 65 45	[735.3]
2197	QLLNFTVDVF	6.4	64	598.3226	2	27.823	1.8	40 40 56 53 89 93 94 68 68 31	[468.3]FTV[361.2]
1957	MSLTHVKKALLAF	8.3	64	729.9301	2	24.853	1.9	58 57 91 96 97 90 86 66 44 43 41 27 26	[218.1]LTHVK[643.4]
1401	DALGGGSGAASLPLF	9.6	64	666.8444	2	18.608	1.6	37 46 61 83 77 75 73 66 70 69 65 74 63 63 26	[299.1]G[957.5]
4000	FAKKGGYAGCAKLF	8.9	64	487.5963	3	50.341	1.8	55 55 77 70 75 75 82 75 74 77 52 46 44 26	[588.3]Y[690.4]
3973	LELPAGPSVF	6.4	64	515.2854	2	50.002	2	75 75 87 64 59 66 71 45 45 45	[242.1]L[655.3]
1141	MFKKECSRLLW	7	64	480.92	3	15.605	-2.4	26 65 81 54 78 88 72 65 74 65 26	[278.1]K[257.1]C[655.4]
985	KVDSVLFKFVNFVF	8.9	64	422.9916	4	13.753	2.2	54 53 61 63 60 56 54 65 59 84 80 84 84 26	[1063.6]VNFV[147.1]
1856	SS(+79.97)Y(+79.97)S(+79.97)YGMPQACEQPDW	10.2	64	696.8512	3	23.678	-38.4	26 26 26 59 60 84 65 65 70 88 88 91 80 69 85 26	[827.1]G[356.2]ACEQ[97.1]D[186.1]
2307	WVM(+15.99)AAVLGSTRAQGFF	10.2	63	586.2994	3	29.209	-0.2	26 65 62 62 76 70 70 79 76 72 76 83 39 43 80 26	[1187.6]A[185.1]F[147.1]
2097	KFFTGATAAPSVTTW	9.5	63	792.9055	2	26.549	-1.2	41 84 64 82 80 62 57 63 57 56 70 56 54 69 50	[128.1]F[147.1]TG[985.5]
3332	MALAAQAVLW	6.3	63	537.2952	2	42.09	1.7	74 74 86 69 61 40 48 62 87 26	[202.1]L[440.2]L[186.1]
1414	NNDLLGTKLSF	7	63	611.3275	2	18.75	0.2	76 79 94 95 44 43 45 60 60 70 28	[228.1]DL[746.4]
2408	MHKLLAPPAGNLPAW	9.5	63	539.2971	3	30.498	-0.6	64 59 57 62 74 69 74 82 82 84 81 48 46 34 26	[790.5]PAGN[467.3]
1110	KWGVSGAYETLW	7.6	63	698.8493	2	15.235	1.2	41 39 51 73 67 67 67 75 81 83 85 26	[848.4]ETL[186.1]
4008	AFKLCLPAVGNGGVW	9.5	63	766.4088	2	50.437	0.9	56 74 88 93 87 74 71 59 61 79 67 40 36 33 26	[218.1]KLC[950.5]
2455	NKLLKHGFW	5.7	63	571.8282	2	31.107	1.9	81 81 93 97 62 56 43 26 26	NKLL[655.3]
1018	RDLEDTGKDAHTQLNNF	10.8	63	658.6483	3	14.151	-0.5	73 54 52 59 58 59 69 39 39 74 73 86 80 84 59 65 46	[1237.6]TQL[375.2]
2053	VFLKATAMLAPVF	8.2	63	469.9412	3	26.009	1.6	26 78 52 48 49 45 61 86 90 85 84 86 26	[730.4]MLAPV[147.1]
1194	RTLPSDDDMVLALW	8.9	63	816.4079	2	16.227	-0.7	30 44 47 96 91 91 99 97 87 51 49 42 30 26	[370.2]PSDDDM[582.4]
1912	LCDTVAAAVSLPVYKW	10.1	63	868.4559	2	24.31	-2.3	61 64 81 35 32 41 62 72 74 81 26 26 96 91 91 72	[216.1]D[512.3]S[210.1]VYK[186.1]
3334	HRPMAAF	4.4	63	415.2115	2	42.112	2.5	26 85 82 74 73 74 26	[137.1]RP[420.2]
2054	NMMTLLDF	5.1	63	984.4504	1	26.018	-2.5	48 48 72 77 76 80 77 26	[590.3]L[262.1]
2827	SMQAVVHSLLLTY	8.2	63	731.3922	2	35.765	0.1	57 56 54 89 90 87 26 88 88 91 32 32 26	[346.1]AVV[137.1]SLL[377.2]
1339	MPAAALSKLEAKRRNVF	10.8	63	634.6966	3	17.927	0.6	93 93 85 80 70 45 44 55 56 48 51 69 93 36 35 53 60	MPAA[840.5]R[516.3]
1922	CNDYVPLWGRKPVLF	9.5	63	903.9741	2	24.432	2.8	53 55 88 97 26 99 98 95 71 53 58 51 42 26 26	[217.1]DY[99.1]PLW[797.5]
3536	FAKLYGGSQLLSTF	8.8	63	766.4104	2	44.581	-1.2	72 74 85 78 41 42 45 61 60 85 74 57 55 47	[218.1]K[605.3]L[448.2]
1326	TMLVSMDPALVVPF	8.8	63	760.3973	2	17.777	-1.6	70 78 92 96 91 70 64 73 55 53 58 26 26 26	[232.1]LVS[969.5]
1234	SLLLLFALNAVYY	8.2	63	750.4268	2	16.688	-2.9	86 86 92 88 44 42 46 60 49 59 69 68 26	SLLL[1054.5]
2038	MSELRLKSPANNAF	8.8	63	789.4094	2	25.821	0.7	87 88 87 90 82 81 58 55 52 49 35 34 34 45	MSELRL[829.4]
1411	RSLTTDLF	5.1	63	476.7587	2	18.724	0.3	35 40 44 81 88 90 98 26	[356.2]TTDL[147.1]

3639	SVLPDGKPY	5.7	63	975.5151	1	45.837	0.6	26 26 96 85 80 60 60 72 59	[186.1]LPD[445.2]
1350	HLLLQGNWGRMW	7.6	63	504.2613	3	18.056	-2.9	70 70 65 48 41 44 70 86 88 76 67 26	[775.4]WG[473.2]
1654	RLTPLNGAELVDY	8.2	63	730.8909	2	21.464	0.1	39 41 53 77 77 61 68 83 87 87 88 26 26	[751.4]AELV[278.1]
1921	NEKLQKT(+79.97)LNHTMVF	8.8	63	891.9349	2	24.422	1	29 29 30 93 53 78 54 74 69 89 85 83 85 26	[371.2]L[664.3]HTMV[147.1]
2548	AFKWGYKALVMF	7.6	63	730.8914	2	32.289	-0.2	73 73 73 54 70 60 72 67 75 56 53 26	[1441.8]
3183	WPLTM(+15.99)LATNNW	6.9	63	681.8284	2	40.244	-1.2	26 59 75 83 86 89 87 40 39 49 55	[396.2]TM(+15.99)LA[515.2]
1778	YAFVRF	3.8	63	401.7154	2	22.825	-1.3	26 99 99 99 26 26	[163.1]AFV[303.2]
1860	Y(+79.97)LRVLDGGGMGLRNVKLY	11.3	63	702.0286	3	23.727	-2.7	75 47 38 53 54 56 55 49 54 65 76 77 88 74 80 79 79 26	[1311.6]R[114.0]V[404.2]
3343	EYLVCF	3.8	63	387.1802	2	42.234	-0.9	26 26 91 79 79 75	[292.1]L[349.1]
2301	FAKAPLKFPKY(+79.97)	6.9	63	695.3731	2	29.133	4.4	73 72 86 74 55 58 82 88 47 26 26	[218.1]K[281.2]KF[468.2]
1752	FKTKLKDVLNPPW	8.2	63	529.3083	3	22.549	0.2	28 27 38 64 76 89 95 97 90 49 56 75 26	[617.4]KDVL[494.2]
2490	FDNGATALSTY	6.9	63	387.1801	3	31.554	-0.6	68 65 59 60 59 56 60 71 83 81 26	[789.4]ST[163.1]
2230	RHKGFLLLFSNMF	8.2	63	537.2949	3	28.231	1.9	54 38 34 54 68 92 93 76 52 52 56 78 65	[625.3]LL[739.3]
1177	ALYLFPF	4.4	63	870.4746	1	16.029	-1.5	87 86 93 93 26 26 26	ALYL[391.2]
2041	TFPVKGDPLEYSKFVYY	10.7	63	1027.021	2	25.862	1.1	28 31 34 68 61 58 54 85 98 99 90 94 91 92 26 26 26	[744.4]PLEYSKF[425.2]
1092	LVAMGELAETKVNLHF	10.1	63	591.3168	3	15.024	-3	40 39 38 39 43 48 57 89 94 97 97 96 77 58 59 26	[713.4]AETKV[511.3]
2000	NFTVLF	3.8	63	740.3988	1	25.371	1.5	62 72 91 96 26 26	[261.1]TV[260.2]
1797	TELLPAPAEPVMARCF	10	63	872.9404	2	23.033	-1.4	30 31 35 80 88 89 91 94 93 94 64 36 35 39 71 26	[343.2]LPAPAEP[707.3]
1008	QASTPLKGADF	6.9	63	567.7925	2	14.041	-0.9	71 86 95 97 89 59 46 41 35 38 26	[128.1]ASTP[631.3]
2786	WDVPM(+15.99)LGGGKTW	7.5	63	681.8294	2	35.243	0.4	26 26 99 99 96 84 78 66 46 49 52 26	[301.1]VPM(+15.99)L[586.3]
1573	FAKLCGAGATGVPPGW	10	63	766.3903	2	20.535	0.5	68 70 80 66 65 67 66 72 80 69 67 77 47 38 38 26	[218.1]K[401.2]A[694.3]
3147	NNSEKGAVVASFPLW	9.4	63	809.9141	2	39.791	-0.8	63 59 50 47 54 67 74 84 68 62 66 95 94 26 26	[700.3]V[257.1]FP[299.2]
2064	MVRFLVPAYNVF	7.5	63	728.3959	2	26.143	1.9	78 77 92 74 26 93 92 55 34 34 41 51	[230.1]R[260.2]VP[594.3]
3411	KPYSTSF	4.4	63	415.2107	2	43.056	6.2	65 63 63 26 73 73 73	[810.4]
2947	Y(+79.97)KSRTKVCAKLCLLRNYKY	11.9	63	608.3206	4	37.27	2.3	82 60 45 56 62 63 58 56 57 62 65 55 65 92 93 81 47 53 27	Y(+79.97)[1330.8]LRN[454.2]
2151	SCSAGGASAHVALF	8.8	63	639.3013	2	27.233	1	26 89 89 88 88 83 53 46 64 61 46 49 61 26	[87.0]CSAGG[796.4]
1290	MEGSLAF	4.4	63	754.3431	1	17.36	-1.1	85 84 89 64 60 26 26	MEG[418.2]
2899	AFKKGGYAELTLY	8.1	63	487.5964	3	36.675	-2.4	40 41 53 38 84 80 89 92 89 76 59 39 26	[474.3]GGYAE[490.3]
3944	WAWVVTVSQTRW	7.5	63	506.9347	3	49.621	3	39 77 48 73 75 26 91 89 73 62 64 26	[742.4]VS[571.3]
3691	AFKKGGYAELTLY	8.1	63	487.5963	3	46.471	-2.7	47 47 68 44 65 72 88 90 84 70 55 49 26	[588.3]YAE[490.3]
2094	RFVLVKKSTPDRW	8.1	63	816.4714	2	26.515	-1.4	26 26 26 96 94 94 90 82 82 72 48 39 29	[402.2]LVKKST[554.3]

1093	GKMVKGFDKKPF	7.5	62	691.3852	2	15.035	-2.1	27 46 61 95 92 67 52 61 77 84 57 26	[316.2]VK[447.2]K[244.1]
2268	QPAVTYGVLF	6.2	62	1094.588	1	28.72	-0.3	42 55 63 94 78 49 51 78 84 26	[296.1]V[420.2]L[147.1]
1098	TVLQFHW	4.4	62	465.7482	2	15.096	6.4	26 98 96 66 73 48 26	[101.0]VL[598.3]
2776	LSPGVVNPGQDQW	8.1	62	466.2326	3	35.112	-1.5	26 80 75 74 69 67 61 83 63 55 51 52 50	[113.1]S[466.3]P[614.2]
4088	KGWCAQLALEVMNF	8.7	62	805.3947	2	51.444	-2.7	36 38 49 59 60 46 74 78 80 71 70 67 69 69	[857.4]L[620.3]
1738	MVQCPLVPF	5.6	62	1033.521	1	22.393	-0.1	98 95 82 87 91 26 26 26 26	MVQCP[456.3]
3711	WVLESPHLKESW	7.5	62	504.2605	3	46.714	-1.1	26 86 87 78 79 87 91 68 35 35 38 33	[186.1]VL[216.1]PH[643.3]
1548	KFVTLYACGGVRF	8.1	62	487.5964	3	20.256	1.8	26 56 50 53 77 87 81 68 68 80 66 66 26	[588.4]YA[160.0]G[402.2]
1602	YPLFGMPRVLKPALDGYPTPW	13.1	62	605.3211	4	20.887	-2.1	78 78 64 52 53 61 65 57 43 31 28 37 57 93 95 95 94 91 76 27 26	[1469.8]LDGYP[384.2]
2292	LVCCGGCF	5	62	401.1592	2	29.027	2.4	76 73 73 33 68 79 67 26	[782.3]
3092	WMVPKPLAAPWKW	8.1	62	537.2957	3	39.089	0.9	59 61 44 63 78 84 82 79 74 68 48 26 37	[641.3]PL[739.4]
1873	VFPTTLDDLGNLLVW	9.3	62	851.9583	2	23.876	2.6	32 32 37 59 72 96 97 92 69 68 39 42 84 81 26	[545.3]LDD[397.2]LV[186.1]
1731	EGLVLGQPY	5.6	62	975.5158	1	22.322	1.3	79 64 67 80 61 44 42 64 55	[299.1]V[558.3]
2475	WLMPKGPF	5	62	975.5146	1	31.355	2.6	26 95 91 83 62 53 58 26	[186.1]LMP[429.2]
1342	VFRAYGPLLKRF	7.5	62	489.6249	3	17.956	-1.9	26 56 55 59 63 75 76 85 85 67 68 26	[790.4]LL[431.3]
2814	TELLGGGSVDDLRW	8.7	62	759.3844	2	35.597	1.4	58 61 84 77 62 54 66 57 56 59 63 62 80 26	[230.1]L[813.4]R[186.1]
3261	VHHYDAAVLLKGPKTGMWY(+79.97)	11.8	62	756.0362	3	41.219	2.7	26 26 73 64 44 60 62 60 68 90 92 93 95 93 65 54 36 36 33	[1005.5]LKGPK[718.2]
1824	WTQKGGLGKLMTHVF	9.3	62	568.3075	3	23.33	-1	28 35 30 33 49 59 77 94 98 93 91 93 92 26 26	[770.4]GKLMTH[246.1]
3984	MATASGPLF	5.6	62	447.7229	2	50.138	-0.4	71 52 44 45 60 72 90 93 26	[518.2]PL[147.1]
2710	RRCLAPGGMLSVVPPMY	10.6	62	923.9774	2	34.284	-0.8	26 56 53 81 64 66 82 66 66 76 90 89 89 53 31 31 26	[415.2]L[168.1]G[301.1]SVV[488.2]
1060	AWPCVDDTTLVLW	8.1	62	759.8671	2	14.633	-1.8	26 26 82 65 65 95 97 96 85 60 49 27 26	[257.1]P[202.1]DDTT[511.3]
3470	LYVVVSTTY	5.6	62	1044.56	1	43.774	-0.9	26 97 97 91 91 61 33 33 26	[113.1]YVVV[452.2]
1009	VLGKNGGAM(+15.99)GLSYF	8.7	62	715.3613	2	14.051	0.7	38 42 55 70 67 62 44 41 36 42 95 95 88 88	[900.4]LSYF
2364	EANPLLAYGGVPLF	8.7	62	487.5973	3	29.95	-0.6	48 41 40 65 68 79 85 86 90 89 91 26 26 26	[637.3]AYGGV[357.2]
3543	CKLLADGDLDLPVF	8.7	62	759.8984	2	44.668	1.4	53 52 77 71 41 39 65 81 79 82 83 85 26 26	[700.4]D[113.1]DLP[246.1]
3306	APPQAVVW	5	62	434.2397	2	41.786	-0.3	26 98 79 48 63 73 79 26	[71.0]P[680.4]
3496	YVAPAAVCPGKAKW	8.7	62	487.5962	3	44.088	1.4	76 78 78 65 40 41 41 58 78 93 83 69 35 26	[871.4]GK[385.2]
3326	SPSVTCSNSVVKRF	8.7	62	504.2609	3	42.018	0	57 57 57 85 85 79 77 53 57 59 64 52 52 26	[271.1]VT[1020.5]
2347	LYVVSSTLY	5.6	62	1044.561	1	29.727	-0.6	26 98 98 91 91 41 36 45 26	[113.1]YVVS[464.2]
2683	AGCLLKVTPGSRMW	8.7	62	759.8981	2	33.961	-1.9	28 37 39 74 76 68 69 72 87 76 65 65 78 26	[785.4]P[617.3]
2002	AAGVGLMTVY	6.2	62	981.5059	1	25.389	-1.4	58 74 75 86 56 56 72 84 26 26	[199.1]V[301.1]T[262.1]

2918	WLTPFLDGNHY	6.8	62	681.8289	2	36.916	2.1	68 70 55 90 26 94 82 56 43 41 49	[400.2]P[147.1]LD[471.2]
1275	MSLVQCGLVNGAPW	8.7	62	737.8636	2	17.17	1.2	66 65 93 41 40 42 55 65 89 71 74 67 63 26	[218.1]L[500.2]V[525.2]
2358	MPDGNPVTGAY(+79.97)	6.8	62	401.1588	3	29.873	2	41 46 48 70 70 80 59 60 81 92 26	[514.2]P[200.1]GA[243.0]
2935	FAKKGGNSGAPGVRW	9.3	62	766.4087	2	37.126	-1.7	71 71 88 62 51 69 62 70 69 45 41 49 71 75 26	[218.1]K[1166.6]
3223	WYSVRVCKGAMLTW	8.6	62	567.285	3	40.753	-2.5	43 53 43 84 91 56 52 63 79 78 68 61 60 26	[436.2]VR[989.5]
3330	FAQNRLKKENHF	7.4	62	766.4092	2	42.069	-1	65 69 61 68 65 64 74 56 42 42 66 64	[1512.8]
3381	LTVFVKALFGY	6.8	62	629.364	2	42.7	-2.7	72 75 91 96 81 63 59 38 33 33 33	[214.1]VFV[679.4]
2869	WLS(+79.97)LAPVKPAALW	8	62	766.408	2	36.298	1	79 92 72 91 69 66 61 49 47 47 56 41 26	[186.1]L[167.0]L[933.5]
2720	HQMTFLATLDW	6.8	62	681.8288	2	34.414	-0.5	54 41 43 77 96 91 74 53 44 52 48	[497.2]FL[586.3]
2361	GYGKGANPGPSSW	8	62	639.3013	2	29.906	3.6	26 72 82 89 89 88 69 83 72 33 33 33 26	[220.1]GKGA[114.0]P[514.2]
4027	MNKWAYVHNCGPGVGVKDKY	12.3	62	756.0379	3	50.68	4.3	82 72 59 42 39 35 49 69 66 75 88 92 89 85 65 45 45 45 47 37	M[1115.5]GPGV[690.4]
1476	DCKKLYAFVRF	6.8	62	695.3722	2	19.449	1.7	64 64 71 28 63 52 89 95 95 26 26	[750.4]AFV[303.2]
2077	VFSAAGVVGVTMLAVPF	10.5	62	555.6406	3	26.304	-0.3	75 74 36 37 39 52 53 46 48 51 67 90 92 86 85 83 26	[987.5]MLAVP[147.1]
1010	KPRMLVGW	4.9	62	493.7848	2	14.063	2	59 47 38 34 88 98 99 26	[512.3]LVG[186.1]
1004	TSTRPF	3.7	62	708.3677	1	13.99	0.3	26 81 90 75 68 26	[101.0]ST[400.2]
3840	VKAKKSLSTNAFSLTKY	10.5	62	629.3641	3	48.305	1.8	34 34 43 61 49 47 55 80 92 89 95 94 85 57 52 48 26	[754.5]STNAFS[505.3]
2626	VSLTLSMSCAMHW	8	62	489.2264	3	33.26	0.6	26 84 71 73 77 49 49 59 83 69 65 64 26	[99.1]S[632.3]C[525.2]
3502	MSNGDFF	4.3	62	409.1619	2	44.167	-2.4	83 74 64 76 77 26 26	M[667.3]
1749	GTPLHKHW	4.9	62	488.2606	2	22.508	-2.1	64 65 63 76 84 85 26 26	[368.2]HK[323.1]
1206	TTGHRSF	4.3	62	805.3946	1	16.373	-0.6	26 91 93 91 70 28 28	[101.0]TGH[390.2]
3961	MFKGPPLW	4.9	62	975.5148	1	49.846	2.8	26 96 87 81 78 68 26 26	[131.0]FKG[493.3]
2089	MMM(+15.99)QVRNF	4.9	62	1072.476	1	26.453	2	26 26 88 78 71 63 65 71	[262.1]M(+15.99)[644.3]
1198	SSAAVNAKNAKAF	8	62	426.8987	3	16.269	1.1	93 90 52 40 37 48 50 56 68 73 80 80 26	SS[739.4]KA[147.1]
1435	WRRGVTWKKKLSGAASCY	11.1	62	525.0361	4	18.997	2.4	66 66 41 56 58 52 40 32 33 88 87 88 83 76 65 64 76 26	[1197.7]KLSG[495.2]
2973	MSKFRCKALTLY	7.4	61	730.8906	2	37.588	-0.8	49 54 76 92 60 58 70 67 80 69 29 26	[346.2]F[458.2]L[377.2]
4105	DMRCLRAMLFF	6.8	61	468.23	3	51.666	-2.6	60 68 47 62 65 71 78 73 61 57 26	[1383.7]
1587	VNLPAEGQGTF	6.8	61	566.7856	2	20.698	0.8	86 70 67 64 84 74 65 41 42 44 33	V[324.2]A[619.3]
1558	YPSLKGAAGPGW	7.4	61	602.3138	2	20.362	3.9	26 26 93 87 85 81 75 68 58 56 48 26	[260.1]SLKG[539.2]
3277	FTLLDDLDHLAVF	8	61	759.8975	2	41.427	2.6	31 35 48 90 92 83 73 71 71 75 49 42 31	[361.2]LDD[795.4]
2288	GCEVAEF	4.3	61	377.6578	2	28.972	1.1	26 26 87 84 88 89 26	[160.0]EVAE[147.1]
4299	WS(+79.97)CVY	3.1	61	369.1216	2	54.219	-0.7	26 79 69 79 52	[718.2]

3339	CLMHTFESLKPGKKW	9.2	61	602.314	3	42.177	2.1	39 46 60 75 79 90 93 92 86 62 45 43 51 26 26	[585.2]FESL[724.4]
1946	KVFTNAWLKKFFHCY(+79.97)	9.2	61	671.328	3	24.718	2.1	26 96 78 74 77 66 64 67 42 60 26 53 79 79 26	[128.1]V[1765.8]
1820	FAQMLKGTGRQAFPW	9.2	61	869.4524	2	23.282	4.7	28 29 29 71 93 95 96 93 92 54 47 52 79 26 26	[477.2]LKGTG[785.4]
4235	Y(+79.97)FWGCCASDVVS(+79.97)HW	8.6	61	607.2062	3	53.376	-0.2	26 58 59 68 78 71 56 55 74 86 86 82 26 26	[1112.3]VVS(+79.97)[323.1]
3087	VFRLKGAPPNM(+15.99)LVLY(+79.97)	9.2	61	605.3195	3	39.025	0.4	26 49 56 38 44 45 59 83 90 77 86 73 59 57 70	[771.5]PP[114.0]M(+15.99)[568.3]
1969	WLTTAGDFTVW	6.7	61	648.8181	2	24.994	2.3	82 42 46 72 68 68 81 65 59 59 26	W[443.2]D[533.3]
2566	LLLMTATAVPQRW	8	61	500.6194	3	32.514	2.4	26 94 66 64 68 63 52 50 63 77 55 62 50	[113.1]L[1254.7]
2953	GYKLSLSGVGGEYLF	9.2	61	795.4129	2	37.348	-1.5	52 56 82 64 81 66 43 43 57 87 72 71 86 26 26	[220.1]K[113.1]S[356.2]G[186.1]Y[260.2]
3757	ECLLKGGDLDLPVF	8.6	61	759.8986	2	47.283	1.7	26 74 75 66 65 61 67 59 58 79 82 86 26 26	[1043.5]LP[246.1]
1485	GELPDGKF	4.9	61	862.4296	1	19.545	-0.9	48 48 89 83 81 84 26 26	[186.1]LPDG[275.2]
3312	WLAKCAAGGGAPLAVF	9.8	61	511.2751	3	41.851	1.2	79 72 59 59 66 65 50 42 64 85 81 80 47 40 40 43	[857.4]GAP[430.3]
1680	LFVVHAPAEGAMKKKW	9.8	61	604.6729	3	21.782	2.9	26 26 26 72 72 60 63 73 83 86 86 82 82 80 26 26	[834.5]EGAMKK[314.2]
3406	AFKLRVTVAAGRY(+79.97)	7.9	61	766.4092	2	42.991	-2.1	64 70 82 81 66 52 39 48 67 68 58 67 26	[218.1]KL[1053.5]
4093	TLVGKFGSKDDACKY	9.2	61	544.6073	3	51.512	-1.5	49 50 55 66 72 64 58 49 52 66 76 78 75 72 26	[1612.8]
2895	TDDGEAF	4.3	61	377.6496	2	36.624	3.9	26 44 81 80 80 87 26	[216.1]DGEA[147.1]
1262	KNALKGSLEPKPF	7.9	61	714.9133	2	17.014	-1	40 45 49 89 91 73 58 62 75 66 63 50 26	[313.2]LK[855.4]
3015	Y(+79.97)TVCTEADS(+79.97)CTGYAPY(+79.97)	9.8	61	661.8685	3	38.104	2.2	27 48 41 70 68 69 50 50 60 93 91 92 75 61 46 26	[1129.3]CTG[574.2]
2444	GFLDGSLYLTLY	7.3	61	681.3556	2	30.965	3.9	45 41 41 67 83 80 80 82 78 71 33 26	[432.2]GSLY[490.3]
1758	STKGWTGM(+15.99)PPVW	7.3	61	681.8289	2	22.61	-0.4	42 43 50 56 81 89 93 96 98 26 26 26	[373.2]WTGM(+15.99)P[382.2]
1192	LLGSS(+79.97)TKLGTTRGNY	9.2	61	549.941	3	16.196	-1	67 68 58 60 58 56 69 78 88 81 58 50 45 45 26	[879.5]GT[591.3]
4050	FKLMHPVPRNLTY	7.9	61	404.7242	4	50.97	-1.7	53 60 75 83 93 26 26 67 66 78 67 67 26	[388.2]MH[940.5]
3809	KTPGNFLLMVY(+79.97)	6.7	61	681.8298	2	47.936	-0.3	50 37 37 41 70 95 94 81 67 66 26	[497.3]FLL[473.1]
2491	MTVYLPNLHQRF	7.3	61	506.9352	3	31.565	1.6	51 51 57 61 70 69 62 79 70 53 52 51	[1499.8]
1768	NKNLERLAW	5.5	61	572.3184	2	22.711	2.3	75 78 75 90 77 46 43 34 26	[356.2]L[655.3]
2208	NM(+15.99)YVVDVVM(+15.99)EF	6.7	61	459.8747	3	27.962	2.3	46 46 50 72 74 77 86 70 52 52 39	[737.3]V[522.2]
1328	CELVSPGVVTGNTLF	9.1	61	768.3943	2	17.795	2.7	26 97 97 97 71 70 65 60 64 38 37 44 55 57 26	[103.0]ELV[1072.6]
1705	STGTMLKVGKERAW	8.5	61	782.4192	2	22.048	-0.1	28 38 51 93 97 97 94 69 39 39 43 52 77 26	[245.1]TMLK[826.4]
3433	ALVVVRRSKGDNW	7.9	61	500.6191	3	43.333	-0.9	38 38 46 61 61 62 61 82 75 77 58 74 51	[793.5]S[600.3]
3276	Y(+79.97)KKSGLVDTLKWSKSGVKYY	12.2	61	608.3197	4	41.416	4.2	81 79 57 74 67 53 55 51 51 71 58 41 40 76 63 63 74 59 65 32	Y(+79.97)[2168.2]
3537	M(+15.99)AKADGPGLLKTPF	8.5	61	731.3931	2	44.593	1.3	43 46 65 92 85 83 73 43 45 68 57 56 62 26	[346.2]ADG[853.5]
3781	HLVAAGFFTAADKY	8.5	61	504.2613	3	47.581	0.5	26 60 55 63 74 73 78 76 63 63 72 51 51 37	[1491.8]

2229	RYSHLLPGFW	6.1	61	425.8931	3	28.221	1.2	29 79 65 92 84 67 65 70 26 26	[406.2]HL[600.3]
2439	TTALPLAALAAPAGWW	9.7	61	537.2954	3	30.898	-1.2	53 59 52 48 58 79 84 80 66 48 57 69 71 61 52 26	[596.4]AA[852.4]
2833	NRPGRNGAPVFLY	7.9	61	487.5962	3	35.839	-1.1	41 41 53 61 67 72 76 79 82 81 78 26 26	[822.4]PV[423.2]
1195	LWAPSDDDPVKKNY	8.5	61	824.4053	2	16.238	1.3	33 37 44 91 82 41 98 96 78 49 55 56 56 26	[370.2]PS[115.0]DD[729.4]
4314	S(+79.97)PT(+79.97)GCNAVY	5.5	61	536.1653	2	54.421	-1.9	26 58 70 84 56 48 66 73 60	[445.1]G[550.2]
955	VQRDHLGHVF	6.1	61	604.3212	2	13.392	1.7	68 48 54 88 72 72 64 82 26 26	[383.2]D[307.2]H[246.1]
4092	YCYGPDGDSY(+79.97)	6.1	61	610.1846	2	51.501	-2.4	27 44 47 77 82 85 75 66 70 26	[486.2]PD[502.1]
2091	NTTAMGSFPF	6.1	61	536.7415	2	26.472	-1	43 43 58 82 76 76 76 95 26 26	[316.1]A[275.1]F[244.1]
1688	NVFNQATKNLSFLGLW	9.7	61	617.9971	3	21.873	0.9	60 66 34 41 33 53 78 68 53 71 93 95 89 54 47 26	[1129.6]SFL[356.2]
1225	RDLESEVDNEKRNVPTW	10.3	61	1044.01	2	16.591	-1.2	56 53 55 66 73 74 88 90 76 80 80 48 52 37 35 33 26	[729.3]VD[114.0]EK[753.4]
1695	SKTSDGVRDFLW	7.3	61	705.856	2	21.941	2.5	38 48 54 84 82 84 82 81 88 26 26 26	[316.2]SDGVRD[446.2]
2282	YGGAGGAATPHRY	7.9	61	639.3037	2	28.894	-1.4	34 56 67 85 75 72 82 74 63 54 41 43 35	[277.1]A[114.0]A[725.4]
1532	KGLT(+79.97)PGASGLTGALW	9.1	61	754.8807	2	20.073	2.1	80 76 79 73 71 69 66 63 65 42 36 37 54 64 26	K[1361.6]
1012	RVM(+15.99)DQNGGLKEF	7.3	61	705.345	2	14.08	-0.9	26 87 85 84 51 65 74 64 42 39 39 65	[156.1]VM(+15.99)D[873.4]
1808	LVKYAPTY	4.8	61	954.5297	1	23.156	0.3	73 72 85 78 60 42 44 26	[212.2]K[595.3]
1934	QCGAVTSAFGERFLF	9.1	60	816.8958	2	24.576	0.2	36 36 46 83 70 75 92 93 96 65 49 65 41 26 26	[288.1]A[200.1]SAF[749.4]
3295	FAKKGGYALLTEY	7.9	60	487.5962	3	41.642	-2.9	37 39 51 67 80 84 93 93 88 45 40 38 26	[474.3]GGYAL[506.2]
2625	WVVTGGSKFGSTVW	8.5	60	504.2617	3	33.248	1.2	56 56 59 47 40 46 69 73 86 88 84 84 26 26	[814.4]FGST[285.1]
1669	SWVKKSNRDGKNYHRLYY	10.9	60	772.0684	3	21.645	2.9	64 62 58 66 57 57 64 75 79 83 83 87 61 52 43 35 26 26	[1100.6]GKN[895.4]
1724	KPFTLKSLSMAGTAKSRW	10.9	60	670.3732	3	22.248	2.5	78 77 57 55 62 68 67 69 49 41 46 82 74 71 65 51 40 26	[1203.7]G[729.4]
1352	SSHRARPGLDFHF	7.9	60	509.5927	3	18.073	1.6	26 26 39 38 55 76 76 82 90 79 79 86 26	[791.4]GL[262.1]H[147.1]
2907	LFSHVCAGKVNSFPLW	9.7	60	602.3133	3	36.773	2.7	74 74 74 80 65 56 53 61 66 68 47 65 67 56 26 26	[347.2]H[1301.7]
2983	LELLFLFTF	5.4	60	571.8283	2	37.715	-0.2	71 91 96 99 26 51 39 39 26	[113.1]ELL[655.3]
2280	FVDLDTVAGKHAVF	8.4	60	759.8999	2	28.874	-1.7	80 69 68 85 90 66 59 40 38 41 62 52 52 36	F[214.1]LD[910.5]
1732	KPVFLKEDLPNGSVVKLYTY(+79.97)	12.1	60	797.4175	3	22.328	-1.1	33 40 40 56 49 36 38 68 71 72 72 88 76 77 82 91 88 41 48 31	[1280.7]G[186.1]VKL[507.1]
3325	DDS(+79.97)GPGDDMAT(+79.97)F	7.2	60	463.1303	3	42.007	-2.4	26 51 41 40 66 61 67 86 85 84 84 26	[723.2]DMAT(+79.97)[147.1]
2672	FAKAKAMFGYVLW	7.8	60	766.4095	2	33.835	-0.7	60 59 74 31 71 78 78 77 70 64 62 26 26	[1512.8]
4100	S(+79.97)PNRQESTY	5.4	60	387.8234	3	51.604	-1.4	69 65 53 58 43 49 87 88 26	[791.3]ST[163.1]
3198	WLS(+79.97)LPAVPKAALW	7.8	60	766.4093	2	40.44	2.6	47 82 52 71 88 76 71 63 62 55 46 36 26	[186.1]L[280.1]P[836.5]
2668	VYAFLVPARLKSDTMY	9.6	60	625.3345	3	33.783	0.6	45 45 50 63 80 45 43 44 65 76 84 80 77 68 65 26	[480.2]L[536.3]KS[510.2]
2674	YLFRPAAAKGFMF	7.8	60	506.9355	3	33.855	-0.4	26 26 26 82 54 74 80 82 75 74 73 77 26	[423.2]R[168.1]AA[610.3]

2880	KNSLAQANGVSSVPF	9	60	759.8985	2	36.438	-0.8	68 58 46 46 60 51 65 54 76 74 74 80 93 26 26	[1069.6]SV[244.1]
4319	CSPMGPY	4.2	60	377.6495	2	54.483	2.5	26 72 72 68 75 79 26	[735.3]
1132	KASVPSHLY	5.4	60	334.519	3	15.487	1.1	62 49 50 55 26 26 90 90 90	[569.3]HLY
3180	WLAKACANGAPVLAF	9	60	511.2749	3	40.213	0.8	79 62 49 45 50 51 56 47 80 79 86 72 56 57 26	[857.4]G[71.0]P[430.3]
2350	VLCKKLFLKNMY	7.2	60	750.4258	2	29.759	-2.2	56 59 58 74 46 37 44 72 84 69 70 46	[944.6]K[408.1]
2281	YLVVSSTLY	5.4	60	1044.562	1	28.885	0.5	26 26 96 85 85 68 61 63 26	[276.1]VVS[464.2]
3542	WAKYVLSTHDKY	7.2	60	504.2604	3	44.658	-1.4	39 41 51 84 90 59 61 90 63 50 50 39	[385.2]YV[200.1]T[543.2]
1051	VRFDMGPGSAAPLY	8.4	60	740.8677	2	14.537	1.9	27 27 27 61 78 77 89 78 69 70 63 64 76 26	[705.3]P[659.3]
2917	KNLLGKHFW	5.4	60	571.8281	2	36.906	1.8	77 74 88 96 62 54 33 26 26	[242.1]LL[655.3]
2870	VSLPDGQLF	5.4	60	975.5141	1	36.309	-0.4	26 26 94 71 66 78 58 67 48	[186.1]L[657.3]
1075	WRAGTGRYKKALYKSW	9.6	60	493.5219	4	14.822	-2.5	47 40 36 45 44 52 82 81 47 62 88 92 85 53 73 26	[628.3]RY[256.2]ALY[401.2]
3012	Y(+79.97)KSKRTPLLYSM(+15.99)SVTKLRY	11.4	60	608.3208	4	38.074	0	76 66 44 46 50 52 58 69 70 66 70 67 67 66 77 52 42 50 43	[2411.2]
1964	GKKLKEGPAFGALLAANPLLEAYGMPW	16.2	60	948.1814	3	24.932	-0.9	26 27 34 55 50 34 34 49 51 65 46 41 51 95 98 97 89 80 81 93 93 91 77 48 40 32 26	[1296.8]LAANPLLEA[634.3]
3236	NNFALPLQLKRW	7.2	60	500.6205	3	40.917	-0.9	55 55 50 57 75 81 54 39 79 61 82 26	[559.3]P[482.3]R[186.1]
2722	TDKTSAKAW	5.4	60	504.2603	2	34.436	-2.2	62 59 72 82 76 63 59 34 26	[344.2]T[543.3]
3114	WHLFSALLAPMVF	7.8	60	511.2752	3	39.377	-1.2	26 26 83 69 62 66 70 79 82 60 57 64 26	[323.1]L[531.3]A[474.2]
2402	FAQAKAMGVAPAALW	9	60	766.4087	2	30.426	0.7	90 90 60 71 41 71 71 66 53 43 50 75 48 33 26	FA[1294.7]
2866	VKCVKSKAHGPY(+79.97)	7.2	60	466.2331	3	36.253	2.9	57 57 46 50 63 80 86 87 61 53 47 26	[557.3]SKA[534.2]
1550	LYVVLTSSY	5.4	60	1044.56	1	20.277	-1.1	26 98 98 88 69 55 48 26 26	[113.1]YVV[551.3]
2784	WLAKSSLEAPVAPY	8.4	60	511.2761	3	35.223	-1.1	82 70 53 49 66 77 61 61 69 87 47 43 39 26	W[799.4]P[430.2]
3337	LYVVSSTLY	5.4	60	1044.56	1	42.158	-1.1	26 97 96 89 89 39 33 40 26	[113.1]YVVS[464.2]
2467	M(+15.99)AKLEPAGTAKRGW	8.4	60	766.4083	2	31.257	2.9	44 50 55 83 82 84 67 43 44 73 77 76 26 26	[346.2]LEP[827.4]
3800	FAKNS(+79.97)KRLKAF	6.6	60	695.3743	2	47.812	0.8	67 77 91 89 67 75 51 40 35 34 26	[218.1]KN[910.5]
1196	KAPLAGNGGKWW	7.2	60	642.8464	2	16.249	0.7	26 50 72 92 70 65 63 83 64 41 50 34	[296.2]L[242.1]G[557.3]
2287	Y(+79.97)HSCGSVFGSLSW	7.8	60	503.8677	3	28.961	1.2	83 83 83 26 44 57 57 88 76 60 58 26 26	Y(+79.97)HS[346.1]F[530.2]
2734	Y(+79.97)NM(+15.99)DPAYTGT(+79.97)AW	7.2	60	522.5079	3	34.585	2.3	44 51 51 62 63 68 78 85 53 52 75 26	[950.3]T[495.2]
2191	MFM(+15.99)PTLELKLPVGLGSLHAW	11.9	60	752.7363	3	27.745	1.1	27 36 34 44 52 54 71 62 59 69 69 78 90 93 68 65 70 58 59 26	[1415.8]GL[651.3]
1615	Y(+79.97)LRHKALGKM(+15.99)LTVHF	9	60	637.3356	3	21.034	2.8	49 32 33 55 48 67 84 88 77 69 87 74 71 26 26	[848.4]LG[275.1]L[484.2]
2427	RSLTTDLF	4.8	60	476.7582	2	30.744	-0.6	41 44 45 81 80 78 78 26	[356.2]TT[375.2]
3128	HKCVHGNSVGARVF	8.4	60	504.2604	3	39.548	-1.9	63 60 54 56 69 71 55 58 78 88 59 48 43 26	[961.5]G[473.3]
1398	APPQAVVW	4.8	60	434.2405	2	18.585	1.8	26 97 66 49 55 75 78 26	[71.0]P[680.4]

4057	MERPAFKHLF	6	60	425.8931	3	51.053	-1.4	64 46 41 52 75 83 85 52 67 26	[584.3]FK[397.2]
3109	KSTSAFNVGGSGLW	8.4	60	705.8533	2	39.31	-1.3	45 51 52 65 75 51 49 54 84 80 58 62 75 26	[834.4]GG[443.2]
1345	HLNLQGLPAWGQQY	8.3	60	812.9129	2	17.995	-2.7	34 33 38 94 87 97 96 88 66 32 29 29 52 52	[364.2]LQGLP[733.3]
3304	WTNYGLAVGGKFPKAVW	10.1	60	632.0038	3	41.751	-2	37 62 40 51 54 65 48 53 57 89 90 86 84 64 46 44 37	[961.5]GKFP[484.3]
1454	KCELNGAVKKWGW	7.7	60	759.899	2	19.201	1.4	54 54 71 72 69 79 64 61 75 56 40 47 26	[1499.8]
3911	APAKPPTW	4.8	60	434.2396	2	49.21	-0.5	26 95 77 71 66 86 26 26	[71.0]P[296.2]P[287.1]
2847	STEGSGGVRLVYW	7.7	60	705.8542	2	36.016	0.1	41 48 44 58 58 85 86 74 70 73 77 26 26	[461.2]GG[816.5]
1281	RLLTENGECTRDTKLLAW	10.7	60	1060.05	2	17.239	-2	35 46 75 82 85 87 84 83 76 74 72 38 37 54 53 31 28 26	[382.3]TENGE[1187.6]
1369	LAFKTF	3.6	60	363.7135	2	18.264	1.7	26 26 93 91 92 26	[184.1]FKT[147.1]
1861	M(+15.99)VDLAEGKEYKLVRF	8.9	60	605.3211	3	23.736	-1.5	74 76 71 76 83 85 49 48 54 50 59 43 49 43 26	[474.2]AE[1120.6]
3643	WNTMLRLDALLW	7.1	60	511.2751	3	45.89	1.1	96 35 34 34 50 48 76 87 77 79 66 26	W[728.4]D[483.3]
3136	AEERNLVPAPNAPVPW	9.5	60	587.3095	3	39.646	0.8	26 26 59 57 56 66 79 82 70 61 59 81 85 83 26 26	[811.4]P[282.1]APV[283.1]
2149	NKCLKPGSGPASTLF	8.9	60	760.4	2	27.21	-0.6	38 39 48 82 74 52 50 74 85 68 59 59 62 67 26	[345.1]L[369.2]G[616.3]
2272	FAKANPGALVCAALW	8.9	60	766.4092	2	28.763	1.4	77 75 65 44 41 67 70 61 53 44 46 65 81 71 26	[1142.6]A[299.2]
2767	AFKKGGYAELTLY	7.7	60	487.5964	3	35.004	-2.4	38 39 50 39 77 73 79 87 85 75 58 41 26	[751.4]AE[490.3]
3576	WLTKKAMHSSPVF	7.7	59	511.275	3	45.068	1	75 86 57 68 54 56 60 85 58 58 58 26 26	[186.1]L[559.3]H[517.3]
2102	VTLEGTLPLW	5.9	59	564.8176	2	26.615	-1.6	36 38 66 79 89 86 78 61 30 26	[442.2]GT[509.3]
2511	YGQLATGAAALLVYY	8.9	59	787.4161	2	31.825	-0.7	60 59 78 87 66 41 41 55 64 64 75 72 70 26 26	[348.1]L[1093.6]
2938	MFKGPPLW	4.8	59	975.5139	1	37.157	1.9	26 95 89 78 75 56 26 26	[131.0]FK[550.3]
2871	GYKLAPGSAATVLYY	8.9	59	787.4162	2	36.318	-0.6	68 68 93 86 88 70 59 41 41 44 51 54 69 26 26	[220.1]KLA[1022.5]
2617	Y(+79.97)KKSEKVELNFKLKRNYY	10.7	59	608.3199	4	33.156	0	85 82 56 70 51 50 60 62 67 38 38 42 87 88 74 42 37 31	Y(+79.97)K[1202.7]LK[596.3]
950	VQLASGNSSVVF	7.1	59	403.2154	3	13.331	0	31 30 40 55 60 89 63 63 71 87 92 26	[498.3]G[288.1]VV[147.1]
1479	WWDVFDGFRPNLDVLLYY(+79.97)	10.7	59	800.0358	3	19.477	-0.6	26 46 56 57 81 79 63 48 67 68 84 86 87 66 60 29 30 27	[586.3]F[572.3]NLD[731.3]
1594	LRLTENSVFGGGGLLEEVRVW	12.5	59	1166.123	2	20.784	-2.9	27 34 41 59 72 54 71 72 76 71 52 72 63 64 69 86 82 65 55 26 26	[1513.8]EE[540.3]
3839	SVLTGKSANGAPVPAY	9.5	59	511.2756	3	48.294	0.5	26 82 66 41 40 51 73 59 53 90 84 84 65 44 57 26	[87.0]V[671.4]GAP[430.2]
2815	WALTSVTTKEKLFHRTWYY	11.3	59	608.3196	4	35.607	-1.5	44 43 44 65 70 58 59 65 65 61 63 73 73 77 84 69 34 37 36	[1641.9]R[613.3]
1113	TTHYNYDQSVRAVF	8.3	59	567.6074	3	15.261	2.9	84 83 69 47 56 48 75 52 80 48 44 48 51 40	TT[820.3]S[572.3]
3316	KKPVGGKFTVPRTVWW	9.5	59	629.3635	3	41.892	-2	26 47 48 56 56 61 72 82 87 84 81 74 66 46 26 30	[694.4]FTVP[728.4]
2760	SSLFVAVSVTQPW	7.7	59	474.2549	3	34.915	2.3	26 79 79 65 64 64 83 85 55 54 36 42 33	[604.3]VS[611.3]
2424	RTVSGCKSNPKRW	7.7	59	506.9352	3	30.712	-3.1	63 63 69 64 52 53 54 58 66 75 60 59 26	[1499.8]
2247	LVHSLFGSFRAVT(+79.97)W	8.3	59	567.285	3	28.45	2.9	26 26 26 71 71 68 72 75 78 81 75 62 65 26	[987.5]R[537.2]

3483	DALLNGLPY	5.3	59	975.5139	1	43.932	-0.6	50 50 91 76 50 49 54 83 26	[186.1]L[397.2]P[163.1]
2090	VFLTMF	3.6	59	757.3941	1	26.462	-1.5	26 26 92 90 93 26	[246.1]LTM[147.1]
2344	HSLKAPTAAVM(+15.99)F	7.1	59	430.23	3	29.683	2.8	26 67 62 48 50 56 60 68 81 81 80 26	[805.4]AVM(+15.99)[147.1]
958	TFLAALHKPFFKATRW	9.5	59	484.2774	4	13.423	4.2	42 45 56 61 78 79 74 60 36 34 75 76 77 62 59 26	[1915.1]
2498	VDDLLLSCLAKGGLPRMPW	11.3	59	695.3734	3	31.654	1.3	52 53 62 60 73 59 56 55 45 50 76 80 81 87 75 54 39 35 26	[1170.6]GGL[667.3]
1138	VEKLLYGKF	5.3	59	366.2183	3	15.563	0.2	41 40 62 79 83 80 62 56 26	[469.3]LY[332.2]
2056	VRFRVRGGRKWVEDLMVDVLY(+79.97)	12.4	59	891.801	3	26.036	1.4	28 28 27 31 37 41 64 57 47 57 57 72 78 94 93 92 91 86 59 55 39	[1625.9]DLMVD[455.2]
1218	RDLEETTVKDLGTGGFWY	10.7	59	696.3419	3	16.512	1.5	39 38 47 67 70 68 62 57 53 54 73 75 85 81 58 38 38 55	[1356.7]TG[553.2]
2286	Y(+79.97)KKPFLLFKLESLRNYQY	10.6	59	608.3209	4	28.949	-0.1	82 79 58 62 62 63 57 53 60 63 45 46 71 83 69 32 38 32	Y(+79.97)[1443.9]R[568.2]
2924	WNT(+79.97)GGGLLQHF	6.5	59	437.1944	3	36.992	-2.9	68 39 37 44 55 69 82 68 67 88 26	[652.2]L[241.1]H[147.1]
4137	KRRPASVENW	5.9	59	621.84	2	52.068	2.2	27 27 50 64 84 88 62 59 63 63	[537.3]AS[528.2]
1165	NPMTRGDGRRNF	7.1	59	474.2329	3	15.887	-1.4	76 83 50 43 43 51 63 73 91 51 26 51	[114.0]P[617.3]R[417.2]
2931	FLLLSPHGDSMGYLVVKY(+79.97)F	11.2	59	756.0373	3	37.072	-1.9	27 27 68 46 45 50 77 82 71 64 66 83 89 91 90 37 34 33 32	[807.5]G[333.1]GYLV[617.3]
2648	FLKGRPLVCDF	6.5	59	432.2384	3	33.537	2.3	46 45 54 68 76 64 61 63 63 77 26	[1275.7]
1581	DKKAGKSKEHENTGGHLVF	11.2	59	1041.538	2	20.625	-1.6	30 30 31 56 71 67 82 91 94 96 94 67 67 68 51 33 31 26 26	[627.4]SKEHE[825.4]
1908	CELVSMNMLTDRENRQLPF	11.2	59	1148.547	2	24.274	-1.1	62 66 85 94 89 65 39 40 58 87 87 77 52 59 32 30 30 31 26	[232.1]LVS[489.2]TD[1040.6]
3507	GYNMSAATGFPSATMY(+79.97)	9.4	59	583.562	3	44.227	0.9	39 43 58 45 62 66 66 41 39 48 75 86 84 72 68 43	[1096.5]SA[475.1]
3380	TLWPM(+15.99)LNGQTW	6.5	59	681.8291	2	42.69	-0.1	35 35 26 99 87 82 69 58 46 50 54	[400.2]PM(+15.99)L[586.2]
1058	KSRKKSEELTF	6.5	59	451.5903	3	14.615	2.5	52 46 44 44 65 86 92 73 55 60 26	[627.4]SE[490.2]
2484	SRKSHAAMMSVYPKLRNKYY	11.8	59	608.3199	4	31.475	1.9	37 40 53 56 60 48 47 47 66 61 61 64 58 59 92 91 83 62 53 30	[1573.8]LRN[454.2]
1500	GKESTPFKGGPVGRRF	9.4	59	573.9816	3	19.715	0.7	34 33 34 35 46 39 72 96 95 68 66 77 76 69 69 26	[746.4]KG[769.4]
4074	KECKMGAGNVGAAPW	8.8	59	506.9125	3	51.269	2.5	54 53 59 58 69 61 50 60 73 82 81 72 42 36 26	[918.4]VG[425.2]
3237	LEKNLLTVGPVFSPAKKY(+79.97)	10.6	59	695.3773	3	40.927	-0.9	46 45 51 47 48 53 59 76 72 69 80 80 79 76 58 39 41 34	[1064.6]VF[754.3]
2559	NDDAS(+79.97)M(+15.99)DCTSMCESY(+79.97)	8.8	59	616.4637	3	32.427	-42.6	43 47 60 59 60 72 66 53 54 69 72 58 52 57 53	[1828.4]
2412	YLVPFMKF	4.7	59	1044.561	1	30.555	2	26 26 97 97 97 72 26 26	[276.1]VPF[406.2]
1335	RPWFTVVM(+15.99)PTGPLKYRY	10	59	1064.065	2	17.874	0.3	26 27 26 73 96 82 65 64 71 79 59 57 62 75 41 45 44	[586.3]TV[1321.7]
3646	RAAPTMPFGPAVF	7.6	59	681.3567	2	45.922	2.1	28 37 57 64 75 91 94 26 86 54 50 50 46	[496.3]MP[147.1]G[414.2]
892	NYAGGAMTYAKY	7.1	59	655.2963	2	12.608	-2	53 56 69 64 68 79 60 56 57 58 53 26	[1290.6]
1892	TLLSVLCVPKW	6.5	59	629.8635	2	24.086	-2.5	27 89 94 94 57 52 51 57 67 26 26	[101.0]LLS[825.5]
1927	WKFWWLTALGKNAGLAKELYY	12.3	59	853.4557	3	24.493	-2.6	35 33 31 26 42 42 44 69 79 86 88 83 61 50 59 84 89 88 82 26 26	[1231.7]GKN[241.1]AKEL[326.1]
1255	SWKLSPKSNKGLALEYY	10	59	662.0233	3	16.934	0.9	26 78 41 34 40 61 53 53 89 93 89 74 60 69 77 26 26	[913.5]NKG[752.4]

2419	Y(+79.97)KKDNDVELKNFLRPPVKF	11.2	59	608.3207	4	30.643	1.2	70 52 41 63 64 75 72 67 63 54 40 43 83 71 88 46 42 46 26	[1573.7]L[156.1]P[471.3]
1375	APKTLLAKLDGMKTKW	9.4	59	451.0155	4	18.324	-0.1	74 67 48 48 59 73 68 49 50 76 73 65 62 56 36 26	[1782.0]
3068	SVLPDGAGLF	5.9	59	975.5142	1	38.783	-0.3	26 26 92 64 60 71 70 65 72 36	[186.1]L[657.3]
903	WLPGSVKATLYY	7	59	466.5874	3	12.751	0.9	26 39 44 54 57 64 82 83 82 71 71 26	[639.3]KAT[439.2]
3724	Y(+79.97)QCDCAAMDSMS(+79.97)PY(+79.97)	8.2	59	608.8217	3	46.866	2.4	85 61 61 61 66 70 67 41 42 48 75 86 26 26	Y(+79.97)[1055.3]S(+79.97)[340.1]
3133	FAKLVNGNVGNGRW	8.2	59	766.4086	2	39.612	-1.8	79 80 91 67 37 36 50 61 71 76 45 46 49 26	[147.1]AK[1166.6]
891	WWVSPPCNTLRF	7	59	502.5841	3	12.597	1.4	26 70 70 89 26 95 88 67 57 43 40 26	[471.2]S[97.1]PC[631.3]
3610	M(+15.99)VVAVQPSESLPVF	8.2	59	759.8956	2	45.48	-2.2	82 82 78 39 38 38 61 61 83 85 89 26 26 26	M(+15.99)V[581.3]ESL[343.2]
1844	HPFVFPSNKNDTPAKGLGHRSFVF	14.1	59	675.6018	4	23.548	0.5	26 78 79 67 67 65 45 32 34 35 36 41 46 67 76 88 75 59 57 67 75 75 79 26	[1679.8]G[943.5]
1452	KVVLCRSKGGVYT(+79.97)VDLSGLPRW	12.9	59	838.4396	3	19.181	-2.1	26 26 52 67 61 54 55 51 43 46 58 58 66 70 92 68 62 69 87 72 67 26	[1569.8]D[257.1]L[439.2]
1737	KNPLLLPKNRGY	7	59	471.6173	3	22.383	0.2	29 48 59 62 68 62 59 63 68 76 79 26	[1393.8]
3184	SLNVVGVVGGPLF	7.6	59	629.3634	2	40.254	-0.5	55 54 52 65 66 65 71 85 79 54 40 42 26	[668.4]V[471.2]
4181	VPGLVVW	4.1	59	385.2346	2	52.645	1.8	26 71 78 86 93 26 26	[253.1]LV[285.1]
4094	YGMYDMYGEPFEF	7.6	59	550.2169	3	51.524	1.7	36 39 38 42 41 58 59 73 72 86 74 77 59	[1109.4]P[423.2]
2283	KVPLAHAPFRLTCY	8.2	59	404.7247	4	28.904	-0.4	43 46 54 60 62 72 66 26 39 62 51 74 90 67	[1330.8]C[163.1]
3016	NNWFVWAKASPLW	7.6	59	809.9133	2	38.116	1.8	49 71 66 78 90 89 89 66 35 36 31 26 26	[561.2]VWA[682.4]
1264	RPRGALKLAHYF	7	58	476.9446	3	17.034	-2.1	26 49 42 55 60 63 66 80 81 60 61 53	[778.5]LA[447.2]
2048	LRYRVMPALWWKNPKPYVLY(+79.97)	11.7	58	669.1019	4	25.945	-2.6	27 27 30 67 78 96 85 43 42 52 41 38 33 41 73 76 80 83 85 63	[687.4]MP[1120.6]YVL[243.0]
3596	S(+79.97)S(+79.97)GYDCEDVW	5.8	58	660.6798	2	45.304	-0.3	26 35 39 44 86 90 78 78 78 26	[554.1]DC[529.2]
2919	DLALVGTTATVRLLKEW	9.9	58	629.3641	3	36.927	1.8	45 45 56 54 53 57 58 72 80 82 80 82 70 39 36 39 36	[770.4]ATVR[669.4]
1785	KSAHLPKLMNTTYF	8.2	58	550.9595	3	22.901	-2	71 71 55 51 44 55 68 89 66 65 73 48 27 27	[761.5]L[757.3]
2242	QNARVT(+79.97)YEDCVHY(+79.97)	7.6	58	586.5518	3	28.382	1	52 51 62 84 74 46 46 48 56 67 67 74 26	[313.1]R[1269.4]
2418	WVTAFGNSVGKTPF	8.2	58	504.2615	3	30.632	0.8	26 74 74 86 74 67 56 68 71 74 37 36 40 26	[386.2]A[1034.5]
3224	KKPKGVPAAGVGRKF	8.8	58	770.4764	2	40.764	-1.7	26 53 47 55 68 64 62 65 90 90 83 60 52 26 26	[805.5]AGV[488.3]
2059	RLRT(+79.97)NSLKTLTKRLSLTPVM(+15.99)Y	12.3	58	863.1423	3	26.078	-1.1	27 27 36 41 33 35 36 62 72 87 96 85 82 93 92 81 56 49 44 45 36	[1149.6]LTKRLSL[607.3]
1437	RMVPVKKLTFLY	7	58	498.9676	3	19.016	1.3	66 63 79 51 39 41 44 54 58 85 89 26	[1052.7]FL[163.1]
2382	APPQAVVW	4.7	58	434.2404	2	30.181	1.5	26 97 74 41 59 70 70 26	[71.0]P[680.4]
4232	VGCTPTAAHY(+79.97)	5.8	58	550.2162	2	53.33	-2.4	51 52 51 57 62 72 88 92 26 26	[558.2]AA[380.1]
1209	SNGGRAPF	4.7	58	805.3946	1	16.4	-0.6	26 75 81 85 61 53 55 26	[201.1]GG[471.3]
3949	TDVVAHGGKPGVSTW	8.7	58	504.26	3	49.686	0.4	37 39 49 62 65 68 70 63 62 66 76 72 54 42 42	[1491.7]
2258	WRGGVGAGVLNETF	8.2	58	731.8736	2	28.591	-2.5	76 75 85 62 47 41 42 62 60 61 58 55 58 26	[342.2]G[1044.5]

1292	LHWKLDKLLY	5.8	58	443.5969	3	17.378	2.8	26 26 77 65 48 66 72 85 85 26	[920.5]LL[163.1]
2967	MNKKYLATKT(+79.97)KW	7	58	531.2739	3	37.511	0.5	52 50 81 73 54 45 58 71 66 45 50 47	[245.1]K[1199.6]
2476	ALVLPLLPAAGAMDTY	9.3	58	539.2975	3	31.364	1	45 45 52 35 55 72 71 60 68 91 87 64 57 49 45 26	[887.6]AG[581.2]
2360	SKGPKKLDAGFEAVY	8.7	58	537.29	3	29.894	-1.8	43 43 39 38 33 57 61 85 85 85 84 54 54 54 52	[738.5]DAGF[462.2]
1897	Y(+79.97)MHLAALLHKKRAQLMVDVVW	12.2	58	651.3425	4	24.146	-2.5	28 40 34 49 57 64 68 66 47 48 29 29 32 39 78 95 96 95 95 95 26	[1854.0]MVDVV[186.1]
3988	LELLFLFTF	5.2	58	571.8282	2	50.192	-0.4	42 88 96 99 26 59 42 40 26	[113.1]ELL[655.3]
1882	KTPLGWSTVPY	6.4	58	624.8364	2	23.972	2.5	70 70 56 47 53 86 87 87 26 26 26	[496.3]WST[359.2]
3048	WLNKMANGAPVLAF	8.1	58	511.2756	3	38.533	2.2	74 69 44 58 63 65 62 56 57 77 65 45 45 26	[1512.8]
1377	APAVEAGVGF	5.8	58	459.2395	2	18.341	-1.1	26 85 70 68 80 56 56 49 59 26	[71.0]P[170.1]E[431.2]
1954	VKRVDSDLDKHPKVMTAY	10.5	58	701.3729	3	24.812	-0.9	34 36 40 35 36 70 76 62 62 64 72 70 73 85 79 57 57 26	[1517.8]V[466.2]
2271	QLNLEGVPYFVRF	7.5	58	791.4238	2	28.752	-1.2	53 43 45 89 90 85 87 90 62 26 26 26 26	[355.2]LEGVP[712.4]
2214	DQTLTPATVVNRGF	8.1	58	759.8987	2	28.036	-0.6	34 34 39 70 62 57 66 84 84 81 56 58 56 26	[726.4]TVV[474.2]
4312	EPETDVDF	4.6	58	476.2	2	54.388	-1.5	26 26 68 68 76 65 65 65	[932.4]
1903	QPFGTTVGSGSKSLLMKAVW	11.6	58	698.7095	3	24.216	4.2	38 50 35 42 43 45 45 45 52 91 81 84 86 87 95 89 51 35 29 27	[874.4]GSKSLLM[484.3]
1148	MLKCAVGVVLF	6.4	58	393.8935	3	15.689	2.7	59 60 70 60 45 45 63 86 93 26 26	[702.4]VV[260.2]
1915	KDWRACKGPKGCGMVF	9.3	58	594.9595	3	24.352	2.3	36 36 31 46 46 76 82 68 64 76 76 54 55 68 81 26	[759.3]K[630.3]V[147.1]
3796	WY(+79.97)GAT(+79.97)Y(+79.97)	3.5	58	500.6191	2	47.77	1.8	26 62 68 78 84 26	[557.2]T(+79.97)[243.0]
1258	YVRSPEM(+15.99)MPLFKSGYY	9.3	58	992.4731	2	16.964	2.3	26 26 68 64 69 73 26 90 81 80 79 49 45 48 70 26	[878.4]MPL[745.3]
3441	MTTKGPPY	4.6	58	447.7227	2	43.427	-0.8	78 78 71 54 54 72 26 26	[875.4]
1030	LDKNAGVVVW	5.8	58	550.807	2	14.281	-2.8	47 46 61 72 61 56 70 69 66 26	[1081.6]
3412	FPLTRTAMKAKLCLLRSHTY(+79.97)	11.6	58	608.3188	4	43.068	-0.6	34 33 34 35 41 67 68 68 58 58 63 63 55 79 91 91 83 45 45 36	[1573.9]LRS[481.1]
2410	AMRAPPGVYGCKF	7.5	58	466.2335	3	30.521	-0.5	42 49 67 70 74 79 64 67 73 55 41 37 26	[1377.7]
1081	ETKYRKKPF	5.2	58	598.8447	2	14.891	2.9	64 63 69 73 47 64 59 51 26	[1177.7]
4076	MMKRRTKVF	5.2	58	399.564	3	51.288	1.8	97 96 91 43 26 39 48 48 26	MMK[787.5]
1574	AM(+15.99)LTSLLTVPSYF	7.5	58	729.88	2	20.545	-1.4	44 39 55 57 62 63 81 78 79 26 54 54 54	[632.3]L[694.3]
1188	SLLKEKYSY	5.2	58	565.8098	2	16.159	2.9	56 56 93 75 48 50 40 72 26	[200.1]L[798.4]
2682	VRLLPCPSETHTPPLY	9.2	58	608.3205	3	33.949	-2.7	32 31 37 55 55 78 67 49 51 69 89 86 80 56 55 26	[1095.6]HTP[373.2]
2295	MKKDHDVLKVLHF	7.5	58	537.3	3	29.057	-1.7	27 45 51 55 75 69 70 71 81 76 73 26 26	[966.5]K[496.3]
3574	ESRARGHKFVNAF	7.5	58	506.9346	3	45.035	-2.1	59 55 54 56 64 60 63 71 58 52 50 51 53	[1499.8]
1807	ARFPKCDAAKQFKKY(+79.97)	8.7	58	627.648	3	23.148	2.9	81 81 74 46 55 60 56 61 70 61 60 50 38 33 33	AR[1634.8]
4036	LKEGPTTHTKVHVY	8.1	58	537.2951	3	50.795	0.8	64 63 81 55 45 57 63 65 41 42 40 62 62 62	[241.2]E[1220.6]

1171	RFNVVMKLYDTLFRF	8.7	58	650.3541	3	15.957	0.6	26 59 46 74 65 56 62 84 74 93 70 58 38 26 26	[874.5]L[163.1]D[664.4]
3199	DALLVQGPY	5.2	58	975.514	1	40.451	-0.6	55 54 88 59 47 38 58 91 26	[186.1]L[397.2]P[163.1]
3756	TTKSGGGYATKVKY	8.1	58	487.5963	3	47.272	0.1	52 62 65 66 57 44 65 81 86 73 54 41 26 26	[588.3]YA[619.4]
3847	SSAS(+79.97)HW	3.5	58	377.6324	2	48.389	2.5	39 51 50 86 90 26	[245.1]S(+79.97)H[186.1]
3836	WAES(+79.97)AAGGY(+79.97)	5.2	58	536.1654	2	48.25	1.5	56 56 56 89 91 67 39 34 26	[386.2]S(+79.97)A[428.1]
1888	KVVKASGKY	5.2	58	490.3009	2	24.04	1.1	26 26 67 68 74 75 74 79 26	[960.6]
2883	NMWLRSAVVM(+15.99)PLW	7.5	58	809.9147	2	36.471	-0.7	36 38 33 42 45 69 66 58 69 79 88 95 26	[1203.6]PL[186.1]
2748	FVDLDTGGKLKYY	7.5	58	759.8982	2	34.763	3.5	71 61 61 89 79 56 48 52 76 66 31 26 26	[361.2]L[1025.5]
1393	NKEVTGTKVRVSCENRY	9.8	58	496.5063	4	18.521	-2.2	41 43 52 48 50 64 59 46 37 34 89 89 88 76 55 61 39	[1112.6]VSC[562.2]
1408	WAHQGGAGRGPLW	7.5	58	696.8484	2	18.684	-1.6	26 63 60 41 50 75 87 90 66 52 43 63 26	[636.3]AG[609.3]
2853	VEAAKTFPVNAPAVVLLF	10.4	58	629.3638	3	36.091	-0.9	58 55 69 56 49 48 51 54 82 67 75 65 71 85 61 28 28 26	[843.4]V[353.2]V[472.3]
1231	KKGRHGMLMKKW	6.9	58	500.6204	3	16.662	1.2	26 26 59 55 44 54 68 91 82 83 70 26	[794.4]LMK[314.2]
3088	KHPAVAVHTTF	6.3	58	403.2231	3	39.036	-2.9	39 55 73 62 63 70 74 55 55 55 26	[1188.6]
3240	APAKPTPW	4.6	58	434.2392	2	40.973	-1.3	26 95 68 60 73 82 26 26	[71.0]P[296.2]T[283.1]
2620	FTSPDVALKVTGF	7.5	58	461.2513	3	33.188	2.3	63 64 64 77 75 65 52 53 62 45 45 45 31	[1362.7]
3169	WVKGPVKPFTPPF	7.5	58	500.6194	3	40.072	2	26 57 59 64 66 57 63 86 89 47 47 55 26	[794.5]PF[442.2]
2278	Y(+79.97)TMACCCELGGGSWWY(+79.97)	9.2	57	663.8751	3	28.839	-0.6	38 45 39 75 79 81 62 56 47 49 65 50 47 50 64 64	[649.2]C[1218.4]
3238	M(+15.99)TT(+79.97)GDYVCCTYGDMT(+79.97)F	9.2	57	661.8699	3	40.939	-0.3	29 54 37 44 47 83 62 62 68 77 79 86 73 52 30 30	[601.1]Y[569.2]G[574.2]
2732	TPPVVGVVGCNMTTYY	9.2	57	567.6042	3	34.562	-2.4	26 26 26 81 74 72 71 79 82 74 57 59 61 58 39 26	[295.2]V[354.2]G[876.3]
2362	RQGSMPSAWSKW	6.9	57	474.2302	3	29.916	-2.1	54 43 53 52 55 71 63 64 89 87 26 26	[814.4]WS[314.2]
2888	M(+15.99)EDDMEEACYTGPMCY(+79.97)	9.2	57	661.8676	3	36.537	0.9	26 52 56 63 62 69 73 65 64 68 76 88 44 41 39 26	[1333.4]G[574.1]
1046	ELEAPPKF	4.6	57	930.4958	1	14.475	3	26 94 93 95 55 33 33 26	[129.0]LEA[469.3]
1681	LYVVVTTSY	5.2	57	1044.56	1	21.793	-1.1	26 97 97 97 61 40 39 29 26	[113.1]YVV[551.3]
1087	HKLVRAAVLYDKHLANHY	10.3	57	716.7314	3	14.962	-1.3	31 32 34 42 46 53 44 47 83 88 93 81 92 81 58 40 44 36	[874.6]LYDKHL[485.2]
3409	FVDLDMLVKLYY	6.9	57	759.8982	2	43.035	-1.4	57 70 69 90 85 51 45 52 55 56 26 26	[361.2]LD[910.5]
3668	KAVDVGSGGAAPGKTVLVLF	11.5	57	629.364	3	46.193	1.6	33 35 38 44 46 50 72 50 48 51 75 83 92 91 88 88 72 26 30 26	[912.5]PGKTV[472.3]
3468	S(+79.97)CY(+79.97)NCCEVEGNW	6.9	57	522.7836	3	43.751	-49.5	26 26 71 71 71 83 78 78 61 41 41 33	[730.1]C[714.3]
1383	MWLKEEAHLLSW	6.9	57	771.892	2	18.403	-0.4	37 38 67 83 95 98 79 61 37 30 30 26	[430.2]KEE[707.4]
2240	AFKKGGYLSMPPLW	8	57	797.926	2	28.362	-0.2	62 62 83 61 88 88 52 44 43 61 56 39 28 26	[218.1]K[128.1]GG[987.5]
3932	ELLTTAGPTGCLVPF	8.6	57	759.8983	2	49.468	1.4	27 51 59 56 43 42 48 80 88 81 69 70 87 26 26	[685.4]PTG[216.1]V[244.1]
3405	CLMLKSGESLKALPEW	9.2	57	602.3146	3	42.979	-2.4	45 43 42 43 53 57 67 87 89 91 77 66 40 37 46 26	[732.4]ESL[724.4]

1899	RFVMTGLHLNAYKW	8	57	868.4561	2	24.166	-3	32 32 55 80 78 82 84 55 44 43 48 59 60 44	[402.2]M[101.0]GL[912.5]
3165	WKAPNPVAPRGNRF	8	57	537.2957	3	40.014	0.9	77 38 33 35 48 58 73 78 80 75 66 43 47 44	[863.5]P[630.3]
3942	LYVVLTSSY	5.2	57	1044.56	1	49.6	-0.9	26 96 96 87 64 48 42 26 26	[113.1]YVV[551.3]
2998	LTATAPLM(+15.99)M(+15.99)GTPKF	8	57	504.2609	3	37.889	2.5	44 44 45 57 65 60 54 64 59 85 75 57 59 26	[961.5]G[473.3]
1320	SWGAEDLHPLPKKKKEY	9.7	57	676.0309	3	17.704	1.3	37 37 50 64 61 54 62 71 57 58 82 83 67 52 45 45 38	[1105.5]PK[676.4]
1849	LLPVLYKFANGLRRTF	9.2	57	636.7126	3	23.603	0.9	26 93 93 49 46 56 49 45 59 71 80 79 82 27 26 26	[113.1]LP[835.5]G[113.1]R[404.2]
1750	M(+15.99)TNGMKALPSVNLKW	8.6	57	569.2985	3	22.517	2.6	40 39 46 57 74 83 73 70 81 67 61 47 44 45 26	[550.2]K[184.1]P[727.4]
2184	APPKATPW	4.6	57	434.2404	2	27.663	1.5	26 95 58 51 56 69 73 26	[71.0]P[680.4]
3964	YLLLPALSGGNMVVY	8.6	57	537.2945	3	49.89	2	28 28 61 62 64 66 58 58 69 67 45 46 59 71 68	[1590.8]
1896	EMLWLACDPDVAGGRDKVKY	11.4	57	756.0367	3	24.137	-1.7	31 30 31 34 41 59 64 64 69 62 72 85 90 79 67 75 64 56 33 26	[1272.6]AG[846.5]
1956	RELEMLPLMEYVSTKAAMELVW	12.6	57	880.4463	3	24.843	-1.4	34 33 39 65 54 50 52 67 65 72 55 54 50 48 44 58 91 91 80 63 55 26	[1891.0]AME[398.2]
3664	KVSMKGSGM(+15.99)VPWPGRDYHAF	11.4	57	756.0363	3	46.137	2.2	44 46 37 37 40 56 70 73 78 75 76 77 88 74 66 61 32 32 44 26	[1303.6]P[846.4]
3193	NMKWASEDPDVAGQASLRKY	11.4	57	756.0356	3	40.373	0.1	51 51 51 38 44 63 68 76 82 60 57 58 91 63 69 66 43 40 36 26	[961.4]P[285.1]G[846.5]
2397	S(+79.97)CCS(+79.97)QCGS(+79.97)EDNDW	7.4	57	558.421	3	30.361	-54.3	26 26 60 55 43 46 81 86 85 73 58 57 40	[771.1]GS(+79.97)E[530.2]
3022	SLLNPAASSVDHW	7.4	57	466.2332	3	38.194	-0.2	35 38 47 47 58 75 79 78 75 75 77 26 26	[1377.7]
4002	DSKRKAPDLRKW	6.9	57	500.6191	3	50.362	-0.7	51 50 54 61 42 57 64 67 77 66 62 26	[1480.8]
3606	Y(+79.97)FSCNCQGS(+79.97)GDF	6.8	57	496.472	3	45.438	-1.9	26 64 65 78 64 78 73 86 53 32 35 26	[925.3]G[486.1]
1840	QKSMPLLGTFGLLSKDDHARRF	12.6	57	839.7831	3	23.5	-1.7	28 28 28 45 64 58 66 59 49 57 84 89 95 84 73 80 78 42 39 35 38 26	[1102.6]GLLS[128.1]D[782.4]
2319	LLTTGCTTKCGALGPTY	9.7	57	567.2858	3	29.363	2.2	37 39 50 41 42 49 78 57 56 56 77 81 80 61 56 75 26	[1078.5]AL[418.2]
1722	Y(+79.97)LDKAATNPREGWVKLKSKY	11.4	57	816.4231	3	22.231	2.7	51 48 37 56 39 39 38 52 57 54 56 75 90 91 86 82 69 56 28 26	[1395.6]WVKL[506.3]
1099	LSFLAPPGRLGFKGVLCY(+79.97)	10.3	57	673.3483	3	15.102	-1.5	67 50 48 43 40 44 68 62 52 41 49 84 61 47 49 58 88 67	[1108.6]F[397.3]C[243.0]
3738	KTFDATF	4	57	415.2108	2	47.051	6.5	53 53 65 61 59 78 26	[810.4]
1442	YRKGCARRKNAARLAM(+15.99)VF	10.3	57	532.5446	4	19.07	1.3	26 40 39 69 75 66 66 32 37 48 82 91 85 75 62 45 47 33	[1232.7]AAR[577.3]
2142	M(+15.99)KHLGCLAVHVSLHGVNRLW	11.4	57	762.7399	3	27.123	-2.5	45 38 37 66 59 63 80 90 93 95 26 54 54 87 76 50 31 30 31 26	[685.3]LAVH[299.2]H[725.4]
1545	GPTAPTLAGY	5.7	57	947.483	1	20.215	-0.3	45 55 58 82 65 48 45 62 80 26	[255.1]A[382.2]G[163.1]
1216	VVCLLAGPDGLGYLF	8.5	57	768.9113	2	16.479	1.5	39 35 32 45 96 74 61 60 76 69 74 65 52 43 26	[414.2]L[990.5]
979	WWVKGMHSLS(+79.97)Y(+79.97)	6.3	57	518.54	3	13.681	0.5	26 26 51 50 66 71 78 76 76 76 26	[1534.6]
1624	GRKPLHVAKNPRKLYY	9.1	57	970.5721	2	21.123	1.5	27 31 38 67 69 50 48 51 73 87 85 74 68 82 26 26	[986.6]NP[284.2]L[326.1]
1214	QLHGNRW	4	57	910.4641	1	16.461	-0.1	39 51 60 68 75 76 26	[891.4]
3474	CPGHRGF	4	57	387.18	2	43.828	2	26 26 89 80 73 75 26	[200.1]GH[360.2]
1556	MLFSHPKPGDAKKW	8	57	547.9573	3	20.343	0.3	34 35 43 47 69 88 79 75 85 59 51 53 45 26	[615.3]P[225.1]G[628.3]

962	M(+15.99)GTLMKW	4	57	441.7139	2	13.477	-0.7	39 38 66 72 71 82 26	[549.2]K[186.1]
2521	WLCVSAKATAVHVF	8	57	511.2757	3	31.956	2.4	74 75 47 62 49 47 58 73 63 57 58 75 26 26	[1512.8]
3764	WLS(+79.97)LPAPAAKVLW	7.4	57	766.4088	2	47.369	1.9	28 70 52 80 62 55 58 81 54 48 48 70 26	[466.2]L[265.1]A[597.4]
1962	MNKWLACDPDVAGGVGDKVKY	11.9	57	756.0369	3	24.914	-1.4	38 37 55 35 33 40 43 59 68 71 81 88 93 83 57 53 61 67 61 35 26	[1173.5]VAGG[789.4]
1191	LLGSPYALNAMGVYY	8.5	57	544.6099	3	16.185	1	91 67 54 54 72 66 57 42 42 71 64 57 42 41 26	L[1499.7]
4221	VKCCAPQLRW	5.7	57	602.31	2	53.174	0.2	42 42 42 44 78 78 66 69 76 26	[1184.6]
1256	TTAALGLAKSNKGANKEYY	10.8	57	667.3532	3	16.944	0.3	29 30 33 36 39 34 35 38 60 66 84 80 74 81 84 89 81 73 26	[913.5]NK[57.0]ANKE[326.1]
1405	FVWGYAKVKTY	6.3	57	681.3671	2	18.657	1.3	26 26 60 91 78 93 92 50 36 40 26	[432.2]G[163.1]AK[491.3]
2365	FAKRCGVGGPVLW	7.4	57	695.3766	2	29.961	0	72 72 77 74 70 73 62 56 55 42 26 26 26	[1370.7]
2143	MVRM(+15.99)LSGAVKTVW	7.4	57	747.4041	2	27.135	2.9	72 73 88 78 67 64 60 51 34 33 35 51 26	[230.1]R[1088.6]
942	Y(+79.97)S(+79.97)DS(+79.97)GGMPCY	5.7	57	660.112	2	13.234	-47.7	26 26 40 43 65 90 79 80 87 26	[749.1]G[131.0]PC[163.1]
4169	YMPTGYGY	4.5	57	476.1987	2	52.488	-1.7	26 64 67 74 67 56 69 26	[932.4]
1239	HVT(+79.97)FLHLQAF	5.7	57	646.8148	2	16.748	2.8	26 26 26 26 93 94 92 59 71 49	[564.2]LHL[346.2]
3477	MVNKQVQCLKAAW	7.4	57	759.8977	2	43.856	-2.5	72 71 68 36 34 39 55 65 74 74 68 48 26	[1499.8]
2586	WVRGCADVVPLAVF	7.9	57	511.2751	3	32.775	1.2	26 57 56 66 65 67 44 47 35 79 56 54 69 67	[1512.8]
2972	LLMGGKDVAVPRPF	7.9	57	500.6194	3	37.578	2.4	91 87 56 52 56 60 51 44 51 72 68 31 42 26	LL[1254.7]
3640	VVWMVTTRTKRCLLRSKS(+79.97)W	10.8	57	608.3209	4	45.846	-1.8	43 41 43 51 45 77 83 38 31 34 37 51 73 88 87 81 71 68 26	[715.4]T[757.4]LRS[481.2]
1417	SLRSTELF	4.5	57	952.5106	1	18.789	0.9	31 33 42 65 81 82 89 26	[443.2]TEL[147.1]
1166	GKFVVSDRMAYDKKAKKFNRW	11.9	57	644.3477	4	15.897	-2.7	31 35 42 52 48 48 53 62 52 82 68 56 46 80 73 70 80 63 54 48 36	[1019.5]A[406.2]K[199.1]K[603.3]
2425	ESRLGGGSAGGSGW	7.9	57	639.3019	2	30.723	7.5	41 43 52 60 72 57 60 72 69 65 65 55 49 26	[1258.6]
3560	GKLRALLAEPDDY	7.4	57	487.5958	3	44.87	-0.9	40 40 40 42 43 46 69 78 85 74 74 74 26	[822.5]E[490.2]
1252	WNPLVFHYVGLPRF	7.9	57	436.9881	4	16.892	-0.8	79 56 60 85 26 26 76 51 50 54 73 63 61 26	[397.2]L[1215.7]
3484	CVLLALQQW	5.1	57	537.2956	2	43.942	2.5	56 56 78 36 62 53 47 49 68	[1054.6]
3093	NKVDPGTSFVFW	6.8	57	466.2336	3	39.101	-2.4	51 40 44 42 58 66 64 71 82 61 59 36	[798.4]F[432.2]
963	HLHLRPKPPAAVLANHY	9.6	57	645.3672	3	13.487	0.1	26 37 37 41 34 47 60 77 55 63 74 77 73 62 57 69 64	[1915.1]
3508	GKLTLEAQT(+79.97)GALRDF	8.5	57	567.2853	3	44.238	-0.1	36 42 54 64 57 54 55 41 56 69 84 74 63 65 26	[1078.5]A[531.3]
1543	WMESGPMTAF	5.7	57	578.7453	2	20.197	2.7	26 86 64 64 73 60 57 50 46 34	[186.1]M[820.3]
2553	WQQACASGGPFKW	7.4	57	489.2268	3	32.351	-1.5	71 37 36 59 60 37 38 44 83 75 63 63 63	[831.3]G[558.3]
2635	LLFPEGHLVRRY	6.8	57	500.62	3	33.379	-1.8	31 30 48 74 71 66 68 77 76 79 26 26	[1480.8]
2437	EPY(+79.97)Y(+79.97)CPYYYHY(+79.97)	6.2	56	600.8174	3	30.875	-41.8	26 85 85 26 26 69 73 57 48 55 66	[129.0]PY(+79.97)[1312.4]
3226	FVLRGVMGTFLLF	7.3	56	750.4253	2	40.788	-0.6	26 79 64 55 52 43 45 53 76 73 70 65 26	[1480.8]

2346	CELLKGPSLDVTPF	7.9	56	759.8981	2	29.717	1	26 77 88 80 77 70 63 65 60 49 37 39 26 26	[232.1]LL[1041.5]
1668	FPVFSSASLEGKGKAY(+79.97)	9	56	589.9526	3	21.636	4.7	47 40 40 43 54 85 53 48 59 87 91 92 52 39 40 26	[577.3]S[271.2]EGK[499.2]
3983	WLAKKTMGKAPDW	7.3	56	511.2755	3	50.127	2	81 70 51 45 48 48 62 74 68 60 48 46 26	W[1326.7]
3526	RTALVFRVNAFLPPVW	9	56	629.3638	3	44.453	-1.5	51 37 35 37 55 65 82 66 87 93 92 70 37 37 26 26	[687.4]R[99.1]NAF[592.3]
1287	QNDKLSVRW	5.1	56	573.3079	2	17.317	2	55 54 69 69 88 91 26 26 26	[485.2]LS[441.2]
1830	YPLVYVLNPDVAGGRDKFY(+79.97)	10.7	56	756.0386	3	23.397	3.1	37 35 35 42 49 52 55 52 64 67 85 89 93 85 62 59 35 35 32	[1173.6]VAGG[789.3]
2422	LFQATTGM(+15.99)LVNNTKLF	9	56	605.321	3	30.677	-1.6	46 46 37 50 68 70 54 60 86 82 56 52 54 56 54 26	[865.4]LV[717.4]
1332	LYWPFTTKVLWKF	7.3	56	576.9881	3	17.844	-0.7	26 54 44 53 69 76 69 66 68 61 52 38 50	[1709.9]
2817	MNKFAKAGAREAYY	7.9	56	810.4043	2	35.629	1	42 41 67 69 67 65 44 44 50 59 67 65 76 26	[1600.8]
3248	WTLPFASLKGY(+79.97)	6.2	56	681.8289	2	41.06	0.8	47 46 45 74 96 69 51 43 51 66 26	[497.3]F[699.3]
1053	LPKARGGPSPKKFLLLGPSTDRY(+79.97)	13	56	645.3518	4	14.56	-1.9	41 46 39 40 47 60 70 69 61 61 63 55 39 54 48 46 48 53 66 59 68 86 65	[2160.2]R[243.0]
2882	KSRRPGGMTLALHW	7.9	56	537.2955	3	36.46	-1.6	33 33 38 80 52 58 69 89 89 87 58 36 33 26	[371.2]R[211.1]MTL[507.3]
4108	S(+79.97)EM(+15.99)GGSPY	4.5	56	462.1465	2	51.708	0.5	31 31 65 87 92 89 26 26	[443.1]GGS[260.1]
2337	KTLFLPASGEVASW	7.9	56	753.4042	2	29.593	1	76 60 56 55 64 58 55 43 43 48 66 58 56 43	[1486.8]
3210	Y(+79.97)KKSEAMKAKLESLKAAKYY	11.3	56	608.3195	4	40.591	2.5	75 69 40 51 53 50 51 58 62 57 56 43 41 57 89 87 57 46 46 29	[1686.8]KA[525.3]
1942	KSPKQLKENTLY(+79.97)	6.8	56	764.8939	2	24.669	2.3	32 32 34 44 46 93 53 60 54 78 84 58	[568.3]L[472.2]L[243.0]
981	EAKVAVEYLTW	6.2	56	436.8989	3	13.7	-0.8	46 44 44 51 58 54 56 84 74 77 26	[726.4]Y[400.2]
2752	GYKLAPGSGTTVFLY	8.4	56	787.4189	2	34.807	2.8	63 63 92 86 92 61 51 42 44 39 41 42 69 26 26	[220.1]KLA[1022.5]
3833	APPQAVVW	4.5	56	434.2397	2	48.222	-0.2	26 94 62 49 53 65 71 26	[71.0]P[680.4]
1606	RKKGLSGCGAALLF	7.9	56	710.9064	2	20.928	-2.7	30 30 36 52 50 73 72 81 82 80 59 59 50 26	[726.5]CGA[444.3]
1690	FNKNGAANLVAY	6.7	56	641.3336	2	21.889	1	59 37 39 52 82 73 58 49 61 60 53 46	[503.2]G[702.4]
4212	DDDDSGDF	4.5	56	443.14	2	53.056	-1.9	26 26 26 94 87 82 78 26	[345.1]DSG[262.1]
2389	LELLFFTLF	5.1	56	571.8289	2	30.264	0.9	39 87 96 99 44 37 36 37 26	[113.1]ELL[655.3]
1263	KVELEENLLPGDKRRF	9	56	648.3629	3	17.024	1.7	58 56 67 43 54 39 39 40 85 66 67 77 72 76 26 26	[954.5]L[856.5]
2496	ADALPLGAYGGVPLF	8.4	56	487.5964	3	31.633	-2.4	31 36 52 52 46 61 67 85 86 82 78 81 26 26 26	[637.3]AYG[57.0]V[357.2]
2032	HKFLTGSLKSMADLKGWKW	10.7	56	1117.103	2	25.746	1.6	68 36 34 45 51 78 82 79 61 59 63 67 59 61 53 50 39 40 34	[683.4]S[1443.8]
1621	Y(+79.97)WNKVTFKLEGLKKF	8.4	56	661.0174	3	21.096	1.6	39 62 38 36 45 49 70 95 93 80 72 49 47 34 26	[1018.4]KLE[573.4]
2671	WLMLNLW	3.9	56	975.5145	1	33.825	2.4	26 97 60 41 41 64 58	[186.1]L[657.3]
3038	LLKKCAPPASAKSW	7.9	56	500.6191	3	38.4	1.8	69 69 69 75 62 65 26 67 46 46 54 52 54 26	[1480.8]
3708	WLTSGKKGGAPLMW	7.9	56	511.2748	3	46.683	0.6	69 39 35 41 48 45 73 78 80 83 83 39 39 26	[857.5]GAP[430.2]
2174	KLVSKKPTCSGGGGFLLHW	10.7	56	1008.048	2	27.527	-0.6	48 47 69 62 64 53 53 62 67 68 70 47 48 51 50 59 60 53 26	[1996.1]

3604	ATPLAVNPGQDQW	7.3	56	466.2335	3	45.405	0.4	27 41 55 71 69 59 57 81 56 50 52 53 52	[666.4]P[614.2]
2539	WLMPGKPF	4.5	56	975.5147	1	32.184	2.8	26 85 80 77 57 44 50 26	[186.1]LM[526.3]
3500	LLFVALHPFKEW	6.7	56	500.6188	3	44.145	0.7	69 69 56 39 38 48 54 94 92 32 44 30	[793.5]PF[443.2]
3905	Y(+79.97)S(+79.97)NDNDTSWEMYY	7.3	56	616.4969	3	49.132	-42.2	26 68 62 69 52 66 59 59 63 82 65 26 26	[1242.3]E[457.2]
3512	VKSKLF	3.4	56	361.2341	2	44.293	0.3	26 40 72 82 87 26	[314.2]KL[147.1]
2222	WGKKDTTTAKKLESLGNVAYGY	12.3	56	608.3204	4	28.132	-2.6	35 35 39 65 48 56 82 64 44 43 60 65 60 59 82 82 59 61 61 48 46 26	[715.4]T[757.4]LG[667.3]
2881	KETLKGCGTKAKLCLLKDKS(+79.97)W	11.8	56	608.3209	4	36.448	-1.2	32 30 30 45 71 62 55 42 41 48 51 60 60 56 74 93 80 77 73 60 26	[1573.9]LK[596.2]
898	DFRLPSGSEDLHPALTF	9.5	56	476.2409	4	12.681	1.5	26 39 60 47 69 54 39 35 36 59 58 67 81 84 82 82 26	[1353.6]PALT[147.1]
2875	TKRLGDGFMW	5.6	56	404.2066	3	36.373	1.3	26 26 75 59 57 63 76 73 73 26	[1191.6]
3602	FAELAGAAGKAEVLW	8.4	56	766.911	2	45.382	2.6	26 29 41 39 49 51 71 45 50 61 89 83 84 87 26	[915.5]AEVL[186.1]
1814	HPM(+15.99)PRVDLGKRY(+79.97)AQKLTLSFF	11.8	56	650.834	4	23.219	-2.3	26 26 64 55 42 67 61 59 60 67 52 30 39 35 43 77 70 67 76 78 72	[2581.3]
3362	YPEALAVANMDNAKKAW	9.5	56	473.7408	4	42.47	2.4	70 69 59 54 53 52 42 42 55 58 61 72 51 50 58 70 26	[1872.9]
3403	QT(+79.97)MACDGCGDENY(+79.97)	7.3	56	522.7845	3	42.958	-37.8	46 61 54 54 51 50 48 41 56 62 66 67 65	[1547.4]
3174	APPQAVVW	4.5	56	434.2408	2	40.14	2.3	26 98 73 39 47 61 73 26	[71.0]P[680.4]
4147	QPTMPVSVAACGF	7.3	56	654.3089	2	52.192	-1.3	56 55 57 50 52 54 58 57 82 73 53 46 26	[839.4]A[378.1]
1614	LYVVLTSSY	5	56	1044.562	1	21.027	0.4	26 97 97 84 58 46 38 26 26	[113.1]YVV[551.3]
2008	KVS(+79.97)VSPTGLLVGLELW	8.9	56	593.321	3	25.463	-0.7	62 58 52 52 56 42 39 41 62 86 83 72 71 45 34 31	[948.5]LV[598.3]
1812	WKAKGRVSTAKGNAGALQELYY	12.3	56	804.4324	3	23.202	-0.2	40 39 47 50 53 53 52 59 64 69 65 73 85 78 44 36 37 52 88 80 26 26	[1269.7]N[440.2]EL[326.1]
1306	GYWLLCLHTLVVW	7.3	56	534.9547	3	17.54	-0.3	29 66 47 53 43 72 63 66 76 76 77 26 26	[1583.8]
3118	DLRGGTFPVTRRVLLW	8.9	56	629.3637	3	39.419	0.4	74 74 77 76 48 42 47 52 77 81 87 32 30 33 29 26	[942.5]TR[667.4]
2534	KHAKAKRPKGVFGY	7.8	56	397.4877	4	32.12	0.8	46 39 40 50 64 63 47 51 81 89 92 38 43 32	[916.6]KGV[367.2]
3265	DALQVLGPY	5	56	975.5163	1	41.275	1.8	65 68 90 47 38 36 44 83 26	[186.1]L[397.2]P[163.1]
2168	TLGPLPKSGASVLPY	8.4	56	500.6195	3	27.452	-1.7	40 40 46 50 61 74 66 63 69 74 74 83 36 26 26	[1008.6]V[373.2]
2631	DDNCPCCAGT(+79.97)MACNNS(+79.97)Y(+79.97)	9.5	56	674.4626	3	33.322	-47	50 48 39 53 58 76 68 58 43 45 52 50 53 53 63 70 60	[2002.5]
1038	LEEAEGVDEFTSF	7.3	56	736.8243	2	14.378	-1	26 26 26 98 96 71 61 63 95 49 39 39 28	[371.2]AE[271.1]E[482.2]
1542	HALPAKSACY(+79.97)	5.6	56	1140.49	1	20.187	-1.1	80 74 73 64 40 34 33 52 75 26	H[984.4]
1003	KHLGKPLYDRHGKW	7.8	56	578.99	3	13.979	0.2	29 34 44 71 63 72 88 94 95 55 33 36 33 26	[660.4]LYD[664.4]
3274	Y(+79.97)PDMPCGDEHCST(+79.97)W	7.8	56	600.8171	3	41.382	-43	26 61 47 66 49 49 64 76 91 26 26 64 64 64	[958.3]E[694.2]
1546	HAEENNAWW	5	56	1156.482	1	20.225	1.4	26 26 95 63 47 60 74 79 26	[208.1]E[800.3]
3361	AFKKGGYALLTEY	7.2	56	487.5963	3	42.459	-2.8	32 35 42 38 72 76 89 92 91 51 37 35 26	[588.3]YAL[506.2]
2101	T(+79.97)YERKAVFSKERRRVRGMKVKSGDDFF	15	56	843.9316	4	26.604	-3	30 30 31 42 54 75 66 65 74 56 50 40 26 26 54 62 91 92 91 87 55 51 70 70 44 32 26	[2142.1]GMKV[796.3]

2115	RRFVKYTATPRYLM(+15.99)Y	8.4	56	991.0264	2	26.772	-1	26 78 26 51 70 75 74 78 77 72 64 36 34 34 34	[1962.0]
1123	YQRDGVSDNAAKVMY	8.4	56	572.939	3	15.379	1	63 40 40 39 50 74 81 75 39 46 55 75 63 61 26	[718.3]S[892.4]
4301	HTPTMANT(+79.97)F	5	56	550.2178	2	54.238	0.3	26 51 52 59 89 67 49 51 52	[436.2]M[513.2]
2646	APPQAVVW	4.5	56	434.2403	2	33.519	1.2	26 96 66 41 45 59 83 26	[71.0]P[395.2]V[186.1]
1296	FAAVRMW	3.9	56	880.4521	1	17.429	2.6	26 96 91 91 29 26 26	[147.1]AAV[473.2]
1605	KSRCAVGSAAVKAHF	8.3	56	511.2758	3	20.917	-2.1	29 30 50 81 77 70 63 47 48 71 72 63 56 44 26	[371.2]C[1038.6]
2034	KTAARELTLAANPLLAFAAACHY	12.8	56	806.0959	3	25.779	-3	32 32 35 33 37 40 50 56 72 80 74 62 65 66 84 74 70 78 52 43 38 52 45	[983.6]A[395.2]L[834.3]
3438	APPQAVVW	4.4	56	434.2398	2	43.401	0	26 97 58 37 41 75 80 26	[71.0]P[395.2]V[186.1]
2479	FTLLMVLGGELYY	7.2	56	759.8978	2	31.409	-1.8	45 45 74 87 67 68 70 69 42 42 56 26 26	[361.2]L[1025.5]
2186	LSKLKKSGTNAFSLTKY	9.5	56	629.3644	3	27.684	2.3	34 32 37 37 56 58 64 77 92 84 89 77 55 43 39 38 26	[841.5]TNA[739.4]
3442	WYSLAGAGAQGASKSVF	9.5	56	567.2858	3	43.436	-0.4	38 43 36 64 69 68 58 59 65 50 51 47 50 54 61 61 61	[1680.8]
1729	FAKNKYAGPHKVVW	7.8	56	548.9706	3	22.304	-2.1	42 53 65 64 73 76 93 81 56 44 45 26 26 26	[751.4]AG[746.4]
2596	TNTSPSSVRYLW	6.7	56	705.8551	2	32.895	1.3	47 44 63 72 51 53 55 84 56 45 49 42	[674.3]V[618.3]
2920	CAPPAQAPLLGSTVW	8.3	56	504.2609	3	36.938	-2.7	26 26 26 78 53 47 52 68 75 86 89 76 70 26 26	[848.4]LG[473.2]
3085	NNRLVPGPGLGFMF	7.8	56	506.9343	3	39.003	-0.1	53 52 55 74 75 39 39 68 56 60 71 57 45 26	[1499.8]
1333	EFMARPYVLKAKLY	7.8	56	432.9927	4	17.854	-0.7	26 59 57 62 73 86 29 30 38 53 87 72 72 26	[634.3]P[503.3]A[404.2]
3111	HPKKKLLFLCVNF	7.2	56	397.4875	4	39.332	2.9	33 39 39 77 70 50 28 28 80 70 63 69 69	[991.6]L[463.2]
2451	RHLMGSALPFF	6.1	56	425.894	3	31.051	0.5	37 52 43 66 65 59 69 80 83 26 26	[752.4]LP[294.1]
1714	WRSTTGCVGLVTHKW	8.3	56	577.63	3	22.136	-2.3	44 54 41 71 50 45 49 70 90 91 64 48 43 40 26	[890.4]GL[651.3]
2604	WLMVQLW	3.9	56	975.5143	1	33.002	2.3	26 26 88 66 50 77 52	[299.2]M[526.3]
1016	RAAPKASSPLDY	6.7	56	425.8942	3	14.131	-0.9	33 34 39 42 51 53 65 94 88 66 68 26	[681.4]SP[391.2]
2404	WVALPKHMGRYTPGPAAEKAF	11.7	56	582.5591	4	30.447	1.4	36 36 38 59 63 68 74 68 44 37 38 49 82 85 88 88 66 38 37 37 26	[1439.7]PGPA[546.3]
730	NGCT(+79.97)CMTVY	5	55	536.17	2	10.322	-1.6	39 42 50 55 54 58 79 91 26	[790.2]V[163.1]
2433	HPDSLAAGGCLRPKMF	8.9	55	567.2845	3	30.819	-0.9	26 26 70 53 52 70 75 65 64 68 66 79 46 45 46 26	[1680.8]
4086	LLNAALRKKHYRCPAAHW	10	55	430.4417	5	51.421	1.7	52 48 47 52 71 69 68 58 27 40 36 38 40 62 79 89 86 26	[1735.0]AH[186.1]
1035	TKLVVAPSKLTY	6.7	55	660.3995	2	14.338	-1.1	37 41 55 74 89 78 76 69 44 39 30 26	[441.3]V[760.4]
951	HPANERW	3.9	55	455.2189	2	13.34	-2.1	26 78 78 68 83 26 26	[419.2]E[342.2]
1489	ESRVRSMPVSEVEAGLTLYY	11.1	55	572.291	4	19.591	-0.5	33 32 47 66 74 90 81 76 80 45 41 40 46 43 49 72 62 45 48 26	[627.3]SM[97.1]V[1225.6]
2997	WHRRGDGPPDVAFSGGRVHY	11.1	55	756.0374	3	37.877	-1.6	26 55 45 36 45 60 71 79 80 49 47 60 74 73 69 56 41 37 39 55	[961.5]P[1188.6]
2968	FELFKY	3.3	55	846.4415	1	37.523	2.2	93 86 48 41 36 26	FE[551.3]
2655	LERKGPYVTGPRPRLF	8.9	55	629.3641	3	33.621	1	36 35 37 38 52 67 70 82 84 58 49 42 84 51 67 26	[843.5]VT[310.2]P[416.3]

1044	KAVANKAWALVGPW	7.8	55	504.2897	3	14.453	1.1	30 31 34 60 46 56 52 64 87 91 90 74 26 26	[868.5]ALV[340.2]
3835	FTLSKSSGMLLATY	7.7	55	759.8978	2	48.239	0.6	44 56 59 59 59 26 68 43 41 53 71 80 82 26	[1164.6]AT[163.1]
2865	M(+15.99)LLYVVLGGDPVAGGRLYNY(+79.97)	11.1	55	756.0366	3	36.242	-1	47 47 52 45 46 46 49 49 65 55 54 76 84 86 82 75 40 31 35 33	[1272.7]AGG[789.3]
3246	WLMGNAAGKGPALVF	8.3	55	511.2751	3	41.04	1.3	72 59 35 41 45 69 59 53 65 84 81 48 43 43 26	[928.5]GP[430.3]
4045	MNNKHAGATPEPRMF	8.3	55	567.6048	3	50.905	0.2	51 47 55 53 46 36 39 45 51 75 88 81 70 61 26	[1021.5]EP[434.2]
2042	AKFLLTSSSVGAGSFRFY	10	55	646.6754	3	25.871	-0.2	28 32 35 63 77 77 83 38 49 49 60 68 86 82 64 41 29 28	[673.4]S[401.2]GS[613.3]
1863	MLEKVVTF	4.4	55	483.7702	2	23.755	0.3	75 64 56 56 69 39 39 39	[947.5]
1518	HPKRSTAYLDHKGLDHSRTSF	11.6	55	614.0665	4	19.92	0.5	63 63 34 34 38 52 38 41 64 70 72 83 80 72 74 84 41 36 32 44 37	[1305.7]KG[228.1]H[578.3]
2218	WKNHSLGPVRKVF	7.2	55	784.4442	2	28.077	-2.8	33 57 42 81 76 78 85 81 47 33 34 40 26	[428.2]H[200.1]GP[629.4]
1983	SLKPLKAPMPFET(+79.97)LPRRY	10	55	556.7981	4	25.161	-0.2	37 37 55 58 68 56 53 61 54 53 63 65 77 53 75 70 26 26	[2205.2]
1806	FKWADRFPALGKNKSPKEYY	11.1	55	815.7608	3	23.139	-1.3	55 38 33 49 52 79 34 37 72 83 80 82 86 64 51 48 45 46 38 26	[1118.6]LGKN[895.4]
3950	NKLTPLPNAVSY(+79.97)	6.6	55	466.2325	3	49.698	-3	56 43 42 44 51 76 86 48 51 51 53 58	[666.4]P[614.2]
1813	KSVKTREVVNWLTHGFAYLY	11.1	55	603.5763	4	23.21	-1.4	46 52 64 43 42 48 50 48 59 48 46 32 49 80 94 87 78 54 50 26	[1540.9]HGF[510.2]
3348	MNKRNGNGPTHPPRGDARQY	11.1	55	756.0374	3	42.299	-1.2	37 36 46 47 46 52 56 46 47 62 76 85 90 68 66 62 44 41 49 39	[1206.6]PP[846.4]
4040	ELLELQVW	4.4	55	515.2853	2	50.84	1.8	35 71 87 68 49 37 42 48	[242.1]L[655.3]
3264	FALGTVPSALDLAAW	8.3	55	766.4131	2	41.264	2.4	68 64 43 40 48 56 33 33 32 38 84 88 89 80 26	[956.5]DLAA[186.1]
2179	LLRDCKLGT(+79.97)PSHSGLPFF	9.9	55	690.0063	3	27.596	-2	42 51 50 33 31 31 54 53 56 64 83 82 82 82 70 69 26 26	[1176.6]SHSG[504.3]
1701	LKEDEKSLKKMAALSRKMKY	11	55	600.0884	4	22.001	-1.4	44 43 56 58 58 64 71 81 78 35 36 39 48 56 77 78 68 33 38 33	[829.4]L[1435.8]
3842	MDGGGFAY	4.4	55	409.1617	2	48.328	-2.9	75 72 59 37 63 78 26 26	[798.3]
2120	LEGLT(+79.97)LPTGKGEEKLELF	9.9	55	685.3547	3	26.838	1.9	93 91 50 49 88 62 68 47 49 37 37 40 58 44 44 45 58 26	LE[170.1]T(+79.97)[1441.8]
3940	LWWQAVAPLVWY	6.6	55	766.4094	2	49.578	1.3	52 52 53 61 65 64 77 77 77 26 26 26	[1512.8]
1272	LDAAALAQQLSAKKVPY	9.4	55	596.3415	3	17.138	2.1	80 81 88 87 69 51 51 44 44 42 41 60 74 30 29 32 26	LDAA[1397.8]
907	VRAAVHLVAKGRYF	7.7	55	529.6483	3	12.803	1.6	73 60 48 35 35 64 73 52 55 86 81 38 38 27	[916.6]KG[466.2]
3712	WRKDAHTLVKVF	6.6	55	500.6195	3	46.726	-2.7	55 45 37 64 62 68 86 77 63 48 26 26	[793.4]T[586.4]
1434	RRKKAATGSNPTGGKELYY	10.5	55	699.7123	3	18.987	1.2	26 49 36 39 36 33 33 43 63 68 88 88 89 84 66 66 78 26 26	[1069.6]PTGG[696.3]
3864	WFVAKGSMNKKRVHVVVY	9.9	55	537.8018	4	48.599	-2	26 79 63 61 61 56 54 56 43 46 47 51 71 26 67 61 61 57	[2129.2]
1684	MGKVMVW	3.9	55	850.4299	1	21.826	-1.8	26 85 76 59 50 60 26	[131.0]G[643.4]
1390	WVALLLRLALT(+79.97)GDSS(+79.97)RFKF	10.5	55	785.0664	3	18.481	-0.9	40 40 50 56 31 57 64 66 68 66 65 68 77 94 81 34 29 26 26	[1501.8]SS(+79.97)[578.3]
3829	LSVGPVCAPKALLF	7.7	55	472.2745	3	48.171	-2.6	26 62 62 62 68 66 66 73 53 50 53 55 42 26	[1395.8]
3367	SVEVGGGPVLKLPTF	8.3	55	500.6192	3	42.534	-2.4	63 63 59 64 61 51 42 50 80 65 61 49 45 40 26	[682.3]V[699.4]
2114	KDVEPAGGSAVSALAW	8.8	55	779.3998	2	26.761	1.1	67 54 56 83 68 46 48 67 58 49 44 43 45 62 57 26	[342.2]E[1067.5]

2787	SLVAKVVGAFAGKSLLYY	9.9	55	629.3646	3	35.253	0.4	26 83 78 64 58 53 45 44 54 60 76 73 45 42 54 57 44 26	[87.0]L[1666.9]
2454	WLAKVPDSADALVF	7.7	55	511.2755	3	31.096	-2.2	84 77 61 57 57 66 43 45 50 79 41 41 37 26	W[1326.7]
4117	WLMSKVNAVANLW	7.2	55	511.2752	3	51.814	1.3	41 83 38 45 47 57 52 91 76 52 41 47 38	[186.1]L[559.3]A[583.3]
1363	ERKFLGQAAGFAAAQEESGDKHF	12.7	55	624.3065	4	18.196	-2.7	27 27 44 45 54 45 35 47 57 57 58 52 58 57 69 93 91 90 83 51 43 45 26	[1545.8]EESG[527.2]

APPENDIX O
DE NOVO SEQUENCING RESULTS FOR CEM LOW

De novo summary report (generated by Peaks DB software)

1. Notes

2. Result Statistics

Figure 1: The distribution of de novo ALC score: **(a)** histogram of score **(b)** The plot of error vs. score

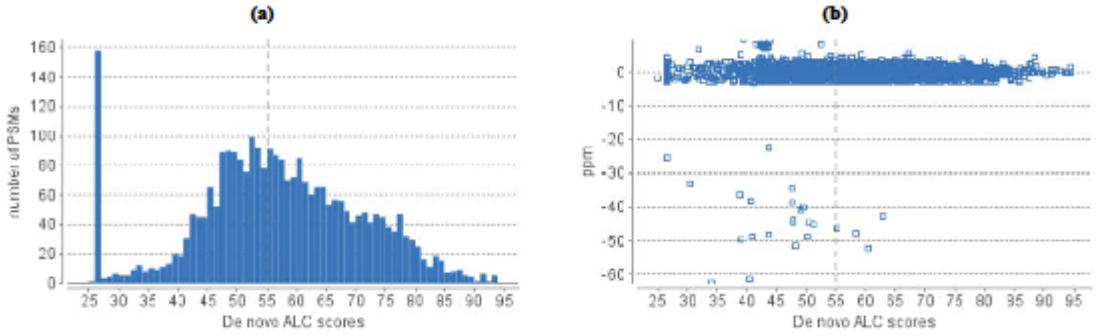

Table 1. Statistics of data and result.

# of MS Scans	876
# of MS/MS Scans	3549
Peptides after filter	1539

Table 2. Result filtration parameters.

De Novo ALC ≥55%
De Novo TLC ≥3

3. Other Information

Table 3. Search parameters.

Parent Mass Error Tolerance: 3.0 ppm
Fragment Mass Error Tolerance: 0.5 Da
Enzyme: CEM_SC
Variable Modifications:
Oxidation M: 15.99
Phosphorylation-STY: 79.97
Max variable PTM per peptide: 3
Report # peptides: 5
Data Refine dependencies: 2

Table 4. Instrument parameters.

Fractions: CEM_LOW.RAW
Ion Source: ESI(nano-spray)
Fragmentation Mode: CID, CAD, IRMPD (y and b ions)
MS Scan Mode: FT-ICR/Orbitrap
MS/MS Scan Mode: Linear Ion Trap

Peptide results for CEM low digested myosin – derived by De novo sequencing with PEAKS DB software

Scan	Sequence	TLC	ALC (%)	m/z	z	RT	ppm	local confidence (%)	tag (>=0%)
1575	LLGSLDVHEPEY	11.3	95	686.3441	2	20.079	1.4	96 96 95 96 97 99 94 94 94 89 89 89	LLGSLDVHEPEY
3213	LLGSLDVHEPEY	11.3	94	686.3431	2	39.666	0.1	96 96 94 95 97 99 95 95 95 89 89 89	LLGSLDVHEPEY
3279	LLGSLDVHEPEY	11.3	94	686.3429	2	40.486	-0.3	96 96 94 95 97 99 94 94 94 87 87 87	LLGSLDVHEPEY
789	VGNEYVTK	7.5	94	455.2374	2	11.618	-0.1	97 97 86 94 88 97 99 89	VGNEYVTK
3544	LLGSLDVHEPEY	11.2	94	686.3431	2	43.695	0	94 93 91 93 96 99 93 93 93 90 90 90	LLGSLDVHEPEY
1678	KAGLLGTLEEMR	11.1	93	659.3636	2	21.203	0.5	85 88 88 93 98 96 96 96 97 95 95 82	KAGLLGTLEEMR
936	LTENADFGR	8.3	92	511.7491	2	13.285	0.8	95 95 93 86 88 90 96 97 84	LTENADFGR
1919	FSPEELKNMW	9.1	91	640.8024	2	23.788	-0.2	87 89 97 98 98 97 90 86 90 76	FSPEELKNMW
858	ESGDNLNDAEER	11	91	674.7836	2	12.419	-0.7	66 72 95 96 90 95 92 97 97 96 97 97	ESGDNLNDAEER
1613	EM(+15.99)LDDLSSNM(+15.99)EAVSK	13.7	91	850.8715	2	20.499	0.2	93 94 94 98 98 98 99 97 77 82 87 86 82 85 92	EM(+15.99)LDDLSSNM(+15.99)EAVSK
1890	FSAEELKNMW	9.1	91	627.7951	2	23.47	0.6	88 88 97 98 98 97 90 86 91 72	FSAEELKNMW
1893	NFDKVLAEW	8.2	91	561.2845	2	23.509	-0.7	71 80 93 92 92 94 97 98 99	NFDKVLAEW
1039	RAAEKELVDASER	11.8	90	737.3855	2	14.411	-1.2	33 90 96 97 97 97 99 99 99 96 91 91 82	RAAEKELVDASER
2949	LLGSLDVPEHEY	10.8	90	686.3428	2	36.411	-0.4	96 96 95 96 98 99 97 97 76 68 68 86	LLGSLDVPEHEY
886	YETDALQR	7.2	90	498.2435	2	12.745	0.5	94 95 97 93 93 92 81 69	YETDALQR
1918	DLAGFEL	6.2	89	764.3822	1	23.78	-0.3	73 72 89 95 97 97 97	DLAGFEL
855	SKYEDTALQR	8.9	89	605.8065	2	12.394	-0.3	93 93 97 84 85 86 94 95 85 74	SKYEDTALQR
1639	NSYEETLDHLETMK	12.4	89	855.3896	2	20.783	1.9	66 79 83 97 91 97 97 97 94 94 96 87 87 68	NSYEETLDHLETMK
1241	MGVKPFSTW	8	88	526.7676	2	16.533	4.4	94 94 95 97 26 94 94 98 99	MGVKPFSTW
1042	HLM(+15.99)SI	4.4	88	616.3129	1	14.447	1	96 92 84 85 82	HLM(+15.99)SI
1581	DVLASMGQLNVK	10.6	88	637.8422	2	20.144	0	26 99 98 97 97 97 96 81 95 87 93 86	DVLASMGQLNVK
1473	KMELDDLSSNMEAVSK	14.1	88	898.924	2	18.968	0.1	90 89 94 96 98 99 98 98 89 60 72 83 88 78 81 89	KMELDDLSSNMEAVSK
1179	LSDVHEPEY	7.9	88	544.7496	2	15.887	2.2	26 99 99 94 93 93 94 94 94	LSDVHEPEY
1319	KKDLDDLELTLAK	11.4	88	751.4292	2	17.361	2.7	97 96 95 96 96 97 95 94 93 88 71 74 45	KKDLDDLELTLAK
3346	LLGSLDVPEHEY	10.5	88	686.3433	2	41.3	0.4	95 95 93 94 96 99 98 98 75 61 61 79	LLGSLDVPEHEY
863	M(+15.99)GAGETAPR	7.9	88	453.2101	2	12.478	-1.8	67 67 96 93 90 91 95 97 86	M(+15.99)GAGETAPR
738	HELEAEEER	7.9	87	571.2607	2	10.995	2	99 99 97 94 95 26 91 91 91	HELEAEEER
1875	QLGEVEDLMVDVER	12.2	87	816.4013	2	23.314	0.6	40 44 88 91 96 97 97 97 97 98 99 91 92 91	QLGEVEDLMVDVER

1486	LVDSMQATLDSEVR	12.2	87	782.3882	2	19.104	0.6	50 58 86 93 94 84 97 97 98 98 96 88 90 88	LVDSMQATLDSEVR
1691	FSVTTAERELV	9.6	87	626.333	2	21.331	0.7	86 86 88 96 96 94 91 84 62 85 88	FSVTTAERELV
877	TSEDKVGLYK	8.7	87	570.3012	2	12.64	0.9	91 90 93 95 95 95 88 78 84 56	TSEDKVGLYK
1222	YEEGQAELEGSLK	11.3	87	726.8459	2	16.338	-0.5	26 99 98 94 80 98 98 98 97 92 84 76 83	YEEGQAELEGSLK
1169	LTM(+15.99)FGEK	6.1	87	421.2092	2	15.769	-1.5	90 91 91 97 84 86 66	LTM(+15.99)FGEK
882	TM(+15.99)FGEK	5.2	87	364.6678	2	12.693	-0.1	96 93 93 81 91 63	TM(+15.99)FGEK
1560	NFDQVLADFSK	9.5	87	642.3174	2	19.911	0.8	68 79 95 85 94 97 95 94 82 82 75	NFDQVLADFSK
1155	TDLAAALAK	7.8	86	437.2558	2	15.636	0.4	88 90 97 98 99 97 87 89 26	TDLAAALAK
1558	SSSDAGVLSVVSK	11.2	86	618.3277	2	19.895	0.4	26 95 97 95 95 96 96 97 97 97 97 97 26	SSSDAGVLSVVSK
1601	MKNSYEETLDHLETMK	13.8	86	984.9567	2	20.358	1.1	79 76 80 95 97 98 81 80 83 96 97 96 95 80 80 58	MKNSYEETLDHLETMK
1485	LVDSM(+15.99)QATLDSEVR	12	86	790.3854	2	19.094	0.3	48 55 79 94 93 79 97 97 98 97 94 89 90 89	LVDSM(+15.99)QATLDSEVR
3682	EPGSLDVTFFFL	10.3	86	686.3431	2	45.363	-3	94 94 92 92 93 96 95 93 93 73 55 55	EPGSLDVTFFFL
1347	ALEDQLSELK	8.6	86	573.3063	2	17.651	0.5	82 86 95 93 78 96 97 83 85 59	ALEDQLSELK
1881	CLCGKVLEGSV	9.4	86	554.2791	2	23.38	-2.4	40 66 68 94 93 94 97 97 96 96 96	CLCGKVLEGSV
1361	M(+15.99)VAELEELR	7.7	86	553.2807	2	17.794	-1.5	98 97 97 98 99 26 92 92 67	M(+15.99)VAELEELR
1931	TVFLTMFGEK	8.6	86	586.8045	2	23.922	-0.2	97 97 97 98 98 96 95 65 63 47	TVFLTMFGEK
1200	LEDEQSLGAQLQK	11.1	86	729.8755	2	16.098	0.3	66 66 94 97 81 94 95 97 97 81 93 77 69	LEDEQSLGAQLQK
1369	MVAELELVW	7.7	85	1089.564	1	17.88	-0.6	92 90 89 93 95 91 93 94 26	MVAELELVW
2237	MVATGGGVELGV	10.2	85	545.2842	2	27.64	0.3	95 95 93 88 82 71 73 75 84 81 82 92	MVATGGGVELGV
2075	LLTEGNEFGR	8.5	85	568.2902	2	25.65	-0.9	92 94 94 92 81 67 84 87 88 64	LLTEGNEFGR
1337	FGTSEDKVGLY	9.3	84	608.2969	2	17.545	-2.1	72 76 90 92 91 90 89 90 85 88 60	FGTSEDKVGLY
1254	WQLHLDDAVNI	9.3	84	662.3364	2	16.671	-2.7	58 70 69 97 97 98 97 92 88 68 90	WQLHLDDAVNI
1671	LLSLNSADMLK	9.3	84	602.8341	2	21.134	0.3	96 96 96 96 88 91 91 91 66 67 44	LLSLNSADMLK
2592	KMELDDLSSNMEAVSK	13.5	84	898.9236	2	32.053	-0.3	79 79 88 92 94 98 97 97 77 62 76 75 79 79 81 89	KMELDDLSSNMEAVSK
2363	FNDAGVLWVSK	9.3	84	618.3239	2	29.212	-1.1	77 67 91 92 96 96 97 93 93 94 26	FNDAGVLWVSK
2172	MFSPANK	5.9	84	397.6967	2	26.83	-0.5	81 70 72 96 95 88 84	MFSPANK
1701	LELLEKPMGL	8.4	84	571.8282	2	21.446	0.2	64 78 98 98 94 90 79 67 79 90	LELLEKPMGL
1266	KVAEQELVDASERGV	12.6	84	815.4241	2	16.802	-1.9	89 87 92 97 89 97 98 98 98 96 91 87 57 52 28	KVAEQELVDASERGV
1719	LTMFGEKL	6.7	84	469.7543	2	21.636	-0.3	93 92 96 96 82 74 83 53	LTMFGEKL
1099	VTNSADMLK	7.6	84	489.7497	2	15.026	-0.3	81 81 80 96 95 94 85 86 56	VTNSADMLK
1999	QDPEDVLVAAFK	10.1	84	666.3456	2	24.726	0	58 71 91 91 91 91 98 95 95 82 78 59	QDPEDVLVAAFK

979	ELNKLQGEVDR	9.2	84	650.8459	2	13.735	-0.7	82 82 71 81 95 70 94 94 87 92 70	ELNKLQGEVDR
900	QFAGDDAPR	7.6	84	488.728	2	12.892	0.6	46 61 92 97 97 96 94 93 75	QFAGDDAPR
1359	MVAELEELR	7.5	84	545.2834	2	17.777	-1.1	97 96 94 96 98 26 91 91 62	MVAELEELR
1786	DLDDLELTLAK	9.2	84	623.333	2	22.329	1.3	27 83 97 97 96 98 98 97 84 85 55	DLDDLELTLAK
1755	LLGLNSADMLK	9.2	84	587.8286	2	22.003	-0.2	98 98 97 96 89 90 87 88 65 66 43	LLGLNSADMLK
999	WSGLDVGL	6.7	84	423.7217	2	13.969	0.6	26 95 84 82 89 95 97 99	WSGLDVGL
978	ASM(+15.99)GQLNVK	7.5	84	482.2498	2	13.727	-0.5	59 59 91 92 75 94 90 97 91	ASM(+15.99)GQLNVK
2107	LGFVPTVGL	7.5	84	902.5342	1	26.042	-0.3	63 62 85 93 93 89 83 87 94	LGFVPTVGL
2627	NFDAGVLWVSK	9.2	84	618.325	2	32.483	0.8	69 76 88 89 93 95 95 94 94 95 26	NFDAGVLWVSK
1929	QLLGTLEEMR	8.3	83	595.3158	2	23.907	-0.1	33 34 95 99 98 98 99 95 97 83	QLLGTLEEMR
3231	LKDALAAEL	7.5	83	472.2761	2	39.892	-1	89 89 89 80 70 51 91 92 95	LKDALAAEL
3365	FNDAGVLWVSK	9.2	83	618.325	2	41.528	0.8	76 63 86 87 93 93 94 97 97 98 26	FNDAGVLWVSK
1164	LLTEGNEFGR	8.3	83	568.2906	2	15.715	-0.1	97 97 97 94 59 49 71 93 94 76	LLTEGNEFGR
880	QGEVDDSVQEAR	10	83	666.8048	2	12.678	-0.1	53 68 77 95 99 98 93 93 80 84 88 64	QGEVDDSVQEAR
934	GEVDDSVAGEA	9.2	83	1048.445	1	13.27	1.6	77 77 77 94 96 96 91 81 63 65 94	GEVDDSVAGEA
2695	KMELDDLSSNMEAVSK	13.3	83	898.924	2	33.313	0.1	75 73 73 78 93 97 94 94 88 63 71 87 88 79 82 88	KMELDDLSSNMEAVSK
1227	NLTEEMASQDESVAK	12.5	83	826.3767	2	16.395	-1.1	41 40 79 95 98 98 98 96 85 97 95 90 73 72 84	NLTEEMASQDESVAK
1185	NEELEAMVK	7.5	83	531.7612	2	15.951	1.4	61 67 97 97 96 94 85 88 58	NEELEAMVK
1131	VAEQELVDASER	10	83	673.3334	2	15.373	0.1	46 46 73 64 94 97 97 99 97 94 95 90	VAEQELVDASER
1233	NLTEEM(+15.99)ASQDESVAK	12.5	83	834.3743	2	16.455	-1	41 40 79 96 98 98 95 84 74 94 93 89 82 82 91	NLTEEM(+15.99)ASQDESVAK
3217	KMELDDLSSNMEAVSK	13.3	83	898.924	2	39.709	0.1	89 88 91 94 97 98 94 93 82 58 61 63 77 73 77 85	KMELDDLSSNMEAVSK
1368	LEDDLSNSMEAVSK	11.6	83	769.3582	2	17.87	2.7	50 50 84 94 95 96 72 76 83 88 87 86 96 98	LEDDLSNSMEAVSK
1987	LLAPASSSSMI	9.1	83	1076.565	1	24.583	-0.9	85 81 81 87 77 77 84 79 81 81 92	LLAPASSSSMI
807	AAEDLKEAGAA	9.1	83	523.2618	2	11.84	0.3	78 76 82 97 97 81 76 73 76 75 95	AAEDLKEAGAA
1092	VFDKEGNGTMV	9.1	83	598.7847	2	14.954	0.5	95 92 90 89 85 86 73 67 65 79 79	VFDKEGNGTMV
2436	MVAEELELR	7.4	82	545.2847	2	30.123	1.2	97 97 97 99 26 88 88 89 58	MVAEELELR
3330	FVDKDDEVVMGANK	11.5	82	783.8762	2	41.099	-1.1	86 85 85 77 78 78 90 93 98 95 82 55 71 74	FVDKDDEVVMGANK
1404	TTAAPTL	5.8	82	674.3724	1	18.246	0.8	89 91 91 85 60 64 93	TTAAPTL
897	AGGGLAANLDKK	9.9	82	557.8145	2	12.867	0.2	63 57 82 92 94 98 92 67 67 81 95 94	AGGGLAANLDKK
1343	KMEM(+15.99)ENLDGEEK	9.9	82	734.8184	2	17.607	0.1	72 71 89 84 92 85 90 84 79 83 85 66	KMEM(+15.99)ENLDGEEK
1620	MELDDLSSNMEAVSK	12.3	82	834.8768	2	20.573	0.5	62 61 86 90 95 96 97 68 52 80 92 87 84 86 88	MELDDLSSNMEAVSK

3100	FNDAGVLWVSK	9	82	618.325	2	38.254	0.8	74 62 85 87 92 93 95 93 93 94 26	FNDAGVLWVSK
923	KLAEKDEEMWALK	10.6	82	795.9116	2	13.149	-2.3	84 84 91 93 96 97 98 94 88 50 61 73 48	KLAEKDEEMWALK
964	MQGQEDENGSVHY	10.6	82	747.3016	2	13.589	-0.2	59 52 93 79 97 98 93 86 92 93 74 71 71	MQGQEDENGSVHY
1803	WLQELVDASEGVVGI	12.3	82	807.9199	2	22.517	-2.9	27 51 35 85 96 98 97 97 95 93 90 89 87 89 89	WLQELVDASEGVVGI
1320	NNGDAAFF	6.5	81	855.3611	1	17.371	-2.3	63 76 77 76 76 91 94 94	NNGDAAFF
1335	TGFPPDVAGNVDYK	11.4	81	740.3577	2	17.531	-2.1	32 32 65 99 99 98 96 95 93 82 90 88 90 74	TGFPPDVAGNVDYK
3516	EFLGAEL	5.7	81	778.398	1	43.353	-0.1	94 90 84 71 63 71 93	EFLGAEL
767	LEEAGGATSA	8.1	81	453.2139	2	11.348	-0.5	26 26 92 90 92 97 96 95 96 98	LEEAGGATSA
4010	EPGSLDVTTVPAW	10.6	81	686.3433	2	49.396	0.2	90 90 89 92 94 98 95 93 86 69 64 64 26	EPGSLDVTTVPAW
3334	LLTEEGNFGR	8.1	81	568.2905	2	41.155	-0.4	95 95 93 93 82 73 65 81 77 54	LLTEEGNFGR
2884	EPGSLDVTTVAPW	10.6	81	686.3433	2	35.594	0.1	95 95 95 96 97 98 97 92 62 57 62 77 26	EPGSLDVTTVAPW
851	KNLEVTVK	6.5	81	465.7845	2	12.344	-0.1	91 84 90 89 89 65 88 51	KNLEVTVK
1399	SLSTELFK	6.5	81	462.7553	2	18.193	-0.3	26 97 95 93 92 89 91 63	SLSTELFK
963	NLEVTVK	5.7	81	401.737	2	13.583	-0.2	26 99 96 96 88 92 68	NLEVTVK
1903	ARNAALMAGKAANPL	12.2	81	734.904	2	23.609	-3	64 69 80 92 95 86 68 55 64 74 95 97 83 93 95	ARNAALMAGKAANPL
2753	EPGSLDVTTVAPW	10.5	81	686.3442	2	34.017	1.5	94 94 94 95 97 98 96 86 63 57 66 80 26	EPGSLDVTTVAPW
3155	MVAEELELR	7.3	81	545.2842	2	38.939	0.4	95 94 94 95 26 92 86 87 57	MVAEELELR
1383	LLDPEATGSLKKEF	11.3	81	774.4203	2	18.037	1.3	87 89 89 96 95 94 92 85 64 65 94 58 58 58	LLDPEATGSLKKEF
4041	GTFPPDVAGNVDYK	11.3	81	740.3593	2	49.78	0	62 61 87 98 98 97 93 87 66 53 81 83 87 71	GTFPPDVAGNVDYK
3450	FELQEI	4.8	81	778.397	1	42.562	-1.3	94 93 90 62 87 57	FELQEI
1566	NFAMALVGVDSK	9.7	81	626.3223	2	19.972	-2.1	60 67 91 93 95 95 83 75 76 83 85 60	NFAMALVGVDSK
3523	MVAELEELR	7.3	81	545.284	2	43.436	0	97 96 94 93 93 26 83 85 55	MVAELEELR
1503	LSFSADQVEDFQEA	11.3	81	793.3547	2	19.288	0.4	81 83 83 90 92 77 65 92 97 98 96 57 63 47	LSFSADQVEDFQEA
742	ASM(+15.99)GQLNVK	7.3	81	482.2497	2	11.049	-0.6	51 51 87 93 83 94 85 93 85	ASM(+15.99)GQLNVK
856	KVETEENDLSK	8.9	81	646.3218	2	12.401	-0.9	92 91 91 97 95 64 55 69 85 88 53	KVETEENDLSK
1303	TLLTSNPY	6.4	81	908.4722	1	17.193	-0.1	47 47 91 90 91 88 98 89	TLLTSNPY
1519	LKDLVDKLNVR	8.9	81	656.9004	2	19.456	-0.8	89 88 96 98 98 96 94 84 47 49 41	LKDLVDKLNVR
898	SAEELKCAA	7.2	80	461.2208	2	12.876	-0.2	70 70 94 98 98 92 69 55 74	SAEELKCAA
3298	NFDAALVTAWK	8.8	80	618.3245	2	40.717	-0.1	65 72 94 95 88 87 83 75 69 84 68	NFDAALVTAWK
1777	Y(+79.97)AWAELGEKLDNLKR	12.1	80	943.4656	2	22.228	1.6	27 27 77 97 97 98 95 94 95 97 97 86 78 81 52	Y(+79.97)AWAELGEKLDNLKR
1528	TLEDLGASELK	8.8	80	588.3118	2	19.564	0.7	85 88 95 93 70 58 69 93 84 86 57	TLEDLGASELK

2289	EPGSLDVTTVAPW	10.4	80	686.3438	2	28.296	0.9	95 94 94 96 97 98 96 91 68 54 56 72 26	EPGSLDVTTVAPW
1798	FELQEI	4.8	80	778.398	1	22.458	-0.1	93 92 85 62 89 58	FELQEI
1769	FCELHDLTEEYSNQL	12	80	920.9081	2	22.146	1.7	26 90 90 94 97 97 94 94 97 97 89 83 48 52 49	FCELHDLTEEYSNQL
3006	MVAEELELR	7.2	80	545.284	2	37.108	0	95 94 94 97 26 88 84 85 54	MVAEELELR
2649	HAPPPDVAGNVDYK	11.2	80	740.3629	2	32.762	-2.8	26 26 98 98 98 98 95 94 92 79 91 78 81 62	HAPPPDVAGNVDYK
2206	LLTEGNEFGR	8	80	568.2911	2	27.255	0.6	89 91 91 91 65 51 68 89 91 69	LLTEGNEFGR
2525	FELQEL	4.8	80	778.3975	1	31.228	-0.7	91 91 86 63 88 58	FELQEL
1116	AVNSADMLK	7.2	80	474.7447	2	15.21	0.3	59 58 85 96 94 91 85 88 59	AVNSADMLK
708	HVTS(+79.97)DLDCSF	8	80	602.2236	2	10.618	1	26 78 78 78 88 93 93 89 86 86	HVTS(+79.97)DLDCSF
1026	GVVDLESEVDNEKGV	12	80	794.8874	2	14.27	-1.5	55 69 73 94 96 96 95 95 97 98 60 73 68 81 43	GVVDLESEVDNEKGV
1437	VKLELNPGSKGEVDR	12	80	820.9528	2	18.592	1.2	49 57 85 94 97 84 65 60 82 96 93 92 83 89 64	VKLELNPGSKGEVDR
3299	YNSEETLDHLEVNF	11.2	80	855.3893	2	40.727	3.5	65 59 64 93 93 92 93 93 93 95 92 61 61 57	YNSEETLDHLEVNF
2620	EPGSLDVTAPCGLL	11.2	80	686.3428	2	32.405	-2.9	95 95 95 95 95 98 97 75 71 41 51 58 66 80	EPGSLDVTAPCGLL
2373	LQDVLDKL	6.4	80	472.2769	2	29.344	0.8	83 75 96 97 95 70 72 47	LQDVLDKL
3430	MDLTPF	4.8	80	723.3378	1	42.325	-0.4	91 91 95 89 84 26	MDLTPF
2787	EFLQEL	4.8	80	778.3972	1	34.431	-1.1	94 91 85 62 86 57	EFLQEL
3147	EPGSLDVTTVAPW	10.4	80	686.3431	2	38.846	-0.2	95 95 94 96 97 98 96 96 80 50 51 55 26	EPGSLDVTTVAPW
1614	EALEELRAAL	8	80	557.8092	2	20.508	0.8	62 64 90 93 92 92 87 79 81 52	EALEELRAAL
3232	FGGDAGVLWVSK	9.6	80	618.3239	2	39.902	-1	35 62 79 90 91 93 93 95 94 94 96 26	FGGDAGVLWVSK
845	KVAEQEI	5.6	80	408.7266	2	12.275	-0.3	70 70 79 92 78 92 74	KVAEQEI
1493	FLAGMSLNGGEKDDL	11.9	80	783.8774	2	19.174	0.5	79 81 93 96 97 93 85 54 66 87 88 78 78 85 26	FLAGMSLNGGEKDDL
1357	SPEDKLSELK	8	80	573.3057	2	17.747	-0.4	77 77 75 76 82 95 95 79 81 53	SPEDKLSELK
1213	LQDAEEQLEAVNSK	11.1	80	787.3899	2	16.237	1.3	38 37 88 95 97 91 63 90 97 97 96 79 92 47	LQDAEEQLEAVNSK
2622	MDLTPF	4.8	79	723.3375	1	32.423	-0.9	90 90 93 88 86 26	MDLTPF
2962	MDLTPF	4.8	79	723.3378	1	36.571	-0.5	90 91 94 89 84 26	MDLTPF
1731	EFLQEL	4.8	79	778.3977	1	21.751	-0.5	93 90 86 61 88 55	EFLQEL
1331	LTFM(+15.99)GEKLK	7.1	79	541.7979	2	17.483	-2.8	73 78 95 96 79 76 92 95 26	LTFM(+15.99)GEKLK
1883	CTGGALTLAGML	9.5	79	554.2791	2	23.395	-2.4	57 64 88 90 90 93 94 95 91 61 52 72	CTGGALTLAGML
3009	NFAWLVGDVSK	8.7	79	412.552	3	37.152	-0.1	84 92 85 75 88 87 85 80 80 85 26	NFAWLVGDVSK
1050	SQVADLTSV	7.1	79	919.4745	1	14.52	1.6	79 69 85 91 96 95 86 81 26	SQVADLTSV
2934	LLTEGNEFGR	7.9	79	568.2909	2	36.215	0.3	94 94 94 84 63 53 57 87 91 69	LLTEGNEFGR

2463	FLAGMVTGNADKDDL	11.9	79	783.8761	2	30.468	-1.2	73 75 90 94 97 95 94 83 68 88 90 65 65 78 26	FLAGMVTGNADKDDL
4142	EPGSLDVTFPPNV	10.3	79	686.3432	2	51.043	0.2	93 93 91 91 92 97 93 94 72 59 50 52 48	EPGSLDVTFPPNV
2095	EPGSLDVPFGPEK	10.3	79	686.3442	2	25.894	1.6	91 91 93 96 97 98 96 96 96 59 38 38 33	EPGSLDVPFGPEK
1429	TLEDQLSELK	7.9	79	588.3121	2	18.507	1.2	86 89 97 89 49 55 95 83 84 59	TLEDQLSELK
1845	YSLEHDLTEEDCK	10.3	79	791.3403	2	22.971	-0.2	56 60 88 94 91 89 80 78 79 92 79 80 57	YSLEHDLTEEDCK
2603	LLTSSGTPM(+15.99)GR	8.7	79	568.2909	2	32.19	-2.7	90 91 90 94 75 70 61 66 83 90 55	LLTSSGTPM(+15.99)GR
1689	YPELEGVSPAL	8.7	79	587.8019	2	21.317	-2.1	97 97 97 93 88 71 69 66 80 80 26	YPELEGVSPAL
1491	MVAELEELRAA	8.7	79	616.3214	2	19.16	0.5	93 92 92 93 94 26 90 88 78 76 40	MVAELEELRAA
2497	FNFVDTLDTYDVNF	11.1	79	855.3883	2	30.879	0.1	84 82 82 92 92 93 94 89 79 73 81 54 54 52	FNFVDTLDTYDVNF
2824	FNDAGVLWVSK	8.7	79	618.3255	2	34.875	1.6	68 58 81 80 82 87 93 96 96 97 26	FNDAGVLWVSK
2338	LLTSSGTPM(+15.99)GR	8.7	79	568.291	2	28.905	-2.5	91 93 93 97 67 63 57 67 85 93 57	LLTSSGTPM(+15.99)GR
953	KLLDPAETGSLKK	10.3	79	700.4106	2	13.472	-1	90 90 98 97 91 75 71 86 71 67 73 86 26	KLLDPAETGSLKK
3198	LLTSSGTPM(+15.99)GR	8.7	79	568.2909	2	39.474	-2.7	94 94 93 96 92 83 66 61 63 81 39	LLTSSGTPM(+15.99)GR
2284	FNGWVLADVSK	8.7	79	412.5521	3	28.231	-0.1	44 68 86 86 96 92 86 87 95 95 26	FNGWVLADVSK
2515	MELDDLSCQTEAVSK	11.8	79	834.8767	2	31.103	0.4	54 53 84 94 95 94 94 81 61 72 72 76 71 83 89	MELDDLSCQTEAVSK
1668	LLAEEELVDASERRL	11.8	79	871.9685	2	21.096	0.9	72 75 74 81 98 97 97 98 97 95 93 89 51 27 27	LLAEEELVDASERRL
1569	KMNDLQEGLEAVSDLPVK	14.2	79	993.5114	2	20.01	-2.9	80 77 83 96 94 82 91 92 98 96 94 94 93 76 64 34 34 28	KMNDLQEGLEAVSDLPVK
2819	LLGSLDVTM(+15.99)T(+79.97)LL	9.4	79	686.3445	2	34.813	-1.6	96 96 95 96 98 98 95 86 85 38 26 30	LLGSLDVTM(+15.99)T(+79.97)LL
2715	GTFPPDVAGNVDYK	11	79	740.3596	2	33.562	0.3	30 29 53 98 98 97 95 94 93 78 89 82 87 71	GTFPPDVAGNVDYK
2212	M(+15.99)AESADKVEDFTNL	11	79	793.3551	2	27.326	-1.3	94 91 87 86 88 88 88 93 97 93 89 34 35 30	M(+15.99)AESADKVEDFTNL
3736	NFWGVLDAVSK	8.6	79	412.5522	3	46.014	0.3	74 87 74 69 65 82 83 79 80 82 84	NFWGVLDAVSK
3408	LLTEGNEFGR	7.9	79	568.2908	2	42.051	0.2	94 94 94 88 56 50 60 90 88 66	LLTEGNEFGR
1096	NLELTVK	5.5	79	408.7446	2	14.997	-0.8	26 97 97 94 84 86 62	NLELTVK
952	LYDQHAV	5.5	79	423.2108	2	13.463	-0.9	93 93 96 79 66 66 54	LYDQHAV
2689	MDLTPF	4.7	78	723.338	1	33.244	-0.3	91 90 94 87 80 26	MDLTPF
1807	DVDDVLKTGVDNPGHPF	13.3	78	912.941	2	22.55	-0.7	33 39 49 78 87 97 98 97 95 93 94 89 87 83 86 92 26	DVDDVLKTGVDNPGHPF
2583	SAFPPDVAGGGVDYK	11.8	78	740.3602	2	31.947	1.2	32 32 61 98 98 97 94 90 86 73 81 92 83 85 68	SAFPPDVAGGGVDYK
941	MGESAGLHETA	8.6	78	551.7462	2	13.342	1.7	73 77 91 93 94 96 95 95 91 26 26	MGESAGLHETA
4007	FELQEL	4.7	78	778.3975	1	49.353	-0.8	93 92 89 59 79 55	FELQEL
2505	LQTLVGAEL	7	78	472.2766	2	30.987	0	85 66 71 59 66 78 86 94 97	LQTLVGAEL
3605	LLTENGEFGR	7.8	78	568.2909	2	44.427	0.3	96 95 94 88 55 62 78 78 77 55	LLTENGEFGR

1497	SALEEAEGTLEHEESK	12.5	78	879.9047	2	19.221	-0.3	28 28 38 82 98 99 98 92 91 94 97 98 94 75 77 56	SALEEAEGTLEHEESK
876	ETEM(+15.99)ATNDESVAK	10.2	78	720.8118	2	12.629	0.3	70 75 91 91 90 56 52 77 87 85 74 74 88	ETEM(+15.99)ATNDESVAK
1539	LQEQVDDLEGSLEQEK	12.5	78	930.4474	2	19.689	0.3	46 44 45 71 96 98 98 98 98 97 96 96 96 58 64 42	LQEQVDDLEGSLEQEK
2068	MFELTGLLGAEK	9.4	78	654.8467	2	25.567	-0.4	26 99 96 94 92 92 95 64 65 71 69 69	MFELTGLLGAEK
1403	TTAAPLTA	6.2	78	745.4099	1	18.238	1.1	87 90 90 81 63 58 69 82	TTAAPLTA
1612	MEEVDLSSACSEAVSK	12.5	78	842.8745	2	20.49	0.8	26 93 83 79 91 96 97 73 57 55 56 73 88 87 91 96	MEEVDLSSACSEAVSK
2985	FELQEI	4.7	78	778.3976	1	36.86	-0.5	91 90 87 59 85 54	FELQEI
1443	LKDVLDQL	6.2	78	472.2768	2	18.658	0.5	90 87 92 94 96 52 58 52	LKDVLDQL
2979	SAFPPDVAGNVDYK	10.9	78	740.3597	2	36.786	0.5	28 28 50 98 98 95 95 94 91 79 92 84 85 69	SAFPPDVAGNVDYK
893	NTYETDALK	7	78	527.7556	2	12.816	-1	47 46 91 95 95 91 84 87 60	NTYETDALK
2160	EPGSLDVTTVAPW	10.1	78	686.3436	2	26.677	0.6	90 89 89 94 97 97 93 89 65 54 58 66 26	EPGSLDVTTVAPW
1587	GTFPPDVAGNVDYK	10.9	78	740.3602	2	20.207	1.2	29 29 55 98 98 98 96 95 86 70 88 84 86 70	GTFPPDVAGNVDYK
2945	LLGSLVDTT(+79.97)PL	8.6	78	604.8123	2	36.355	0	95 95 93 93 95 26 94 72 67 79 42	LLGSLVDTT(+79.97)PL
2166	EGVDDDAKEAR	8.6	78	602.7753	2	26.751	-0.5	72 73 73 94 91 72 72 82 79 81 62	EGVDDDAKEAR
1045	KQLEDSLVQVK	8.6	78	643.8699	2	14.465	0.9	54 41 79 87 89 90 97 94 76 76 68	KQLEDSLVQVK
2397	MEAGMVETLDKSQK	10.9	78	783.8765	2	29.643	-2.9	76 77 90 94 98 97 89 86 90 90 54 49 44 49	MEAGMVETLDKSQK
3375	GTFPDPVAGNVDYK	10.9	78	740.3592	2	41.657	-0.2	30 30 56 98 98 97 92 91 90 82 93 81 81 64	GTFPDPVAGNVDYK
1887	CTNGKVDSVGK	8.6	78	1107.547	1	23.444	0.8	80 79 75 94 87 85 79 73 54 69 75	CTNGKVDSVGK
1781	QVAEKELLDASERVGL	12.4	78	878.9752	2	22.274	-0.3	62 80 89 91 94 96 98 99 98 98 95 46 46 46 61 36	QVAEKELLDASERVGL
1816	ESFLPMLK	6.2	78	482.7626	2	22.652	0.8	26 91 91 92 86 83 89 61	ESFLPMLK
910	ARETECVRLQSA	9.3	78	681.8434	2	13.013	0.1	72 78 92 96 94 71 58 65 88 50 69 95	ARETECVRLQSA
2017	NLEVTVK	5.4	78	401.7368	2	24.943	-0.6	26 99 95 95 82 83 59	NLEVTVK
2487	EPGSLDVTTVAPW	10.1	78	686.343	2	30.767	-0.3	94 94 94 96 96 98 96 89 46 42 57 76 26	EPGSLDVTTVAPW
826	SDYVGDEAQSK	8.5	78	599.7649	2	12.064	0.3	26 26 99 99 97 96 96 97 76 75 63	SDYVGDEAQSK
2285	EPGSLTLTFPF	8.5	78	604.8119	2	28.241	-2.7	93 93 92 94 95 88 77 82 82 26 26	EPGSLTLTFPF
3666	MVAEELELR	7	78	545.285	2	45.164	1.8	95 94 94 98 26 82 77 78 49	MVAEELELR
3429	LQDLVDKL	6.2	78	472.2765	2	42.316	-0.2	85 76 94 96 88 65 67 45	LQDLVDKL
3649	MDLTPF	4.6	77	723.3389	1	44.959	1	89 89 94 86 78 26	MDLTPF
2061	LLDGGSLGPSPL	9.3	77	563.3109	2	25.483	-0.3	97 97 95 96 92 91 91 92 94 26 26 26	LLDGGSLGPSPL
1789	FSGDEEFPDLSHI	10.1	77	746.8342	2	22.355	1.6	62 61 80 84 96 98 98 92 90 92 95 26 26	FSGDEEFPDLSHI
1159	KKDLTELEDV	7.7	77	595.3195	2	15.665	0.6	87 72 70 70 63 67 83 88 89 81	KKDLTELEDV

3868	LLTENGEFGR	7.7	77	568.2911	2	47.625	0.8	94 95 94 74 52 58 70 83 87 62	LLTENGEFGR
1693	LYVVPEPEV	7	77	1044.562	1	21.347	0.9	26 97 97 81 71 71 83 83 83	LYVVPEPEV
2920	FELQEI	4.6	77	778.3975	1	36.044	-0.8	90 87 83 59 87 55	FELQEI
1203	QLESDLVQVK	7.7	77	579.8234	2	16.138	2.6	46 52 81 89 89 98 97 78 72 67	QLESDLVQVK
972	CPDLPGCKAAF	8.5	77	561.2607	2	13.664	2.3	26 97 96 96 73 62 78 94 97 99 26	CPDLPGCKAAF
3616	LLGSLDVTTSS(+79.97)AK	10.1	77	686.3433	2	44.555	2	94 95 94 94 95 95 93 94 89 48 38 38 32	LLGSLDVTTSS(+79.97)AK
991	NSWVAQVTCA	7.7	77	539.7527	2	13.863	-0.2	52 55 71 96 96 70 85 80 80 83	NSWVAQVTCA
817	EERADLAETGA	8.5	77	581.2729	2	11.95	0.2	26 66 65 68 65 80 95 97 93 93 96	EERADLAETGA
3758	LQDLVDKL	6.2	77	472.2758	2	46.29	-1.6	78 67 92 96 90 71 73 48	LQDLVDKL
3118	YGVGAGVLEGW	8.5	77	554.2772	2	38.48	0.3	26 35 86 88 81 81 89 95 94 95 76	YGVGAGVLEGW
3018	EPGSLDVTCPAGLL	10.8	77	686.343	2	37.251	-2.6	92 92 94 96 98 98 97 78 67 55 57 34 56 61	EPGSLDVTCPAGLL
1353	ALEDQLSELK	7.7	77	1145.604	1	17.712	-1.1	57 65 82 93 77 90 86 81 85 52	ALEDQLSELK
2686	LLGSLDVTGYGNY	10	77	686.3431	2	33.217	-0.2	94 95 95 96 98 98 97 87 74 45 45 48 26	LLGSLDVTGYGNY
3540	LLTENGEFGR	7.7	77	568.2908	2	43.644	0.2	94 95 94 88 53 58 66 81 82 58	LLTENGEFGR
1341	YNQNENGNGGELK	10	77	718.8237	2	17.591	0	81 82 53 84 93 85 92 44 71 85 81 86 61	YNQNENGNGGELK
2766	KMELDDLSSNMEAVSK	12.4	77	898.9236	2	34.167	-0.3	73 72 81 88 96 96 94 95 80 50 43 44 86 72 73 84	KMELDDLSSNMEAVSK
2421	EPGSLDVTSLAPW	10	77	686.3425	2	29.94	-1.1	92 92 94 96 97 98 96 87 48 46 54 71 26	EPGSLDVTSLAPW
2703	LQDVLDLK	6.2	77	472.2765	2	33.419	-0.1	83 71 94 96 91 65 68 47	LQDVLDLK
1770	ALEEAEGTLEHEESKLL	13.1	77	949.4729	2	22.154	-0.2	30 30 50 89 94 95 87 88 94 96 96 94 85 83 77 80 34	ALEEAEGTLEHEESKLL
927	HANGPASSMKLMV	10	77	671.8331	2	13.198	-1.3	95 94 87 94 93 92 92 79 48 48 54 77 42	HANGPASSMKLMV
3417	STEDRVGDRTK	8.5	77	632.3193	2	42.164	2.1	95 95 92 84 80 80 87 83 64 56 26	STEDRVGDRTK
1350	LDDLRKDL	6.2	77	494.2771	2	17.674	0.1	84 84 91 84 73 71 80 46	LDDLRKDL
2125	ASFPPDVAGNVDYK	10.8	77	740.3589	2	26.251	-0.6	34 44 59 95 98 98 96 94 89 65 75 76 82 65	ASFPPDVAGNVDYK
1188	VEEVKLTSS(+79.97)ETA	9.2	77	686.8157	2	15.972	-0.1	42 49 83 90 93 93 90 91 88 80 91 26	VEEVKLTSS(+79.97)ETA
2655	FELQEL	4.6	77	778.3987	1	32.838	0.9	94 91 87 56 78 53	FELQEL
2319	GTFPPDVAGGGVDYK	11.5	77	740.3592	2	28.667	-0.2	29 29 54 98 98 97 94 93 84 63 77 90 84 87 70	GTFPPDVAGGGVDYK
828	STHPHFV	5.4	77	412.7062	2	12.081	0.3	95 95 96 99 99 26 26	STHPHFV
1207	DEKVDVVQVK	7.7	77	579.8234	2	16.169	2.6	59 57 78 90 90 95 96 72 65 61	DEKVDVVQVK
3316	EFLQEL	4.6	77	778.3973	1	40.934	-0.9	91 89 86 58 81 53	EFLQEL
787	VGNEYVTK	6.1	77	909.4677	1	11.586	0.1	88 84 77 87 83 67 79 46	VGNEYVTK
3243	ASFPPDVAGGGVDYK	11.5	77	740.36	2	40.04	0.9	29 38 50 94 97 98 95 92 88 73 76 86 79 83 66	ASFPPDVAGGGVDYK

1819	QLLGTLEEMRDEK	10	77	781.3983	2	22.679	0.2	46 58 81 93 93 95 96 95 87 61 61 62 63	QLLGTLEEMRDEK
1445	LQDLVDKL	6.1	77	943.5458	1	18.672	-0.1	80 69 90 98 92 67 70 43	LQDLVDKL
1456	RSEVHGMVAA	7.7	77	528.7665	2	18.784	0.2	81 80 80 26 70 73 82 89 90 93	RSEVHGMVAA
2141	LLTEGNEFGR	7.7	77	568.291	2	26.453	0.4	90 90 91 91 57 46 49 89 89 70	LLTEGNEFGR
2316	EFLQEL	4.6	77	778.3979	1	28.624	-0.2	95 91 86 56 77 51	EFLQEL
2470	LLTSSGTPM(+15.99)GR	8.4	77	568.2907	2	30.553	-3	83 82 82 94 81 73 71 72 69 83 47	LLTSSGTPM(+15.99)GR
1978	KWFGLVGAEDSVK	10	77	718.3831	2	24.481	0.7	42 42 84 97 96 85 66 68 93 96 97 96 26	KWFGLVGAEDSVK
1228	LMTNL	3.8	77	591.3164	1	16.403	-1.1	79 79 84 85 53	LMTNL
3297	LQDVLDKL	6.1	77	472.2765	2	40.709	-0.1	86 80 96 97 92 56 59 42	LQDVLDKL
2187	GTFPPDVAGNVDYK	10.7	77	740.3595	2	27.018	0.2	39 37 62 98 98 97 93 89 83 67 85 77 79 62	GTFPPDVAGNVDYK
4088	LKDVLDQL	6.1	77	472.2764	2	50.37	-0.4	86 83 91 93 92 53 58 54	LKDVLDQL
4076	LLGSLDVTTGST(+79.97)K	10	77	686.3428	2	50.221	1.2	95 95 94 96 97 98 96 89 61 51 43 44 31	LLGSLDVTTGST(+79.97)K
1666	KVAEQELVDASEGVRL	12.2	77	871.9685	2	21.08	0.9	88 86 91 96 86 97 98 98 98 96 87 68 37 32 30 29	KVAEQELVDASEGVRL
3749	LLGSLDVTTSGT(+79.97)K	9.9	77	686.3416	2	46.169	-0.6	93 92 91 93 95 96 92 88 78 43 41 43 44	LLGSLDVTTSGT(+79.97)K
1750	LCM(+15.99)LLDLK	6.1	77	482.7637	2	21.946	-0.4	81 85 85 94 52 74 84 53	LCM(+15.99)LLDLK
3421	RAHM(+15.99)LPVF	6.1	76	493.767	2	42.205	2.8	56 54 78 86 86 83 83 83	RAHM(+15.99)LPVF
3112	TGFPPDVAGNVDYK	10.7	76	740.3593	2	38.405	0	32 32 59 98 98 98 96 91 84 65 85 78 82 64	TGFPPDVAGNVDYK
1421	CLPTAPKGTYDDYVEVKV	13.8	76	999.4951	2	18.425	-2.9	27 63 81 92 94 95 94 93 93 92 94 96 72 63 66 62 63 26	CLPTAPKGTYDDYVEVKV
1455	TRLSDLTEQLGETGGA	12.2	76	824.4112	2	18.776	-1.9	53 61 88 94 95 97 96 96 82 95 95 93 54 46 43 26	TRLSDLTEQLGETGGA
1943	DFDKVLADWK	7.6	76	618.817	2	24.062	0.6	26 92 77 78 92 91 84 72 74 71	DFDKVLADWK
844	TQQVEELK	6.1	76	487.7612	2	12.267	-0.1	54 42 60 96 97 93 94 71	TQQVEELK
1841	LHENETLDHQCGW	9.9	76	791.3408	2	22.921	-0.5	98 98 96 85 91 93 93 84 59 46 53 64 26	LHENETLDHQCGW
1479	EFPPVVEEVGKK	9.1	76	679.372	2	19.03	0.5	96 96 96 99 26 93 89 71 65 71 80 26	EFPPVVEEVGKK
829	RSKYETDALQR	8.4	76	683.8574	2	12.088	0.2	90 89 91 92 74 76 75 71 68 55 51	RSKYETDALQR
1078	GTDKVEDFQEA	8.4	76	619.7814	2	14.822	1.7	49 64 79 92 96 98 98 90 59 50 56	GTDKVEDFQEA
2355	LLGSLDVTTGTS(+79.97)K	9.9	76	686.3425	2	29.12	0.8	95 96 94 95 97 98 97 93 77 44 35 35 28	LLGSLDVTTGTS(+79.97)K
1822	S(+79.97)VLLMVHEL	6.8	76	1120.552	1	22.719	3.9	26 26 97 92 92 85 85 85 92	S(+79.97)VLLMVHEL
1141	RDDLGAEKAAM(+15.99)VER	10.6	76	788.8925	2	15.474	2	42 42 57 86 72 72 92 92 97 93 92 72 75 72	RDDLGAEKAAM(+15.99)VER
1263	GELPDGKFLDNKK	9.9	76	730.8893	2	16.778	-2	35 35 80 96 89 86 86 94 96 94 72 72 48	GELPDGKFLDNKK
3001	FLAGMVGNGDDKETL	11.4	76	783.877	2	37.044	-0.1	75 77 92 95 97 96 95 76 73 88 90 49 46 51 31	FLAGMVGNGDDKETL
750	AEGAAM(+15.99)VER	6.8	76	475.2239	2	11.143	-0.3	35 43 46 91 95 96 89 94 89	AEGAAM(+15.99)VER

2370	MVAEELELR	6.8	76	545.2841	2	29.302	0.2	95 95 95 98 26 78 71 73 48	MVAEELELR
804	KLGASGGHGNV	8.3	76	498.7646	2	11.797	-0.2	79 73 76 89 96 98 94 82 44 55 43	KLGASGGHGNV
1029	RASSYKPV	6.1	76	454.2535	2	14.31	0.3	26 94 94 91 87 90 92 26	RASSYKPV
2064	TPMVAENFI	6.8	76	1021.501	1	25.514	-1.7	91 90 72 67 66 79 65 83 65	TPMVAENFI
2781	TGFPPDVAGGGVDYK	11.4	76	740.3597	2	34.356	0.5	29 29 53 98 98 96 92 91 83 63 75 89 82 85 67	TGFPPDVAGGGVDYK
1036	NLPDLSAHF	6.8	76	1013.507	1	14.386	1.8	47 61 71 89 99 94 94 95 26	NLPDLSAHF
3495	LQDVLDKL	6.1	76	472.2762	2	43.111	-0.8	89 79 95 96 89 56 59 38	LQDVLDKL
2853	FELQEL	4.5	76	778.3971	1	35.22	-1.3	93 87 86 56 76 53	FELQEL
960	M(+15.99)LTDVSVNQW	7.6	76	604.7834	2	13.544	-1.8	78 79 90 89 83 82 81 53 56 61	M(+15.99)LTDVSVNQW
3807	NM(+15.99)SRVLADVSK	8.3	76	412.5518	3	46.88	-0.2	57 65 79 91 92 92 74 73 87 90 26	NM(+15.99)SRVLADVSK
3587	MVAEADGKLGV	8.3	76	545.2841	2	44.213	0.2	97 96 95 96 73 45 48 49 71 72 84	MVAEADGKLGV
976	ASMGQLNVK	6.8	76	474.2523	2	13.714	-0.5	72 77 94 92 37 41 78 95 90	ASMGQLNVK
3203	AM(+15.99)ESADQVEDFVTK	10.6	76	793.3572	2	39.536	1.3	67 73 71 76 76 82 65 89 95 98 96 58 70 35	AM(+15.99)ESADQVEDFVTK
864	ETELEESGAKKLAK	10.6	76	766.9132	2	12.485	1.7	39 46 57 90 98 94 92 86 86 91 88 70 72 44	ETELEESGAKKLAK
2272	LLTEAQTM(+15.99)GR	7.6	76	568.2908	2	28.08	-2.9	94 94 94 92 63 42 57 69 87 60	LLTEAQTM(+15.99)GR
3166	FNDAGVLWVSK	8.3	76	618.3242	2	39.078	-0.6	62 52 65 67 84 92 93 95 95 95 26	FNDAGVLWVSK
2071	WHVLYPPVVM(+15.99)LPKTK	11.3	76	912.517	2	25.598	1.5	26 26 98 98 98 98 99 86 86 85 88 83 64 65 26	WHVLYPPVVM(+15.99)LPKTK
1289	ARLLTENGEGF	8.3	76	603.8086	2	17.048	-1.1	41 41 73 92 94 86 74 74 74 87 91	ARLLTENGEGF
1948	LGLTNWDDMEKL	9.1	75	717.8505	2	24.121	0.3	32 38 83 96 90 84 87 82 93 79 80 55	LGLTNWDDMEKL
1764	DTLDYKLPPF	7.5	75	604.8134	2	22.088	-0.3	59 66 87 93 85 55 50 74 91 91	DTLDYKLPPF
2692	GFGDAGVLWVSK	9.1	75	618.3245	2	33.285	0	28 71 84 87 84 79 81 78 93 93 95 26	GFGDAGVLWVSK
1415	TGFMDYVEGLR	8.3	75	644.3052	2	18.365	-0.4	46 47 64 71 92 94 98 97 81 84 49	TGFMDYVEGLR
1872	SELKKDLDDLELTLAK	12.1	75	916.0067	2	23.274	0.1	28 33 46 79 97 95 96 98 97 95 94 92 88 60 62 38	SELKKDLDDLELTLAK
1186	NEELEAM(+15.99)VK	6.8	75	539.7585	2	15.958	1.2	55 57 97 97 92 90 66 59 59	NEELEAM(+15.99)VK
2919	TAFGAGVLEGW	8.3	75	554.2771	2	36.034	0.1	26 79 82 80 73 62 71 91 93 93 73	TAFGAGVLEGW
2914	TGFPDPVAGNVDYK	10.6	75	740.3593	2	35.969	-0.1	33 32 56 98 98 96 94 89 82 57 82 80 84 67	TGFPDPVAGNVDYK
1969	VLAGWFQTAGPA	9	75	609.3194	2	24.37	0.2	95 95 91 91 90 73 52 56 77 74 77 26	VLAGWFQTAGPA
2783	MTLLSAGGEV	7.5	75	977.4973	1	34.378	0.1	94 93 95 97 79 68 67 49 49 56	MTLLSAGGEV
3183	EFLQEL	4.5	75	778.3977	1	39.296	-0.5	95 90 82 50 87 45	EFLQEL
1129	KSLEDETNLGAQLQK	11.3	75	837.4397	2	15.342	1.1	57 61 82 95 97 87 48 46 95 91 91 64 83 66 57	KSLEDETNLGAQLQK
3454	GDFGKVLEGW	7.5	75	554.2771	2	42.611	0.1	46 57 63 81 75 75 84 93 94 77	GDFGKVLEGW

2653	RATEEMASQDESVAK	11.3	75	826.3818	2	32.804	-1.7	38 46 63 78 89 93 93 94 75 91 81 78 64 63 76	RATEEMASQDESVAK
1103	EWLQEQAAFVER	9	75	753.3721	2	15.071	-0.9	41 41 71 55 96 77 97 97 95 75 77 75	EWLQEQAAFVER
3117	FELQEI	4.5	75	778.3972	1	38.471	-1.1	90 88 82 56 78 53	FELQEI
1463	FDTPDQMEDYGLW	9.8	75	808.8301	2	18.858	-2.7	67 73 89 89 84 62 85 90 94 83 62 59 33	FDTPDQMEDYGLW
2127	FSLPML	4.5	75	707.3797	1	26.284	0.1	55 55 94 89 91 64	FSLPML
1926	MLKPVMPLK	6.7	75	528.819	2	23.865	-0.1	90 90 93 96 98 90 41 46 27	MLKPVMPLK
1134	NSMQTVSSQFR	8.2	75	642.8038	2	15.401	0.3	50 51 61 66 95 96 99 96 63 82 61	NSMQTVSSQFR
1258	VFDKEGNGTMVGAELR	12	75	861.9272	2	16.718	-0.4	57 62 56 64 95 98 91 92 84 61 61 72 85 79 82 56	VFDKEGNGTMVGAELR
1498	FLKTEGGNTVCADDL	11.2	75	791.8742	2	19.23	-0.3	82 84 94 96 93 93 74 59 78 89 50 48 60 92 26	FLKTEGGNTVCADDL
1692	SFLPMLK	5.2	75	835.4752	1	21.339	0.7	54 54 91 91 84 87 60	SFLPMLK
2553	EPGSLDVTPCAGLL	10.5	75	686.3428	2	31.578	-2.8	94 94 94 96 96 98 96 68 55 56 59 37 48 51	EPGSLDVTPCAGLL
1663	VVDTAPKGTYDDYVEGLRV	14.2	75	1049.03	2	21.041	1.3	68 69 60 69 90 96 95 92 91 87 85 94 93 91 92 58 29 29 27	VVDTAPKGTYDDYVEGLRV
2517	SAFPPDVAGNVDYK	10.5	75	740.3603	2	31.136	1.3	30 30 57 98 98 97 95 93 81 54 71 81 86 70	SAFPPDVAGNVDYK
3412	LLGSLDVTTT(+79.97)SGK	9.7	75	686.343	2	42.1	1.4	95 95 93 93 94 97 96 96 85 34 33 29 26	LLGSLDVTTT(+79.97)SGK
1348	LEGADVDQLEAV	9	75	629.8118	2	17.659	0.1	48 43 42 66 93 97 93 73 93 82 82 81	LEGADVDQLEAV
888	TLAAVSGGGDKPADAGAGK	14.2	75	821.9237	2	12.76	0.5	27 27 48 95 97 98 95 91 89 87 87 81 75 84 92 75 47 52 65	TLAAVSGGGDKPADAGAGK
2404	LLTEGNEFGR	7.5	75	568.2915	2	29.728	1.4	91 93 93 89 56 50 64 82 74 51	LLTEGNEFGR
949	EAEEQLEAVNSK	9	75	673.8257	2	13.424	0.7	26 26 94 91 74 94 97 94 93 73 88 42	EAEEQLEAVNSK
954	TLAAVSGNDKPADA	10.5	75	665.3357	2	13.481	-0.3	31 30 56 96 97 98 97 82 90 90 86 80 81 26	TLAAVSGNDKPADA
2417	EPGSLDVAPNPL	9	75	604.8116	2	29.885	0.2	91 91 92 94 96 85 83 51 48 43 67 49	EPGSLDVAPNPL
3037	FNADGVLGSSLR	9	75	618.3239	2	37.483	2.2	86 75 90 93 93 92 82 71 67 49 55 36	FNADGVLGSSLR
2173	MVAEGSAGVLGV	9	75	545.2842	2	26.839	0.3	92 92 91 73 52 48 59 73 82 75 75 78	MVAEGSAGVLGV
3178	TGFPPDVAGNVDYK	10.4	75	740.3601	2	39.231	1.1	29 29 53 98 98 95 93 92 86 60 77 78 83 66	TGFPPDVAGNVDYK
2772	LKDVLDQI	6	75	472.2761	2	34.237	-1	87 85 89 92 89 49 53 49	LKDVLDQI
1294	NAQGEQLDNLKR	8.9	75	693.3615	2	17.103	1.9	35 31 31 93 94 86 97 97 94 83 86 61	NAQGEQLDNLKR
2223	EPGSLDVPCTQLL	9.7	75	686.3433	2	27.469	-2.2	94 94 93 95 97 99 95 73 59 58 33 46 28	EPGSLDVPCTQLL
2561	NFDKVLADWK	7.4	74	618.3241	2	31.669	-0.7	62 66 87 88 92 88 68 59 64 65	NFDKVLADWK
2233	NLTEEMASGADESVAK	11.9	74	826.3777	2	27.584	0.1	42 42 75 95 89 85 86 93 85 80 84 77 70 54 54 72	NLTEEMASGADESVAK
3387	ATFQGVLEGW	7.4	74	554.2769	2	41.804	-0.2	26 92 91 60 77 79 96 96 97 26	ATFQGVLEGW
1127	LTLDGANRDGLLSK	10.4	74	736.9078	2	15.326	1.2	27 48 88 90 60 52 63 86 93 84 86 94 94 68	LTLDGANRDGLLSK
1104	MALTEQLWTNA	8.2	74	639.3115	2	15.079	-2.9	48 56 85 96 95 83 97 84 73 26 70	MALTEQLWTNA

1677	MCTVVT(+79.97)VEAV	7.4	74	1131.484	1	21.195	1.2	89 86 87 94 26 26 79 78 86 88	MCTVVT(+79.97)VEAV
1985	MDSPLAALDPTEFER	11.2	74	846.4009	2	24.562	0.1	47 36 37 85 85 96 97 95 93 79 72 76 70 70 70	MDSPLAALDPTEFER
3046	GTFPPDVANGVDYK	10.4	74	740.3594	2	37.598	0.2	31 30 57 99 99 97 94 89 54 65 81 83 86 69	GTFPPDVANGVDYK
2549	LLGSLVDTT(+79.97)PL	8.2	74	604.8113	2	31.523	-1.7	93 94 89 89 92 26 80 64 63 80 42	LLGSLVDTT(+79.97)PL
1409	LGLNSAPSFR	7.4	74	531.29	2	18.304	-0.9	75 86 94 90 93 86 84 46 44 39	LGLNSAPSFR
2944	LATTTDLADASR	8.9	74	412.2143	3	36.345	0.8	79 77 80 67 67 65 73 84 86 77 79 51	LATTTDLADASR
1438	TLEDQLSELK	7.4	74	1175.617	1	18.601	0.9	81 81 86 89 75 92 64 55 70 44	TLEDQLSELK
4257	GEVDDSVQEAR	8.2	74	602.7754	2	52.518	-0.3	74 74 74 92 86 70 69 68 73 78 52	GEVDDSVQEAR
1138	KKLESDLVRA	7.4	74	579.8453	2	15.448	-0.5	26 82 78 76 81 83 91 75 80 64	KKLESDLVRA
1167	LTMFGEK	5.2	74	413.2117	2	15.753	-1.6	93 93 98 26 72 80 54	LTMFGEK
1582	EPGSLDMGTLSSPI	10.4	74	702.3377	2	20.152	-3	89 90 80 79 88 93 89 56 55 51 52 68 68 73	EPGSLDMGTLSSPI
3221	MVAEGSAGALLA	8.9	74	545.2843	2	39.762	0.6	96 96 89 80 61 56 59 69 81 80 59 59	MVAEGSAGALLA
3561	LQDLVDKL	5.9	74	472.2765	2	43.91	-0.1	84 77 96 97 94 51 53 38	LQDLVDKL
2590	EFLQEL	4.4	74	778.3969	1	32.032	-1.6	95 90 74 54 77 52	EFLQEL
2137	YPAGTETLVDLMAW	10.4	74	783.8776	2	26.398	-1.9	90 92 83 84 90 90 80 69 75 92 74 41 37 33	YPAGTETLVDLMAW
3364	LKVLDDQI	5.9	74	472.2768	2	41.518	0.5	87 87 85 77 88 52 61 52	LKVLDDQI
2158	MLDLTPF	5.2	74	836.4225	1	26.659	0.4	77 75 78 90 85 84 26	MLDLTPF
4106	GTFPPDVAGNVDYK	10.4	74	740.3588	2	50.589	-0.7	33 33 58 97 97 97 95 85 68 54 86 79 83 66	GTFPPDVAGNVDYK
1198	VDLLKNGV	5.9	74	857.5092	1	16.083	0.2	26 93 93 92 84 64 64 72	VDLLKNGV
1911	QAGLLGTLEM(+15.99)I	8.1	74	581.3127	2	23.706	-0.2	48 48 57 70 94 88 88 92 87 90 46	QAGLLGTLEM(+15.99)I
1452	WSTMLPKL	5.9	74	488.271	2	18.738	1.6	78 78 76 81 83 73 76 43	WSTMLPKL
3273	KMGLSSLADASR	8.9	74	412.5515	3	40.412	-1	26 69 65 70 80 92 86 86 89 80 81 55	KMGLSSLADASR
2892	QFTAGVLWADK	8.1	74	618.3242	2	35.689	-0.6	47 49 62 76 85 87 93 92 78 78 61	QFTAGVLWADK
3737	LLTEEGNFGR	7.4	74	568.2909	2	46.025	0.3	93 93 93 95 65 54 51 76 67 46	LLTEEGNFGR
747	KQVETETEQLK	8.1	74	666.854	2	11.115	0.3	78 70 94 96 98 95 57 55 47 73 46	KQVETETEQLK
3379	STELQEAEGVPV	8.9	74	629.8118	2	41.7	0.2	79 85 83 77 67 92 70 46 57 68 77 77	STELQEAEGVPV
1219	KEASGPLNF	6.6	74	481.7504	2	16.302	-0.6	40 40 85 90 84 72 71 87 90	KEASGPLNF
2863	MLKVCDPF	5.9	74	952.4637	1	35.329	0.7	93 91 68 51 47 69 83 83	MLKVCDPF
2537	LLTEGNEFGR	7.4	74	568.2904	2	31.374	-0.5	89 90 90 90 58 49 63 72 80 51	LLTEGNEFGR
3714	EFLQEI	4.4	74	778.3984	1	45.747	0.5	85 79 77 58 85 56	EFLQEI
2617	ATFGAGVLEGW	8.1	74	554.2771	2	32.366	0.1	26 89 87 86 63 46 56 90 93 94 75	ATFGAGVLEGW

741	NLGPAGGHDTAGAR	10.3	74	647.3182	2	11.039	-0.1	51 50 83 74 60 67 95 93 82 81 88 66 62 73	NLGPAGGHDTAGAR
1698	LREPSLEL	5.9	74	478.7741	2	21.408	-0.1	63 61 74 94 94 74 95 30	LREPSLEL
2070	QLGEVEDLMVDVERA	11	74	851.919	2	25.587	-0.4	32 33 64 71 87 91 95 91 82 84 97 89 65 69 47	QLGEVEDLMVDVERA
957	TCGANERDTLL	8.1	74	596.7857	2	13.519	1.2	54 59 88 89 82 88 81 58 77 90 38	TCGANERDTLL
966	NLEVTVK	5.2	74	802.4663	1	13.609	-0.7	26 99 98 98 74 70 47	NLEVTVK
4072	FELQEI	4.4	74	778.3967	1	50.169	-1.8	94 92 88 50 69 46	FELQEI
3846	EFLQEI	4.4	74	778.3987	1	47.349	0.9	93 88 88 53 68 49	EFLQEI
3054	EFLQEL	4.4	74	778.3978	1	37.693	-0.4	90 85 82 53 80 48	EFLQEL
1683	SFLPMLK	5.2	74	418.2411	2	21.259	0.3	85 85 96 67 63 64 52	SFLPMLK
1417	MTLVTAGGEV	7.4	74	977.4969	1	18.379	-0.3	94 87 88 26 79 73 77 67 67 73	MTLVTAGGEV
2908	MELDPMSSSSAEAVSK	11.8	74	834.8757	2	35.895	-0.8	46 45 73 81 83 89 97 98 58 57 55 80 70 64 82 89	MELDPMSSSSAEAVSK
3491	LLGSLTLPS(+79.97)DL	8.1	74	604.8127	2	43.055	0.6	92 92 92 93 93 87 84 91 26 26 26	LLGSLTLPS(+79.97)DL
771	TEAPLNPK	5.9	73	435.2397	2	11.4	-0.7	91 92 96 84 85 84 26 26	TEAPLNPK
3132	FLAGMNGGTVEKDDL	11	73	783.8766	2	38.65	-0.5	77 78 89 93 92 72 59 64 80 81 68 66 72 78 26	FLAGMNGGTVEKDDL
2645	AMLAGGASEAVL	8.8	73	545.2839	2	32.709	-0.2	63 65 77 78 77 51 55 62 80 86 92 88	AMLAGGASEAVL
3401	CDESADKVEDFTVK	10.3	73	793.354	2	41.965	-2.7	26 90 89 81 82 79 77 83 96 97 94 44 52 30	CDESADKVEDFTVK
2496	FGGDAGVLWVSK	8.8	73	618.3257	2	30.869	1.9	26 54 71 81 79 83 86 86 93 93 96 26	FGGDAGVLWVSK
3081	EPGSLDVTTNPNK	9.5	73	686.343	2	38.025	2.8	95 95 94 96 97 98 96 93 63 31 31 32 26	EPGSLDVTTNPNK
2694	SPNLMDF	5.1	73	823.3674	1	33.303	2.4	82 82 75 77 77 89 26	SPNLMDF
2737	LLTEEGNFGR	7.3	73	568.2922	2	33.825	2.7	91 90 91 94 66 62 50 68 69 47	LLTEEGNFGR
1163	DAQLHLDDAVR	8.1	73	626.8174	2	15.707	-0.3	46 46 43 94 95 95 96 95 70 74 47	DAQLHLDDAVR
2514	KMELDDLSSNMEAVSK	11.7	73	898.9233	2	31.092	-0.7	71 71 82 94 97 97 97 98 91 68 71 59 34 31 45 60	KMELDDLSSNMEAVSK
3774	GTFPPDVAGNVDYK	10.3	73	740.3593	2	46.471	0	30 30 55 97 97 95 93 78 75 60 84 77 83 65	GTFPPDVAGNVDYK
2682	TAFAGPPGFGSV	8.8	73	554.2774	2	33.167	0.7	26 26 94 85 81 76 62 50 90 94 95 95	TAFAGPPGFGSV
2848	GTFPPDVAGNVDYK	10.2	73	740.3593	2	35.157	-0.1	34 33 61 98 98 97 93 91 76 45 55 80 87 71	GTFPPDVAGNVDYK
3249	EFLQEL	4.4	73	778.3964	1	40.113	-2.1	95 91 87 48 73 43	EFLQEL
4187	WVDDADQEVK	7.3	73	602.7768	2	51.601	-1.4	26 26 92 77 71 80 80 90 93 90	WVDDADQEVK
825	QEAECATSKQEAK	9.5	73	711.8286	2	12.056	-2.1	48 56 59 90 89 85 85 78 68 52 83 85 68	QEAECATSKQEAK
1242	NQLADLM(+15.99)R	5.8	73	488.749	2	16.539	2.7	36 36 89 93 92 87 89 58	NQLADLM(+15.99)R
2595	MEAGMVTELDQSKK	10.2	73	783.8774	2	32.096	-1.6	72 74 89 94 97 95 91 82 73 78 44 50 51 26	MEAGMVTELDQSKK
2393	FELQEI	4.4	73	778.3967	1	29.589	-1.7	93 89 80 51 78 44	FELQEI

1246	QANDKSLELKAK	8.8	73	672.8777	2	16.584	0.1	51 44 43 93 94 68 64 92 95 89 90 47	QANDKSLELKAK
2458	EFLQEL	4.4	73	778.3976	1	30.404	-0.5	91 82 78 53 82 49	EFLQEL
2128	EFLEQLL	5.1	73	891.4829	1	26.293	0.8	95 95 91 84 52 63 26	EFLEQLL
2347	ECAKEATLL	6.6	73	977.497	1	29.011	-0.2	70 75 75 69 64 63 64 80 94	ECAKEATLL
1111	QQNLESEVDNEK	8.8	73	716.8315	2	15.156	0.5	42 41 43 61 90 91 92 97 96 72 84 61	QQNLESEVDNEK
1269	LQGEVEDI	5.8	73	902.4459	1	16.842	-0.7	81 68 73 71 76 89 95 26	LQGEVEDI
1405	YFSTVDDLEGSLEKEKK	12.4	73	994.496	2	18.255	-0.5	46 35 35 71 96 99 98 97 93 88 84 83 78 61 57 65 47	YFSTVDDLEGSLEKEKK
1800	HLELVDNPANTLGNER	11.7	73	896.4512	2	22.476	-1.8	90 87 87 96 71 70 66 45 45 51 84 92 89 62 76 48	HLELVDNPANTLGNER
3432	NFAWLVGATEK	8	73	618.3238	2	42.346	-1.2	75 83 96 97 94 91 85 71 37 35 32	NFAWLVGATEK
3033	LKDVLDQI	5.8	73	472.276	2	37.439	-1.1	85 79 83 87 90 49 56 49	LKDVLDQI
4090	GFGDAGVLWVSK	8.7	73	618.3247	2	50.39	0.3	35 71 83 72 69 76 79 78 92 92 93 26	GFGDAGVLWVSK
682	ETNSVCTR	5.8	73	909.4067	1	10.296	-3	26 96 87 91 83 68 87 40	ETNSVCTR
2451	ASFPPDVANGVDYK	10.2	73	740.3591	2	30.315	-0.2	38 48 76 97 98 98 95 79 45 52 65 77 82 63	ASFPPDVANGVDYK
3366	AELGEQLDNLQR	8.7	73	693.3555	2	41.538	1.3	45 51 77 70 71 74 93 96 78 87 66 58	AELGEQLDNLQR
3276	EPGSLVDPAPNL	8.7	73	604.8112	2	40.442	-0.5	92 92 91 92 94 26 90 81 71 40 38 60	EPGSLVDPAPNL
2637	LKDVVGAEL	6.5	73	472.2768	2	32.614	0.5	87 82 82 72 46 49 60 83 88	LKDVVGAEL
2151	ESFLPML	5.1	73	836.4218	1	26.579	-0.6	26 80 80 96 84 85 54	ESFLPML
859	KS(+79.97)VETDALKGV	8	73	613.8036	2	12.427	-2.3	45 45 45 96 96 95 94 92 61 61 66	KS(+79.97)VETDALKGV
2320	NLFESFLPMLK	8	73	669.8599	2	28.678	-0.1	63 73 91 69 67 84 97 79 64 65 40	NLFESFLPMLK
1936	AGLLGTLENKCA	8.7	73	1189.625	1	23.98	0.2	72 72 88 86 81 82 86 83 57 54 65 38	AGLLGTLENKCA
3629	LKDVLDQL	5.8	73	472.2764	2	44.714	-0.4	75 73 93 95 90 48 54 48	LKDVLDQL
2322	QVTEEMASQDESVAK	10.9	73	826.3771	2	28.698	-0.7	31 32 60 91 97 96 96 93 71 86 77 70 61 55 63	QVTEEMASQDESVAK
2681	EPGSLTLTFPF	8	73	604.8117	2	33.155	-3	93 92 90 90 92 90 69 64 61 26 26	EPGSLTLTFPF
1548	TLDDLQAEEDKVNTLTK	12.3	72	966.9911	2	19.784	-0.5	36 36 49 85 87 73 96 97 94 67 65 81 72 83 78 79 45	TLDDLQAEEDKVNTLTK
969	KLEEQEAL	5.8	72	480.2559	2	13.643	0.1	76 75 91 91 58 67 74 44	KLEEQEAL
3099	LQVDLDKL	5.8	72	472.2767	2	38.245	0.4	85 74 83 70 86 66 69 43	LQVDLDKL
2933	MFQLVASNADTGAEL	10.9	72	783.8763	2	36.204	-0.9	26 80 68 88 92 62 56 49 59 83 91 83 76 82 83	MFQLVASNADTGAEL
737	HHPAGGATSAGA	8.7	72	517.2436	2	10.983	-0.9	38 38 58 89 94 88 91 93 85 80 85 26	HHPAGGATSAGA
1023	MPVSPTSEVDNEKR	10.1	72	530.2606	3	14.246	2.3	62 62 62 85 78 78 82 88 97 97 69 51 51 42	MPVSPTSEVDNEKR
4131	EPTSSGVVFGR	8	72	568.2902	2	50.9	-0.9	26 96 96 96 67 57 57 58 86 85 65	EPTSSGVVFGR
3854	EPGSLDVPAPQV	8.7	72	604.8106	2	47.458	-1.4	92 92 91 92 93 26 81 81 70 58 42 44	EPGSLDVPAPQV

1521	FGTPPDVANGVDYK	10.1	72	740.3599	2	19.485	0.8	31 40 45 93 98 96 92 81 49 59 76 84 89 73	FGTPPDVANGVDYK
2999	LLTEEGNFGR	7.2	72	568.2911	2	37.023	0.6	91 91 90 92 74 64 52 62 61 40	LLTEEGNFGR
3209	LLGSLPLTS(+79.97)DL	8	72	604.8113	2	39.614	-1.6	95 95 93 94 96 70 64 61 70 26 26	LLGSLPLTS(+79.97)DL
2759	SPNLMDF	5.1	72	823.3686	1	34.086	3.9	79 78 71 80 80 89 26	SPNLMDF
3478	EPGSLDVPM(+15.99)GQLL	9.4	72	686.3429	2	42.901	-2.8	91 91 91 94 96 98 97 72 34 34 39 64 29	EPGSLDVPM(+15.99)GQLL
1276	MAVFGGVTVW	7.2	72	533.7745	2	16.913	2.5	97 95 95 84 70 83 70 71 26 26	MAVFGGVTVW
1135	QYGQTVSSQM(+15.99)R	7.9	72	650.8011	2	15.41	0.1	32 32 34 42 92 95 99 96 92 95 79	QYGQTVSSQM(+15.99)R
3510	SPNLMDF	5.1	72	823.3675	1	43.282	2.5	77 77 77 86 77 82 26	SPNLMDF
2511	FEPVPVELDGKK	8.7	72	679.3719	2	31.06	0.4	96 96 96 97 82 78 71 62 50 50 55 26	FEPVPVELDGKK
4042	EPGSLVDPGQPL	8.7	72	604.8116	2	49.791	0.2	93 93 93 95 96 26 81 53 53 40 59 78	EPGSLVDPGQPL
1060	CPERSRKY	5.8	72	519.762	2	14.636	1.8	26 26 88 79 79 91 96 88	CPERSRKY
1085	EVGLSKDDLR	7.2	72	566.3043	2	14.887	0.9	31 33 55 72 91 90 90 89 93 72	EVGLSKDDLR
1005	AAEDLKEAGACV	8.7	72	588.7828	2	14.037	1.7	66 71 73 93 95 71 56 51 62 83 69 70	AAEDLKEAGACV
1120	WAGEALEEGSLK	8.6	72	645.3225	2	15.256	0.5	34 39 53 62 89 84 88 95 89 83 68 75	WAGEALEEGSLK
3309	FASPPDVAGNVDYK	10.1	72	740.3597	2	40.852	0.5	36 41 41 93 26 95 93 92 90 70 86 84 86 69	FASPPDVAGNVDYK
1792	SYELPDGGAVLTLGNER	12.2	72	895.9497	2	22.393	0.2	51 50 71 80 95 93 85 43 39 57 96 98 97 91 56 70 43	SYELPDGGAVLTLGNER
967	M(+15.99)AEVVAGTA	6.5	72	864.4125	1	13.616	-0.8	71 71 61 74 91 83 80 86 26	M(+15.99)AEVVAGTA
1642	YNSKVMNDHLECTR	10.1	72	855.3888	2	20.822	-1.8	79 65 75 73 52 52 70 80 87 87 90 75 76 41	YNSKVMNDHLECTR
2872	FAESADKVEDFEQA	10.1	72	793.3536	2	35.443	-1	26 84 83 83 91 92 91 93 97 99 26 42 50 42	FAESADKVEDFEQA
2615	LLGSLLTPS(+79.97)DI	7.9	72	604.8118	2	32.344	-0.8	95 94 92 93 96 87 76 75 26 26 26	LLGSLLTPS(+79.97)DI
814	LAGGANPTNKEVR	9.3	72	663.86	2	11.923	0.4	37 36 47 49 64 86 89 79 73 88 88 96 96	LAGGANPTNKEVR
1367	EYEGQAELEGSLKEA	10.8	72	826.8868	2	17.859	1	26 90 69 91 79 95 95 93 91 82 77 76 36 36 33	EYEGQAELEGSLKEA
1054	WVDDSVQEAGVNAEEK	11.5	72	888.4102	2	14.566	2.7	26 26 95 93 87 87 76 93 92 70 66 48 60 79 81 61	WVDDSVQEAGVNAEEK
3441	ASFPPDVAGVNDYK	10.1	72	740.3611	2	42.459	2.4	30 41 59 96 99 98 95 91 76 58 55 68 73 59	ASFPPDVAGVNDYK
1366	GM(+15.99)PVPAPMVA	7.2	72	985.486	1	17.851	1.5	70 70 70 69 69 63 65 73 81 83	GM(+15.99)PVPAPMVA
3630	LLGSLTLPS(+79.97)DI	7.9	72	604.8114	2	44.723	-1.5	94 95 93 94 95 80 71 82 26 26 26	LLGSLTLPS(+79.97)DI
937	LAEKDEEMEQLKR	9.3	72	809.9099	2	13.293	1.2	67 59 63 81 96 99 26 97 96 61 70 63 49	LAEKDEEMEQLKR
1630	LTRQVDDLEGSLEQEQKL	12.9	72	1051.041	2	20.689	-1.5	54 39 39 50 93 98 98 97 96 93 91 91 88 61 83 35 44 31	LTRQVDDLEGSLEQEQKL
3333	AM(+15.99)ESADKVEDFEAK	10	72	793.3539	2	41.144	-2.8	71 76 76 85 89 92 91 93 97 99 26 35 38 31	AM(+15.99)ESADKVEDFEAK
2791	MVAEGAGGTLLA	8.6	72	545.2841	2	34.472	0.1	94 93 93 92 80 77 49 51 56 79 45 46	MVAEGAGGTLLA
1623	QQADSVAELEGQLQTLQR	12.9	72	1007.514	2	20.613	0.2	52 52 83 94 99 98 97 98 97 73 73 73 91 36 37 46 49 34	QQADSVAELEGQLQTLQR

2482	FNWGVLDAVSK	7.9	72	412.552	3	30.702	-0.2	42 57 57 76 76 86 85 77 73 73 79	FNWGVLDAVSK
2677	MELDVESSCAAEAVSK	11.5	72	834.8765	2	33.101	0.1	51 50 72 68 68 79 92 80 63 63 66 70 70 69 86 89	MELDVESSCAAEAVSK
2439	LQDVLDKL	5.7	72	472.2761	2	30.164	-1	71 59 90 94 90 60 62 43	LQDVLDKL
607	MQGQEDENGSHV	8.6	72	665.7697	2	9.31	-0.6	39 34 69 56 88 96 89 67 76 75 82 82	MQGQEDENGSHV
1216	NQTALAQSTPF	7.9	72	589.2955	2	16.276	-0.7	46 44 62 64 85 96 75 90 96 98 26	NQTALAQSTPF
2028	NKLLEKWVNF	7.2	72	645.8656	2	25.076	2.7	72 71 95 98 96 93 43 36 46 60	NKLLEKWVNF
3798	FNELVKGDW	6.4	72	554.2767	2	46.764	-0.6	70 60 85 93 77 67 70 92 26	FNELVKGDW
1590	EPGSLECALPDVGV	10	72	693.3334	2	20.232	-1.4	93 94 94 95 96 97 87 86 69 61 38 28 28 28	EPGSLECALPDVGV
1714	SATNDLQEGLEAVSPAQK	12.9	71	929.4631	2	21.581	0.1	27 30 33 62 88 91 84 94 95 98 96 92 92 88 66 50 51 40	SATNDLQEGLEAVSPAQK
1157	TDLAAALAK	6.4	71	873.5042	1	15.652	0.2	61 63 83 88 96 95 75 50 26	TDLAAALAK
3355	SPNLMDF	5	71	823.3678	1	41.403	2.9	81 81 75 72 72 89 26	SPNLMDF
1924	CTGTKAGPVFDV	8.6	71	1194.58	1	23.846	-2	52 58 87 91 69 45 53 82 85 78 77 71	CTGTKAGPVFDV
4188	LTEADGGFGR	7.1	71	511.7481	2	51.612	-1.1	66 68 87 56 46 74 73 83 88 68	LTEADGGFGR
1852	LKMPVCGVPKL	7.8	71	592.848	2	23.046	-0.5	67 71 93 97 92 71 66 55 64 63 42	LKMPVCGVPKL
4077	WNGFVLADVSK	7.8	71	412.5519	3	50.232	-0.5	45 44 57 79 91 84 79 88 93 93 26	WNGFVLADVSK
1247	EWTEKLGETGKSHL	10	71	807.908	2	16.593	-2.1	37 37 65 63 87 88 92 94 88 80 77 77 80 26	EWTEKLGETGKSHL
862	KVQHELEEAEER	8.6	71	748.872	2	12.467	2	65 77 61 97 99 99 26 26 26 95 95 82	KVQHELEEAEER
2793	MEAGTEVELSLMTR	10	71	783.8776	2	34.505	-1.5	78 78 82 86 95 92 82 68 64 61 61 60 57 26	MEAGTEVELSLMTR
2146	LLGSLVDTT(+79.97)PL	7.8	71	604.8116	2	26.515	-1.1	91 87 79 80 92 26 86 71 65 65 36	LLGSLVDTT(+79.97)PL
1000	LVDSMAGA	5.7	71	763.3674	1	13.976	2.6	26 93 93 93 87 74 75 26	LVDSMAGA
2868	LLTEEGGGFGR	7.8	71	568.2914	2	35.392	1.2	93 93 93 95 78 69 48 32 51 75 51	LLTEEGGGFGR
1704	LVNASVLPDGQFLDNK	11.4	71	865.4595	2	21.468	-0.1	34 34 34 87 95 99 98 89 73 46 42 87 88 86 72 67	LVNASVLPDGQFLDNK
3976	LLGSLSGGDFGSV	9.3	71	604.8106	2	48.973	-1.4	91 93 88 90 94 91 69 48 54 64 46 46 46	LLGSLSGGDFGSV
1899	NSAMKGVGDSKVAF	10	71	705.8542	2	23.577	-2.4	44 45 51 55 54 65 82 83 82 83 83 85 89 87	NSAMKGVGDSKVAF
816	TQQVEELKR	6.4	71	565.812	2	11.94	0.3	44 36 51 97 98 95 93 94 26	TQQVEELKR
1458	MADLEKEEA	6.4	71	1035.469	1	18.8	2.6	95 86 85 78 74 62 62 68 26	MADLEKEEA
1895	MPNAALAPASLWVK	10	71	734.9036	2	23.525	1.2	96 96 91 98 98 94 84 69 52 46 54 38 39 33	MPNAALAPASLWVK
1091	AYGEAAL	5	71	694.3408	1	14.947	0.3	39 63 68 77 74 85 89	AYGEAAL
1339	TLLTTNPY	5.7	71	922.4863	1	17.562	-1.9	41 41 84 95 94 94 26 88	TLLTTNPY
3840	FTGPDPVAGNVDYK	9.9	71	740.3601	2	47.279	1.1	34 45 60 93 95 90 89 80 77 55 61 62 82 63	FTGPDPVAGNVDYK
3397	FVDKDANGTVMGAEL	10.7	71	783.879	2	41.915	2.6	63 62 61 65 68 45 39 47 85 90 94 87 79 85 87	FVDKDANGTVMGAEL

940	LTENWNVF	5.7	71	1022.492	1	13.333	-1.9	80 83 92 89 79 54 60 26	LTENWNVF
1633	GKKNSNPKGTLDDYVEGLR	13.5	71	1046.043	2	20.72	-2.1	26 46 64 77 89 44 51 90 95 92 90 92 97 85 81 88 45 55 31	GKKNSNPKGTLDDYVEGLR
769	AEDLDAAQAAF	7.8	71	561.2606	2	11.368	2.6	26 94 93 93 53 51 64 79 96 99 26	AEDLDAAQAAF
1980	LKDVLDQI	5.7	71	472.2769	2	24.499	0.6	86 82 86 89 91 42 47 42	LKDVLDQI
724	CRGQEDESMCR	7.8	71	657.2557	2	10.822	0.7	80 83 83 67 94 95 77 77 67 26 26	CRGQEDESMCR
3505	FNDKVLADWK	7.1	71	618.3245	2	43.219	-0.1	77 61 74 58 61 87 85 67 68 66	FNDKVLADWK
1291	QEM(+15.99)EEEAGEAKAELK	10.6	71	854.3885	2	17.064	-2.6	51 60 51 26 26 89 82 81 88 95 89 87 83 88 60	QEM(+15.99)EEEAGEAKAELK
709	LFS(+79.97)GPM(+15.99)GK	5.7	71	466.7003	2	10.629	-1.4	26 91 91 94 82 61 71 45	LFS(+79.97)GPM(+15.99)GK
1011	LLDPEATTRKK	7.8	71	636.3683	2	14.104	-1.8	97 97 96 98 88 66 65 69 47 26 26	LLDPEATTRKK
3383	FELQEI	4.3	71	778.3974	1	41.752	-0.9	85 82 81 50 79 45	FELQEI
4065	LLTEGNEFGR	7.1	71	568.2906	2	50.083	-0.1	91 93 92 92 63 41 45 74 68 45	LLTEGNEFGR
1771	EVVMKPPF	5.7	71	473.7571	2	22.165	0.5	26 77 68 74 84 85 76 71	EVVMKPPF
799	DVDLAESA	5.7	71	819.3729	1	11.734	-0.1	26 26 93 86 82 78 81 90	DVDLAESA
993	DASERVGL	5.7	71	846.4334	1	13.895	2.2	93 77 75 90 76 62 54 36	DASERVGL
1122	LGNSAGGFNK	7.1	71	482.7478	2	15.274	3.9	61 61 79 96 97 95 68 48 49 50	LGNSAGGFNK
1121	SLDDKEELDATW	8.5	71	711.3265	2	15.264	2	38 38 70 49 47 49 84 96 96 95 96 85	SLDDKEELDATW
1572	LEELEEELEAERAA	9.9	71	815.8943	2	20.039	0.5	37 37 60 77 79 90 26 97 96 96 94 80 76 35	LEELEEELEAERAA
590	RHSHTAHY(+79.97)SW	7.1	71	681.2818	2	9.069	2.2	26 72 77 76 70 74 90 95 95 26	RHSHTAHY(+79.97)SW
1533	MPAVLSGGTMTYPGLADR	12.7	71	918.9529	2	19.623	0.2	28 31 40 56 95 97 96 92 88 72 77 96 91 69 64 64 65 42	MPAVLSGGTMTYPGLADR
1025	FGMMSAHAA	6.4	71	922.3882	1	14.262	-3	67 70 88 94 84 84 91 26 26	FGMMSAHAA
3956	LKVLDDQL	5.7	71	472.2757	2	48.725	-1.7	86 86 84 77 85 45 53 45	LKVLDDQL
797	AEETTYEF	5.7	71	495.2083	2	11.712	-0.4	26 88 85 85 83 81 87 26	AEETTYEF
1739	LLVGTGAAVDSPTAAK	11.3	71	735.9135	2	21.822	2.5	90 90 82 79 68 68 79 81 78 83 83 90 50 32 31 37	LLVGTGAAVDSPTAAK
2412	MTAGASLVEV	7.1	71	977.4979	1	29.821	0.7	96 96 95 86 81 83 52 43 43 26	MTAGASLVEV
1055	ALLGSPSDDDFLCPR	10.6	71	803.3845	2	14.577	2.4	31 48 72 90 94 98 97 93 99 94 86 59 32 33 26	ALLGSPSDDDFLCPR
2661	LFAGMVETGNGKDEV	10.6	70	783.877	2	32.909	-0.1	61 67 93 96 97 96 83 74 74 59 65 65 43 48 30	LFAGMVETGNGKDEV
3574	FEPPFAKHRTK	7.8	70	679.371	2	44.064	-2	95 95 91 90 77 77 88 57 33 40 26	FEPPFAKHRTK
1725	GTYDDYVEGLRV	8.5	70	693.8304	2	21.694	0	29 40 43 81 92 97 97 93 86 64 71 48	GTYDDYVEGLRV
2869	FVDAGGSGGTVVMGAEL	12	70	783.8773	2	35.402	0.3	66 72 69 43 41 48 50 63 68 80 87 97 95 81 66 80 81	FVDAGGSGGTVVMGAEL
970	AEDLGAEKAMA	7.7	70	553.2633	2	13.649	0.1	26 97 96 95 57 39 40 69 90 92 70	AEDLGAEKAMA
4006	FNELVGKDW	6.3	70	554.277	2	49.343	-0.1	70 62 91 93 57 43 46 90 76	FNELVGKDW

1125	NLAEKELL	5.6	70	465.2694	2	15.312	1.4	34 34 77 91 91 92 96 43	NLAEKELL
1865	EPLGSLDVPAPNLY	9.8	70	742.8859	2	23.201	1	26 96 94 94 95 96 98 98 98 42 40 33 36 31	EPLGSLDVPAPNLY
1336	VQLELNQLK	6.3	70	542.8206	2	17.538	-1.9	45 42 96 97 97 87 59 63 42	VQLELNQLK
1553	ELLSEGTLEHEESQLL	11.2	70	913.9543	2	19.84	-0.3	27 30 40 59 88 81 82 93 96 97 93 87 84 53 78 30	ELLSEGTLEHEESQLL
1489	ECVAVDDLSSDMKAVSK	11.9	70	898.925	2	19.13	1.2	82 81 80 76 79 95 98 96 95 51 39 40 41 74 51 51 56	ECVAVDDLSSDMKAVSK
1419	ASSEAEDLRHQPI	9.1	70	726.8582	2	18.408	0.9	27 41 57 94 97 96 95 93 90 65 38 69 46	ASSEAEDLRHQPI
3552	CS(+79.97)GLGTSL	5.6	70	409.1621	2	43.789	1	26 92 91 92 77 54 52 73	CS(+79.97)GLGTSL
3165	LKDVLDQL	5.6	70	472.2763	2	39.068	-0.6	85 80 86 89 93 39 47 39	LKDVLDQL
1218	QAFTQQVEELQGV	9.1	70	738.8694	2	16.293	-0.9	54 68 75 89 74 59 81 84 90 85 44 50 52	QAFTQQVEELQGV
2331	LFAGMVGATNDKDEV	10.5	70	783.8773	2	28.82	0.3	59 65 91 95 97 96 89 74 63 61 66 65 46 50 29	LFAGMVGATNDKDEV
3696	EPGSLASTGYKV	8.4	70	604.8109	2	45.528	-0.9	90 90 89 91 90 65 59 87 71 40 35 29	EPGSLASTGYKV
2037	ELLKPPLALPL	7.7	70	602.39	2	25.193	1.5	40 40 73 57 59 74 75 80 85 87 96	ELLKPPLALPL
837	QVETEQTELK	7	70	602.8065	2	12.191	0	63 62 94 92 90 61 61 56 73 45	QVETEQTELK
2081	NLEVTVK	4.9	70	401.7368	2	25.724	-0.5	26 99 93 93 66 64 46	NLEVTVK
2425	MELDDLSSNMEAVSK	10.5	70	834.875	2	29.982	-1.7	47 47 73 84 95 95 96 56 45 57 63 61 60 79 86	MELDDLSSNMEAVSK
2279	MMQSFLDLLVK	7.7	70	662.8528	2	28.166	-1.6	76 75 72 67 70 85 71 71 65 67 46	MMQSFLDLLVK
2100	DPALVELLK	6.3	70	997.5925	1	25.958	-0.2	26 78 83 88 98 96 65 57 34	DPALVELLK
1174	QDLGKML	4.9	70	402.7172	2	15.829	-1.4	26 93 93 94 71 65 44	QDLGKML
1635	ALEDGALSEL	7	70	1017.511	1	20.752	1.3	42 46 63 81 75 71 81 80 84 72	ALEDGALSEL
3461	MEAGMVGATTKKDEV	10.5	70	783.8769	2	42.695	-2.3	73 69 86 90 97 96 88 84 81 56 65 52 36 39 28	MEAGMVGATTKKDEV
2356	SPNLMDF	4.9	70	823.3681	1	29.13	3.3	70 68 69 82 81 90 26	SPNLMDF
1177	WLPDGAGFLDNKKALCK	11.9	70	938.4928	2	15.855	-0.1	82 88 72 69 57 48 64 88 94 94 71 79 90 68 42 43 31	WLPDGAGFLDNKKALCK
1863	M(+15.99)S(+79.97)SVAELWQLATGLK	10.5	70	865.4169	2	23.179	2	26 74 76 76 81 90 94 78 54 68 68 56 55 61 83	M(+15.99)S(+79.97)SVAELWQLATGLK
2307	LQDVLDLK	5.6	70	472.2764	2	28.52	-0.3	80 67 91 92 80 50 54 41	LQDVLDLK
981	EADVGGYSK	6.3	70	463.2167	2	13.763	0.1	26 98 98 95 89 83 42 56 34	EADVGGYSK
2712	MVANRSGAQR	7	70	545.2838	2	33.519	2.1	97 97 85 74 84 76 45 42 41 51	MVANRSGAQR
1711	FGGTAAAEPTGGF	9.1	70	1182.543	1	21.54	0.5	29 67 82 88 75 67 65 77 75 64 62 70 79	FGGTAAAEPTGGF
3141	CRGSTVLADVSK	8.4	70	412.5522	3	38.769	0.7	37 42 57 63 70 81 89 87 90 95 95 26	CRGSTVLADVSK
1638	TMKAVSVHPTLENEM(+15.99)Y	11.1	70	933.4431	2	20.774	0.9	56 56 77 88 85 86 86 62 75 78 88 65 50 60 68 26	TMKAVSVHPTLENEM(+15.99)Y
2429	GFGAEGLVGAVMK	9.1	70	618.3248	2	30.037	-2.4	30 65 85 93 65 61 84 81 82 76 63 73 42	GFGAEGLVGAVMK
1649	NYAGGAEELRSELYYR	11.1	70	945.9506	2	20.896	-2.1	48 51 81 89 95 97 99 94 88 75 60 61 75 30 31 30	NYAGGAEELRSELYYR

2931	ESFLPMLK	5.6	70	482.7622	2	36.184	0.1	26 77 77 92 83 76 77 46	ESFLPMLK
3699	YPEDAQPGKGCR	8.4	70	660.8039	2	45.572	0.4	90 90 86 74 74 69 65 69 73 60 55 26	YPEDAQPGKGCR
1752	NMKAAHLVGAT(+79.97)FAAPK	11.1	70	853.9254	2	21.962	-0.6	40 41 50 82 81 74 77 76 65 69 83 88 86 60 60 72	NMKAAHLVGAT(+79.97)FAAPK
1836	EFLDF	3.5	70	670.3086	1	22.865	0.5	98 98 98 26 26	EFLDF
1971	VTNFGLVSGLDKW	9	70	479.2573	3	24.401	-0.4	47 47 46 60 86 95 97 93 89 81 54 57 46	VTNFGLVSGLDKW
1828	EFLDF	3.5	69	670.3085	1	22.785	0.5	98 98 98 26 26	EFLDF
1416	EFPWMPVPVKK	7.6	69	679.369	2	18.372	-2.1	96 96 96 65 72 55 89 26 55 68 39	EFPWMPVPVKK
1942	WGDFVLADVSK	7.6	69	412.8804	3	24.053	0.5	49 45 41 47 84 95 93 93 93 92 26	WGDFVLADVSK
2728	FVDQRNMGVMGANK	9.7	69	783.877	2	33.722	-3	70 70 54 41 65 57 56 89 93 94 82 60 65 70	FVDQRNMGVMGANK
2345	TM(+15.99)LHDGNTAEMSK	9	69	725.8205	2	28.99	2.5	62 65 90 88 83 78 54 51 55 86 61 79 42	TM(+15.99)LHDGNTAEMSK
2357	FNESFLPLMKVV	8.3	69	712.3856	2	29.14	-0.9	68 62 87 85 88 96 58 37 37 89 93 26	FNESFLPLMKVV
3520	FTAGAGVLEGW	7.6	69	554.2774	2	43.404	0.7	26 82 80 70 51 57 75 83 86 87 62	FTAGAGVLEGW
4100	YLPGEEVVVPGAK	9	69	679.3715	2	50.516	-0.3	85 85 85 62 56 66 71 89 89 50 50 51 57	YLPGEEVVVPGAK
2646	MTLVTAGGEV	6.9	69	977.4966	1	32.719	-0.6	93 90 92 26 77 62 66 58 58 65	MTLVTAGGEV
913	DVAAGSLGV	6.2	69	394.7117	2	13.039	1.6	79 75 55 45 44 63 76 87 95	DVAAGSLGV
3443	MVGKGEGEVAI	7.6	69	545.2853	2	42.48	2.4	66 69 85 53 39 37 66 88 81 89 83	MVGKGEGEVAI
833	SADVTFGVK	6.2	69	462.246	2	12.14	1.6	54 65 90 97 95 91 61 37 29	SADVTFGVK
3855	LSFEPMLK	5.5	69	482.7618	2	47.469	-0.8	77 74 77 92 77 57 60 36	LSFEPMLK
1206	LVLSTLASGV	6.9	69	480.293	2	16.161	1.7	26 26 97 96 93 92 83 53 59 61	LVLSTLASGV
1797	VRSGSAGAEVSKPSRY(+79.97)	11.1	69	865.9172	2	22.448	3	26 82 82 95 96 96 95 95 95 98 49 37 37 38 42 36	VRSGSAGAEVSKPSRY(+79.97)
3342	LLGSLPLDT(+79.97)TV	7.6	69	604.8117	2	41.247	-1	88 89 81 84 92 73 70 66 35 41 36	LLGSLPLDT(+79.97)TV
3052	GFGDKVLADW	6.9	69	554.2769	2	37.672	-0.3	29 57 74 54 54 66 87 93 95 78	GFGDKVLADW
4084	MVAESAGGVLGV	8.3	69	545.2835	2	50.317	-0.9	96 95 95 90 50 50 60 79 77 43 43 45	MVAESAGGVLGV
3890	LKDVLDQL	5.5	69	472.2764	2	47.9	-0.3	79 65 66 71 95 56 61 56	LKDVLDQL
1079	RNSTDVDRKY(+79.97)R	7.6	69	745.3486	2	14.829	-0.4	63 58 66 90 84 83 93 89 45 45 37	RNSTDVDRKY(+79.97)R
1427	M(+15.99)AM(+15.99)EQSKL	5.5	69	969.4355	1	18.488	-2.5	71 76 76 96 46 76 53 54	M(+15.99)AM(+15.99)EQSKL
3233	KFCDETLDPAKPCGW	10.3	69	855.3873	2	39.911	0.7	49 48 63 85 84 95 94 80 63 57 61 70 77 76 26	KFCDETLDPAKPCGW
4000	LLTEGGSVM(+15.99)GR	7.6	69	568.2914	2	49.266	-1.8	92 92 92 88 75 46 40 52 55 81 41	LLTEGGSVM(+15.99)GR
1513	MCAPEEGKANKEGSLEKA	12.4	69	946.4506	2	19.389	2.7	31 34 49 62 94 95 92 92 95 62 66 93 86 81 81 41 43 35	MCAPEEGKANKEGSLEKA
2559	STKSDGVSHKFA	8.3	69	632.3201	2	31.647	0.2	64 72 88 93 93 93 94 96 33 33 31 31	STKSDGVSHKFA
1888	NGLMVAELEELR	8.3	69	687.3589	2	23.454	1	32 31 33 94 98 98 97 97 26 80 81 54	NGLMVAELEELR

2194	YSNGGKANGAEGTVK	10.3	69	726.858	2	27.106	0.7	68 65 58 79 79 79 79 78 78 80 84 63 38 38 59	YSNGGKANGAEGTVK
1996	LYGVLDL	4.8	69	792.45	1	24.698	-0.2	77 77 91 89 83 26 35	LYGVLDL
2410	EAGLDVDAGLEAV	8.9	69	629.8122	2	29.8	0.8	43 44 60 76 85 96 78 72 71 80 60 61 62	EAGLDVDAGLEAV
2465	FHSLM(+15.99)VPPLVA	7.6	69	613.8347	2	30.49	1.6	71 71 72 83 82 91 89 26 76 45 45	FHSLM(+15.99)VPPLVA
3175	QMEMEDGGLLADK	8.9	69	718.8231	2	39.187	-0.4	62 72 94 94 89 76 66 56 59 67 53 55 45	QMEMEDGGLLADK
1511	KEFLQEL	4.8	69	453.7506	2	19.372	0.9	60 67 37 87 69 94 64	KEFLQEL
2879	EPGSLVDHELL	7.6	69	604.8115	2	35.53	0.1	92 92 91 93 95 26 26 72 61 72 30	EPGSLVDHELL
3802	LLTEGNEFGR	6.9	69	568.2907	2	46.813	0	97 96 95 93 56 46 69 63 37 30	LLTEGNEFGR
3024	TMAGAEATLL	6.9	69	977.4973	1	37.322	0.1	70 71 80 78 63 56 61 54 59 91	TMAGAEATLL
2298	NFADALVAGMVK	8.2	69	618.3253	2	28.401	-1.5	60 67 92 93 90 89 65 59 68 51 52 32	NFADALVAGMVK
3911	TGFPPDVAGNVDYK	9.6	69	740.3595	2	48.149	0.2	28 27 46 96 96 97 89 82 79 56 66 62 75 55	TGFPPDVAGNVDYK
1583	LMSVI	3.4	69	562.3268	1	20.16	-0.2	26 96 96 96 26	LMSVI
2249	GEVDDVSQEAR	7.5	69	602.7756	2	27.787	0.1	50 50 50 95 90 59 58 54 85 90 69	GEVDDVSQEAR
875	LKVVDTAPK	6.2	69	485.8002	2	12.62	0.1	63 63 93 98 91 74 42 44 44	LKVVDTAPK
995	QNAGADEELFGALK	9.6	69	731.861	2	13.915	-1.8	46 37 40 78 87 93 98 94 64 60 63 46 71 74	QNAGADEELFGALK
1035	KLEEVWRW	5.5	69	573.3088	2	14.379	0.3	63 61 83 84 84 56 56 56	KLEEVWRW
2196	ASMGAVANVK	6.9	69	474.2521	2	27.127	-0.9	54 59 85 78 54 45 61 75 88 80	ASMGAVANVK
3125	MELDDLSSGSPM(+15.99)GVSK	11	69	834.8778	2	38.563	1.7	52 51 79 94 92 80 80 26 66 67 69 40 41 69 88 93	MELDDLSSGSPM(+15.99)GVSK
1156	RELSAQSSPF	6.9	69	561.2833	2	15.644	0.8	51 50 84 79 64 51 79 98 99 26	RELSAQSSPF
2475	M(+15.99)AESADGGLKDFEAK	10.3	68	792.8636	2	30.616	-0.6	65 72 72 86 89 92 61 50 59 79 90 95 36 41 32	M(+15.99)AESADGGLKDFEAK
2197	WALDVCPVGEAV	8.2	68	629.8112	2	27.136	1.2	55 49 52 74 77 76 92 79 76 65 59 62	WALDVCPVGEAV
2745	M(+15.99)VRCPLADVSK	7.5	68	412.2134	3	33.931	-2	26 62 62 62 84 76 75 86 94 94 26	M(+15.99)VRCPLADVSK
2218	RCGSTVLADVSK	8.2	68	412.5517	3	27.402	-0.7	39 38 60 74 66 69 84 83 89 94 93 26	RCGSTVLADVSK
3065	MEQTGNSVTVLMEK	9.6	68	783.877	2	37.821	-2.3	76 75 61 90 83 63 73 85 91 89 45 41 42 35	MEQTGNSVTVLMEK
2020	EAPADAELGEQLDQVQRVK	13	68	1048.535	2	24.983	0.6	27 27 51 50 57 94 97 98 95 94 74 89 76 59 60 56 66 70 49	EAPADAELGEQLDQVQRVK
1707	QDLKGLMTNL	6.8	68	566.8057	2	21.507	1.1	37 40 90 86 80 80 92 65 66 44	QDLKGLMTNL
961	HRLDEAENL	6.2	68	548.7728	2	13.553	0.3	35 65 44 63 84 96 71 81 73	HRLDEAENL
2056	AFSPDPVAGGGVDYK	10.2	68	740.3585	2	25.419	-1.1	33 41 41 91 26 97 94 90 80 61 66 79 74 81 62	AFSPDPVAGGGVDYK
1441	VDKDLESELK	6.8	68	588.3119	2	18.629	0.9	53 53 48 75 81 88 89 70 74 47	VDKDLESELK
1951	NM(+15.99)ADALVGAGGKK	8.9	68	624.325	2	24.151	1.1	37 38 82 87 86 82 74 68 67 63 57 69 72	NM(+15.99)ADALVGAGGKK
2027	FGLPGGPPCVLVAAF	10.2	68	722.8884	2	25.066	2.7	58 65 89 92 86 58 47 49 52 52 74 71 64 79 81	FGLPGGPPCVLVAAF

1380	QQTLDDLQAEEDQVSK	10.9	68	923.9373	2	17.998	0.5	47 47 55 70 88 93 88 66 86 92 85 81 50 54 55 26	QQTLDDLQAEEDQVSK
3195	FDTLPMLK	5.5	68	482.7623	2	39.443	0.1	26 83 81 87 86 67 68 43	FDTLPMLK
852	FGLAMPPGGK	6.8	68	974.5148	1	12.354	2.1	84 85 92 87 73 62 47 49 71 26	FGLAMPPGGK
1833	FSADPPVAGGGVDY	9.5	68	676.3118	2	22.841	0	34 42 49 76 77 97 92 87 80 63 66 78 81 26	FSADPPVAGGGVDY
3809	LSTEWGQGVL	6.8	68	545.2831	2	46.902	1.3	52 56 89 94 70 75 54 77 54 55	LSTEWGQGVL
3169	MMPWKATL	5.5	68	977.4973	1	39.111	2.6	69 70 70 86 74 64 71 38	MMPWKATL
1885	GLLGTELEMR	6.8	68	559.7983	2	23.413	1.7	36 36 67 77 83 73 68 81 86 70	GLLGTELEMR
3199	M(+15.99)LAGMVVTARCGNDL	10.2	68	783.8767	2	39.484	1.6	52 52 81 92 94 95 81 70 67 64 52 53 49 54 59	M(+15.99)LAGMVVTARCGNDL
1297	MEAGMVTGNGLQL	8.9	68	660.8166	2	17.128	-2	76 77 88 92 95 88 57 57 57 73 42 48 29	MEAGMVTGNGLQL
2244	TDLAAALAK	6.1	68	437.2552	2	27.723	-0.8	66 74 93 96 93 83 38 39 26	TDLAAALAK
1305	VDDDLKAEEDQVSK	9.5	68	795.8776	2	17.222	-0.8	26 26 89 84 83 74 74 74 90 80 54 77 88 26	VDDDLKAEEDQVSK
1567	ESKMKLADSSR	7.5	68	417.8842	3	19.98	1.5	48 44 50 55 72 76 90 90 95 96 26	ESKMKLADSSR
1311	S(+79.97)EASPRL	4.8	68	839.3636	1	17.285	-2.7	91 91 87 88 42 44 30	S(+79.97)EASPRL
694	MLTNDGNNK	6.1	68	503.7341	2	10.446	-1.3	92 91 85 54 40 34 51 87 74	MLTNDGNNK
2286	NLEVTVK	4.8	68	401.7375	2	28.252	1.1	26 99 94 94 60 56 43	NLEVTVK
3133	LLTEVGGSM(+15.99)GR	7.5	68	568.2911	2	38.661	-2.4	88 89 89 92 72 66 47 37 79 26 57	LLTEVGGSM(+15.99)GR
2578	MVGVTAGGDVAL	8.1	68	545.2839	2	31.887	-0.1	67 68 70 67 65 71 66 83 82 72 72 26	MVGVTAGGDVAL
3106	WALDVCGPVEAV	8.1	68	629.8111	2	38.332	1	60 46 48 85 92 91 84 73 65 56 54 54	WALDVCGPVEAV
3119	TM(+15.99)LHDGNATEMSK	8.8	68	725.8204	2	38.49	2.4	59 61 86 68 65 65 67 73 91 87 54 65 34	TM(+15.99)LHDGNATEMSK
1107	AAEVTHGLFTETERR	10.2	68	572.9619	3	15.118	2.8	73 76 74 88 73 65 63 57 43 40 76 82 84 91 26	AAEVTHGLFTETERR
3945	EPGSLDVTSGNAPK	9.5	68	686.3427	2	48.579	2.3	89 87 59 63 75 94 90 76 70 78 49 40 46 29	EPGSLDVTSGNAPK
4073	GDFALATVAGW	7.5	68	554.2772	2	50.179	0.2	48 49 68 95 76 58 58 53 62 91 83	GDFALATVAGW
1953	VM(+15.99)LGLLPVLYPPVYRHGQK	12.9	68	1098.619	2	24.182	-2.9	29 32 32 63 90 99 97 97 97 96 98 90 86 86 49 44 33 34 29	VM(+15.99)LGLLPVLYPPVYRHGQK
1344	QLDLVDQLK	6.1	68	536.3062	2	17.615	0.6	43 47 86 89 98 90 52 61 41	QLDLVDQLK
1318	KATALDDLELTLAK	9.5	68	501.2885	3	17.354	2.7	30 29 35 44 68 81 97 97 97 97 96 64 65 42	KATALDDLELTLAK
2574	NM(+15.99)CGNSTLPPKGDVNF	10.9	68	855.3885	2	31.832	4.5	54 55 87 83 64 87 86 89 95 73 45 47 66 49 50 46	NM(+15.99)CGNSTLPPKGDVNF
3207	CRVPM(+15.99)LADVSK	7.5	68	412.2137	3	39.592	-1.2	64 64 64 69 59 59 61 88 94 94 26	CRVPM(+15.99)LADVSK
3671	LLTEGDQFGR	6.8	68	568.2905	2	45.226	-0.3	95 96 94 79 37 35 35 73 82 47	LLTEGDQFGR
3340	CASRSVLADVSK	8.1	68	412.5521	3	41.226	0.3	45 46 46 66 26 96 93 90 91 91 90 26	CASRSVLADVSK
2807	DVESACEVAGMEVDK	10.2	68	791.3423	2	34.669	0.3	77 79 77 80 82 90 83 68 67 67 74 77 30 30 28	DVESACEVAGMEVDK
1329	EGFTYPKLK	6.1	68	361.5347	3	17.468	1.4	26 75 72 71 79 88 82 87 26	EGFTYPKLK

1941	M(+15.99)GTLVELLR	6.1	68	524.2955	2	24.044	-2.8	35 39 59 75 78 88 89 91 50	M(+15.99)GTLVELLR
2031	TPGLMENFLVLHQLR	10.2	68	589.9899	3	25.117	-1.3	71 73 67 66 67 53 48 79 95 96 96 88 38 40 30	TPGLMENFLVLHQLR
3351	STQSDGVRQGTK	8.1	68	632.319	2	41.361	1.5	79 78 75 92 92 91 90 70 41 32 36 29	STQSDGVRQGTK
4208	S(+79.97)PADYER	4.7	68	459.1724	2	51.871	-2.7	85 85 74 73 62 54 37	S(+79.97)PADYER
2181	LYPPAFGARHTK	8.1	68	679.3718	2	26.945	-0.9	73 72 95 96 81 75 70 71 59 48 38 26	LYPPAFGARHTK
2050	LLAPASTM(+15.99)NI	6.8	68	1046.554	1	25.348	-1.5	74 74 73 88 84 74 66 43 51 44	LLAPASTM(+15.99)NI
1608	QEGSVEDFKEAGF	8.8	68	721.8256	2	20.441	0.4	46 39 41 58 89 95 85 84 60 43 72 90 68	QEGSVEDFKEAGF
2349	NFVWGLADVSK	7.4	68	412.5522	3	29.043	0.3	26 26 26 87 89 93 89 88 94 94 26	NFVWGLADVSK
1577	FTGPDPVAGNVDYK	9.5	68	740.3604	2	20.096	1.5	28 32 38 85 91 97 94 86 77 59 79 59 63 49	FTGPDPVAGNVDYK
2835	LQLVDDKL	5.4	68	472.2767	2	35.01	0.3	26 78 85 85 88 63 65 46	LQLVDDKL
1015	EAPAGYTKLAPNL	8.8	68	672.8633	2	14.144	2.7	26 55 66 72 62 63 77 91 94 87 65 50 64	EAPAGYTKLAPNL
739	TYHPVAHR	5.4	68	327.5064	3	11.007	-1.3	33 73 59 85 72 71 83 59	TYHPVAHR
2802	EPTSSGVVFGR	7.4	67	568.2903	2	34.612	-0.8	26 97 97 97 74 61 61 56 58 66 42	EPTSSGVVFGR
1105	NNKNKDPLNDSVVK	9.4	67	792.9198	2	15.087	-1	30 37 38 85 87 91 71 67 53 79 89 91 94 26	NNKNKDPLNDSVVK
778	DDAKVPPK	5.4	67	869.4728	1	11.48	0.1	91 90 90 93 94 26 26 26	DDAKVPPK
1930	DLNATLDQLLPAAKV	10.1	67	791.4457	2	23.914	-0.3	63 63 79 95 78 59 77 54 81 94 72 67 48 38 38	DLNATLDQLLPAAKV
3143	LLGSLDVTGGNY	8.1	67	604.8115	2	38.791	0.1	91 92 89 91 95 26 90 63 54 46 38 26	LLGSLDVTGGNY
1355	RCEFPGNAACGAEK	9.4	67	726.8201	2	17.73	-1.9	77 78 94 96 81 75 42 40 43 46 65 62 68 69	RCEFPGNAACGAEK
1375	LLTENGEGF	6.1	67	979.473	1	17.947	-0.1	86 86 85 83 55 39 38 65 64	LLTENGEGF
1168	QDLANLF	4.7	67	410.7148	2	15.762	3	26 90 87 67 62 76 59	QDLANLF
2346	MGEPAVCTVAAPL	8.8	67	629.8113	2	29.001	-1.2	70 72 86 81 79 77 91 67 59 66 39 39 45	MGEPAVCTVAAPL
831	KALQESHQKDV	7.4	67	641.8424	2	12.121	2	82 80 85 73 92 93 90 38 32 37 34	KALQESHQKDV
1908	YLLQELLGA	6.1	67	510.2923	2	23.667	0.1	88 88 75 63 69 72 65 55 26	YLLQELLGA
2507	MVAEGTGGVLGV	8.1	67	545.2844	2	31.007	0.7	95 95 90 85 46 40 40 50 76 61 61 62	MVAEGTGGVLGV
1030	DLQHRLDEADGA	8.1	67	670.3158	2	14.318	0.5	79 51 46 94 61 58 80 88 86 69 63 26	DLQHRLDEADGA
918	LLAPPVW	4.7	67	398.2424	2	13.093	1.6	98 98 95 97 26 26 26	LLAPPVW
1876	VDVVGGEDLMVDVER	10.1	67	544.6033	3	23.322	0.6	35 35 36 51 62 51 53 76 87 94 97 98 75 76 75	VDVVGGEDLMVDVER
2099	GMKSNAVSKNDL	8.1	67	632.3202	2	25.948	-2.4	26 92 91 84 65 83 87 67 58 51 58 37	GMKSNAVSKNDL
2483	LLGSLPLTES(+79.97)V	7.4	67	604.8113	2	30.712	-1.6	94 94 91 90 92 59 55 47 44 41 26	LLGSLPLTES(+79.97)V
2385	YAAPPDVAGNVDYK	9.4	67	740.3587	2	29.492	-0.8	31 31 40 89 26 98 95 94 77 54 69 79 84 68	YAAPPDVAGNVDYK
3672	MDFPLLADVSK	7.4	67	412.5518	3	45.236	5.5	26 67 67 49 65 79 78 90 93 93 26	MDFPLLADVSK

2980	FEPPAFKTRHK	7.4	67	679.3719	2	36.797	-0.6	95 95 95 26 87 83 86 65 36 35 30	FEPPAFKTRHK
701	YPTSALY(+79.97)K	5.4	67	511.732	2	10.531	-2.6	96 95 82 74 63 49 39 36	YPTSALY(+79.97)K
4011	M(+15.99)VRGSGLADVSK	8.1	67	412.552	3	49.407	0.1	26 66 57 44 55 84 83 84 89 94 93 26	M(+15.99)VRGSGLADVSK
2045	LAGTVLGAEL	6.7	67	472.2764	2	25.288	-0.4	47 44 51 66 62 73 80 77 78 87	LAGTVLGAEL
695	RTELHSEETR	6.7	67	629.313	2	10.457	0.5	51 51 73 88 76 43 49 80 88 67	RTELHSEETR
3508	YAAPPDVAGNVDYK	9.4	67	740.3581	2	43.262	-1.6	33 33 43 90 26 93 89 87 81 58 75 77 83 64	YAAPPDVAGNVDYK
3423	CFHLSRTSSNMEAVSK	10.7	67	599.6185	3	42.24	-0.5	61 61 61 57 56 62 71 93 95 80 87 85 47 41 48 57	CFHLSRTSSNMEAVSK
839	CPELKQFQPTSSHLER	10.7	67	950.4737	2	12.207	1	26 43 61 74 67 65 50 72 91 96 97 26 90 78 80 48	CPELKQFQPTSSHLER
2541	DVESADCGAEDFVPK	10	67	791.3397	2	31.427	-1	68 69 67 63 66 82 77 66 68 78 82 79 47 55 29	DVESADCGAEDFVPK
1542	DSPVLSGGMFAYPGLADR	12.1	67	926.9467	2	19.715	-2	26 26 26 26 96 95 89 83 71 61 73 95 84 63 63 81 82 56	DSPVLSGGMFAYPGLADR
242	S(+79.97)NVNGS(+79.97)SV	5.4	67	462.15	2	3.705	2.2	60 52 59 62 84 78 69 69	S(+79.97)NVNGS(+79.97)SV
2080	LLGSLTLPS(+79.97)DL	7.4	67	604.8113	2	25.714	-1.7	94 93 89 88 91 74 56 67 26 26 26	LLGSLTLPS(+79.97)DL
1782	MTMVFTKVK	6	67	1084.588	1	22.283	-1.1	95 95 96 87 75 53 36 34 26	MTMVFTKVK
1986	M(+15.99)PPGVAELEELR	8	67	678.8449	2	24.573	-0.2	26 38 34 81 95 96 97 98 26 76 78 51	M(+15.99)PPGVAELEELR
2605	VDSETVLVFAKPA	8.7	67	459.255	3	32.21	2.7	90 90 59 50 46 46 46 75 77 76 73 73 63	VDSETVLVFAKPA
662	VLNPMMSSGPL	7.4	67	573.2891	2	10.028	1.4	29 29 29 59 64 85 94 94 78 81 89	VLNPMMSSGPL
1209	MLKSGMLGKPF	7.4	67	604.8307	2	16.199	0.9	82 83 88 80 76 73 45 43 56 78 26	MLKSGMLGKPF
1115	MVPALFHTM(+15.99)ELEESKK	10.7	67	635.9849	3	15.201	-2.5	66 68 65 66 69 71 78 71 57 66 90 90 59 55 63 26	MVPALFHTM(+15.99)ELEESKK
1564	M(+15.99)NSVGVLADFSK	8	67	428.5474	3	19.957	-1.9	45 44 36 37 44 77 94 91 88 82 82 78	M(+15.99)NSVGVLADFSK
4108	LLGSLEGASSQF	8	67	604.8114	2	50.608	-0.1	93 93 91 90 86 63 50 38 40 49 52 52	LLGSLEGASSQF
2409	CPHPADGAVEDFKEA	10	67	793.3547	2	29.789	4.5	26 26 26 85 85 90 83 82 89 97 96 96 43 35 35	CPHPADGAVEDFKEA
2124	NFEPLFPFSK	6.7	67	613.3176	2	26.242	2.2	69 75 91 99 26 26 72 67 67 71	NFEPLFPFSK
1275	DVM(+15.99)RQSLLGLLDVLDTPA	12	67	658.0204	3	16.905	2.4	83 83 61 50 36 72 91 82 78 89 77 49 44 48 59 81 83 26	DVM(+15.99)RQSLLGLLDVLDTPA
1477	QM(+15.99)LEDDGYLDVNAVSK	10.7	67	906.9214	2	19.001	2	55 69 59 72 82 95 69 75 83 83 34 32 37 65 70 80	QM(+15.99)LEDDGYLDVNAVSK
1684	MEMENHYAR	6	67	1180.487	1	21.265	-0.9	88 56 83 83 60 82 46 61 37	MEMENHYAR
3084	MVGQGTVDVAI	7.3	67	545.2839	2	38.054	-0.1	72 73 83 57 63 51 61 91 76 76 26	MVGQGTVDVAI
2551	MTLVTAGGEV	6.7	67	977.4966	1	31.546	-0.6	93 81 84 26 75 64 68 54 54 63	MTLVTAGGEV
4053	M(+15.99)DTAADQVEDFKTV	9.3	67	793.3547	2	49.933	-1.8	41 48 60 83 85 69 56 86 96 96 91 43 42 33	M(+15.99)DTAADQVEDFKTV
2478	LDAADVDGALEAV	8.7	67	629.8112	2	30.649	-0.9	57 54 63 74 77 90 77 64 61 68 58 59 60	LDAADVDGALEAV
3687	TSKSDGVAKWNA	8	67	632.3202	2	45.425	0.3	59 59 86 91 93 93 78 62 44 40 45 45	TSKSDGVAKWNA
1870	CLLKKDLDDLELTRR	10	67	611.0071	3	23.258	-1.9	43 43 53 46 46 50 68 96 96 95 95 85 75 74 26	CLLKKDLDDLELTRR

3941	FGGGLLDGAPGF	8	67	554.2768	2	48.525	-0.4	32 67 84 44 45 62 69 71 86 74 73 87	FGGGLLDGAPGF
1637	NFDQVLADWKKKY	8.7	67	552.2921	3	20.766	2	62 38 57 39 80 83 87 92 91 61 52 68 49	NFDQVLADWKKKY
1559	WCGKLNVKDQELEAMVK	11.3	67	996.0051	2	19.902	-2.9	29 32 46 72 92 87 93 64 53 41 81 89 88 82 67 68 40	WCGKLNVKDQELEAMVK
1449	KLEEQEALVSQI	8	67	693.8771	2	18.715	-0.4	63 63 84 77 39 52 73 93 96 48 59 48	KLEEQEALVSQI
2669	LLTETAQM(+15.99)GR	6.7	67	568.2911	2	33.004	-2.3	89 90 90 90 49 47 43 51 72 40	LLTETAQM(+15.99)GR
1183	LTMFGEK	4.7	67	825.4178	1	15.921	0.4	83 83 91 26 64 66 49	LTMFGEK
2250	TNVADPF	4.7	66	763.3655	1	27.798	4.5	56 51 73 84 73 62 62	TNVADPF
2956	S(+79.97)LAERPA	4.6	66	823.3687	1	36.495	-2.7	96 96 83 59 43 52 33	S(+79.97)LAERPA
2278	CGVLVGVGLPCPAL	9.3	66	649.3542	2	28.155	0.4	72 78 78 89 81 70 68 73 79 81 26 41 42 44	CGVLVGVGLPCPAL
637	VTHDS(+79.97)LDCSF	6.6	66	602.2239	2	9.704	1.6	26 54 50 54 26 93 93 90 87 87	VTHDS(+79.97)LDCSF
2961	MDSVKFHSSNMGNKSK	10.6	66	599.6182	3	36.56	-0.9	35 35 44 73 64 84 67 92 97 85 87 70 58 67 70 26	MDSVKFHSSNMGNKSK
1379	MVLKAEEY(+79.97)VNTLTK	9.3	66	859.9265	2	17.991	1.3	30 32 43 83 97 98 26 26 95 83 83 82 88 56	MVLKAEEY(+79.97)VNTLTK
2448	NLTEEMASKDEGEAK	10	66	826.3782	2	30.27	0.7	36 36 42 90 94 94 94 93 74 71 79 42 35 53 56	NLTEEMASKDEGEAK
990	ANGEVAQSVGV	7.3	66	515.7603	2	13.854	-2.8	48 56 90 92 96 96 51 47 39 54 56	ANGEVAQSVGV
2025	LELLEKPMGLF	7.3	66	645.3638	2	25.048	2.4	40 61 97 99 96 88 55 43 40 63 42	LELLEKPMGLF
2309	KPKMVHLDFW	6.6	66	434.2335	3	28.539	-0.8	26 40 42 42 59 93 91 88 88 88	KPKMVHLDFW
2201	FLAGMVQGSADKDDL	9.9	66	783.8775	2	27.19	0.6	60 63 84 93 95 89 34 35 35 85 87 66 66 68 26	FLAGMVQGSADKDDL
1860	VLLLDKAVPVPGPV	9.3	66	708.9445	2	23.135	-0.5	49 49 83 97 93 93 63 57 49 26 87 76 76 26	VLLLDKAVPVPGPV
3300	MTAGALVSDI	6.6	66	977.4968	1	40.738	-0.4	67 71 87 86 76 77 56 56 56 26	MTAGALVSDI
2899	MGELKEPCGVPV	8	66	629.8123	2	35.776	0.3	48 50 63 80 71 74 76 60 64 65 69 69	MGELKEPCGVPV
3509	LM(+15.99)GPAVCTSAPPV	8.6	66	629.8114	2	43.272	-1.1	48 44 50 88 90 75 78 88 64 65 54 55 55	LM(+15.99)GPAVCTSAPPV
983	FNLAFGGTGNNL	7.9	66	612.8022	2	13.78	-3	84 65 78 86 80 78 71 61 53 45 44 44	FNLAFGGTGNNL
2290	S(+79.97)LAERPA	4.6	66	823.3696	1	28.307	-1.6	94 94 81 66 49 45 32	S(+79.97)LAERPA
3245	MVSVYDDVDNSMVVLR	10.6	66	921.4442	2	40.061	2.2	66 66 66 97 95 90 84 47 47 60 70 76 89 38 33 28	MVSVYDDVDNSMVVLR
2741	FNAFMAETASSNPK	9.3	66	757.851	2	33.878	0.2	73 62 82 83 80 78 81 81 55 55 62 44 58 26	FNAFMAETASSNPK
1008	QSLAGEQEY	6	66	512.7336	2	14.062	1.7	32 32 47 66 73 86 76 95 83	QSLAGEQEY
1181	WADVDGSADPL	7.3	66	573.2602	2	15.903	1.9	72 78 92 97 71 55 33 35 42 64 82	WADVDGSADPL
1674	QLKLGTLEEMR	7.3	66	439.9115	3	21.157	0.5	33 43 32 53 59 65 93 98 88 88 69	QLKLGTLEEMR
2542	TFMVNGGSYESMK	8.6	66	725.8203	2	31.438	-0.5	64 64 59 56 48 67 73 78 86 85 61 72 41	TFMVNGGSYESMK
1995	RQMVAELEELGVAA	9.2	66	758.3953	2	24.688	-0.1	33 49 44 96 94 94 95 26 96 93 63 43 44 46	RQMVAELEELGVAA
3912	AWLFELS(+79.97)EKKPK	7.9	66	778.3981	2	48.16	-1.9	50 48 66 68 90 92 63 86 85 76 36 26	AWLFELS(+79.97)EKKPK

3659	NFDKVLWEGK	6.6	66	618.3241	2	45.083	-0.7	67 70 89 85 85 83 60 35 40 40	NFDKVLWEGK
3468	M(+15.99)LSSADQVEDFKEA	9.2	66	793.3546	2	42.778	-1.9	48 48 66 89 87 54 49 86 89 96 95 40 35 33	M(+15.99)LSSADQVEDFKEA
805	ETVYKKGCVAI	7.2	66	404.2226	3	11.807	2.6	79 79 53 51 73 39 51 55 74 81 84	ETVYKKGCVAI
2268	M(+15.99)LAGMVTVGGSGKDEV	10.5	66	783.8764	2	28.026	-3	61 61 88 94 97 93 67 58 61 49 52 70 69 44 53 28	M(+15.99)LAGMVTVGGSGKDEV
1858	CPLEEEYMYPKASDSL	10.5	66	937.9141	2	23.113	1.2	62 63 56 63 83 58 58 77 81 89 83 73 69 48 48 33	CPLEEEYMYPKASDSL
4035	MEAGMVTTGAAGETKL	10.5	66	783.877	2	49.708	-2.2	69 70 83 89 95 92 90 52 45 49 81 72 45 36 40 36	MEAGMVTTGAAGETKL
2939	MVAEGQGTLAL	7.2	66	545.2839	2	36.281	-0.1	92 93 93 93 60 35 38 56 78 39 42	MVAEGQGTLAL
1285	LEAVAGADF	5.9	66	892.4406	1	17.003	-0.5	44 45 61 53 55 73 79 86 90	LEAVAGADF
846	QKVETEQTELASK	8.5	66	745.8882	2	12.284	-0.3	55 60 82 93 85 72 41 66 67 75 48 48 57	QKVETEQTELASK
2121	FELQELL	4.6	66	446.2446	2	26.215	-0.3	44 54 54 66 92 98 49	FELQELL
1915	EAFLKLKHDANK	7.9	66	471.932	3	23.743	-2.5	26 82 68 64 58 76 72 72 74 76 64 51	EAFLKLKHDANK
1176	REQFEEEGAEAQAELK	10.5	66	932.4377	2	15.845	-1.9	35 49 37 48 55 98 91 80 80 89 96 66 80 49 54 35	REQFEEEGAEAQAELK
1675	ADSNADFKF	5.9	66	1014.453	1	21.164	0.5	86 86 66 47 53 71 76 76 26	ADSNADFKF
2626	S(+79.97)LAAPER	4.6	66	823.3688	1	32.473	-2.5	97 93 93 95 26 26 26	S(+79.97)LAAPER
2445	LYPSSGLVAPPEK	8.5	66	679.3717	2	30.239	0.1	65 65 92 92 62 53 54 72 85 84 41 48 34	LYPSSGLVAPPEK
2117	EFPKSAADGLLPL	8.5	66	679.3722	2	26.164	0.8	93 93 83 61 50 50 44 50 82 86 68 57 30	EFPKSAADGLLPL
857	LYDQHLGK	5.3	66	325.1746	3	12.41	-0.9	48 48 79 49 83 70 73 71	LYDQHLGK
1152	FGAANGATVSSQF	8.5	66	628.8007	2	15.597	2.8	47 42 44 38 38 45 54 76 91 97 91 91 91	FGAANGATVSSQF
3159	M(+15.99)VDDVGVLSSNMEAVSK	11.2	66	599.6181	3	38.993	-0.4	41 47 47 46 39 44 53 74 99 94 85 87 84 71 64 65 68	M(+15.99)VDDVGVLSSNMEAVSK
1327	RGMLQNSELKAK	7.9	66	687.8804	2	17.436	1	46 55 66 67 58 71 79 79 87 72 71 31	RGMLQNSELKAK
1939	S(+79.97)FKMFKMF	5.2	66	1145.494	1	24.012	1.5	90 90 90 71 41 57 40 41	S(+79.97)FKMFKMF
2812	KGMLSSLADASR	7.9	66	412.5522	3	34.732	0.6	26 51 49 64 76 86 81 80 81 67 70 48	KGMLSSLADASR
793	ALGKNPSQAGEVK	8.5	66	649.8557	2	11.657	-1.6	68 63 68 93 87 52 34 31 45 52 67 92 92	ALGKNPSQAGEVK
1397	SAGALGAGAAVVLAPA	10.5	66	648.3701	2	18.179	1	49 48 61 67 67 59 42 41 86 83 83 81 67 59 71 78	SAGALGAGAAVVLAPA
4017	MVAEAGGGTLLA	7.9	66	545.2841	2	49.485	0.1	96 95 90 90 80 73 48 42 44 52 35 36	MVAEAGGGTLLA
1395	LLGSLDVPT(+79.97)TL	7.2	65	604.8116	2	18.164	-1.2	97 96 91 90 95 26 26 73 42 52 26	LLGSLDVPT(+79.97)TL
3489	METDVGVLSSNMEAVSK	11.1	65	599.6187	3	43.035	0.6	35 36 38 40 42 55 54 58 98 94 68 76 82 84 80 81 83	METDVGVLSSNMEAVSK
1906	EQLFELLK	5.2	65	1019.577	1	23.646	0.1	59 43 56 76 90 79 77 38	EQLFELLK
2415	KMGSTVLADASR	7.9	65	412.5522	3	29.864	0.6	26 45 39 39 75 81 87 85 87 80 81 53	KMGSTVLADASR
4146	KLEDVCPGPMAV	7.8	65	629.8118	2	51.085	-0.4	56 51 51 60 68 81 75 59 68 76 66 69	KLEDVCPGPMAV
1627	FGTNEVGSVGLF	7.8	65	613.8064	2	20.651	0.3	45 49 54 68 78 66 66 72 87 76 75 43	FGTNEVGSVGLF

3091	KLDLVDQGMALK	7.8	65	444.2513	3	38.136	-0.5	78 78 91 89 86 77 48 53 46 45 51 36	KLDLVDQGMALK
1829	SAFPPDVAGVNDYKNL	10.5	65	853.9231	2	22.792	0.4	31 31 61 96 90 87 93 94 83 46 42 80 93 38 38 34	SAFPPDVAGVNDYKNL
2607	FAESADQVEDFEAK	9.1	65	793.3541	2	32.244	-0.5	26 86 79 79 86 82 66 85 96 99 26 32 34 30	FAESADQVEDFEAK
2021	LKLGTRCGADSSPERR	10.5	65	873.459	2	24.994	1.9	30 41 62 83 83 82 70 68 65 65 66 66 66 78 85 26	LKLGTRCGADSSPERR
4144	FNGWVALDVSK	7.2	65	412.5521	3	51.064	-0.1	41 51 65 68 85 64 68 81 82 82 26	FNGWVALDVSK
2697	WWAAMAKSSNMEAVSK	10.4	65	599.6184	3	33.346	-2.9	26 29 33 33 33 49 78 97 95 87 93 83 76 69 72 86	WWAAMAKSSNMEAVSK
2275	LDGPSTEAGLEAV	8.5	65	629.811	2	28.111	-1.2	44 45 54 69 91 90 63 56 54 75 66 66 68	LDGPSTEAGLEAV
3181	LQDLVDGAPFKK	7.8	65	444.2515	3	39.263	2.6	83 72 88 88 79 66 63 67 83 29 31 27	LQDLVDGAPFKK
4020	FPEGLEEI	5.2	65	933.458	1	49.517	1.8	81 81 65 68 85 87 26 26	FPEGLEEI
1763	YPLVT(+79.97)GLLSKWDDMEK	10.4	65	987.9673	2	22.078	-0.4	58 47 47 49 54 94 95 97 89 66 43 53 78 61 61 44	YPLVT(+79.97)GLLSKWDDMEK
2629	MGEPAVCAPTALV	8.5	65	629.8119	2	32.503	-0.3	57 58 71 79 71 71 93 82 54 50 48 53 55	MGEPAVCAPTALV
732	EADLTGVAGAA	7.2	65	487.7435	2	10.92	0.8	26 91 87 88 48 43 43 66 68 59 92	EADLTGVAGAA
1492	TM(+15.99)LHDQTNEMSK	7.8	65	725.8204	2	19.167	2.4	56 59 89 89 87 62 44 43 90 61 61 35	TM(+15.99)LHDQTNEMSK
674	GFNMFHK	4.6	65	440.71	2	10.185	-0.8	44 53 54 68 83 75 75	GFNMFHK
1133	QEELKEGAAAMVER	9.1	65	520.9279	3	15.391	0.5	31 32 32 67 58 53 55 79 97 97 92 69 72 69	QEELKEGAAAMVER
1471	QKKADSVAEAVEQLDNLQR	12.4	65	1071.562	2	18.938	1.1	26 26 71 85 91 98 97 96 93 52 51 80 56 64 93 36 38 40 33	QKKADSVAEAVEQLDNLQR
2015	LLNPESKTGPLMENFI	10.4	65	901.9714	2	24.923	-0.1	65 61 50 62 74 64 64 85 65 59 76 86 65 50 56 49	LLNPESKTGPLMENFI
763	LEEANATSA	5.9	65	905.4208	1	11.299	-0.2	26 26 80 66 46 67 83 90 97	LEEANATSA
2131	FVLM(+15.99)TDGW	5.2	65	984.4501	1	26.325	0.6	26 95 73 68 66 77 85 26	FVLM(+15.99)TDGW
4252	CS(+79.97)WVY	3.3	65	369.1218	2	52.457	-0.2	26 26 90 90 90	CS(+79.97)WVY
2229	KSGMDGNSGLKGI	8.5	65	632.3204	2	27.544	-2.1	46 46 50 54 92 94 74 80 83 82 47 47 43	KSGMDGNSGLKGI
2529	FVDQPFDVVMGAEL	9.1	65	783.8773	2	31.279	-2.3	55 58 57 36 44 44 68 88 94 93 73 56 63 74	FVDQPFDVVMGAEL
191	FVMSSA	3.9	65	321.1515	2	2.788	-1	26 67 67 66 78 83	FVMSSA
723	TENGEGFR	5.2	65	455.2064	2	10.813	-0.6	26 97 95 90 85 57 36 30	TENGEGFR
2716	MWVVVMGVLNARGDS(+79.97)K	10.4	65	921.4438	2	33.572	0.1	34 64 54 92 80 63 62 69 85 73 59 59 62 55 72 51	MWVVVMGVLNARGDS(+79.97)K
2915	FLGVYDDEGDGGMVVRL	11	65	921.4432	2	35.98	3	45 52 61 90 91 92 94 80 53 40 43 68 74 87 50 42 32	FLGVYDDEGDGGMVVRL
2389	YPGVVDPVCGSGQPAEPAV	12.3	65	921.444	2	29.536	3.8	42 69 75 95 98 98 80 77 65 64 63 60 45 57 75 50 34 35 39	YPGVVDPVCGSGQPAEPAV
869	LNKTEAGEGSF	7.1	65	576.7808	2	12.548	1	44 43 49 58 82 79 78 85 68 66 56	LNKTEAGEGSF
1354	DSLAATPSLLKA	7.8	65	593.837	2	17.722	-0.8	26 96 91 71 60 57 72 70 79 59 56 37	DSLAATPSLLKA
1762	TPFEVMLK	5.2	65	482.7624	2	22.072	0.3	26 69 69 72 90 75 71 43	TPFEVMLK
3343	ELLLSTGAQVGA	7.8	65	579.8219	2	41.259	0.1	55 55 80 58 53 43 56 82 76 71 72 73	ELLLSTGAQVGA

3067	LLTSNVEM(+15.99)GR	6.5	65	568.2911	2	37.843	-2.3	92 92 92 80 44 48 52 76 26 42	LLTSNVEM(+15.99)GR
1217	RDVSNGEVAF	6.5	65	547.267	2	16.285	-0.6	59 59 47 39 38 64 65 84 94 94	RDVSNGEVAF
3048	LFGVYDDYHDMVVVAV	10.4	65	921.4438	2	37.619	1.4	38 35 57 95 90 86 86 79 47 46 67 81 78 64 39 41	LFGVYDDYHDMVVVAV
3021	MGKSDGNSGVKLA	8.4	65	632.3202	2	37.294	-2.4	26 91 86 86 87 91 71 77 77 55 32 30 27	MGKSDGNSGVKLA
3184	GYVGGGLLEGW	7.1	65	554.2772	2	39.306	0.3	26 26 92 83 52 36 40 92 93 93 73	GYVGGGLLEGW
2165	MCNKGRK	4.5	65	418.7142	2	26.742	-2.2	87 64 59 92 95 26 26	MCNKGRK
1990	WTTLPAGPLTSGRDDEMQL	12.3	65	696.6752	3	24.622	2.1	47 47 61 39 38 49 70 83 86 90 92 91 92 94 86 41 37 45 31	WTTLPAGPLTSGRDDEMQL
3459	LCFLGTTPL	5.8	65	482.762	2	42.675	-0.6	26 26 94 91 93 68 68 68 42	LCFLGTTPL
2577	LYPGVSAEPSPLK	8.4	65	679.3718	2	31.877	0.3	68 69 88 81 65 42 43 77 90 90 44 46 32	LYPGVSAEPSPLK
2531	TTVSDPAGPLVGL	8.4	65	613.8352	2	31.301	0.5	79 78 80 91 62 46 41 49 64 61 42 72 72	TTVSDPAGPLVGL
1806	QEVAELVDASEGVRL	9.7	65	807.9199	2	22.542	-0.4	44 45 37 38 56 95 96 95 95 94 90 66 41 37 34	QEVAELVDASEGVRL
1937	SLAGSGGPVAFTVF	9.1	65	655.3427	2	23.991	-0.4	32 32 39 58 84 83 72 57 52 54 76 82 88 89	SLAGSGGPVAFTVF
971	NKECPGEVETAMPPV	9.7	65	534.2493	3	13.656	-0.8	37 37 56 54 74 78 78 79 81 81 77 64 64 76 26	NKECPGEVETAMPPV
2433	VFDGNGPGTSSNPVSFSK	11.6	65	599.6193	3	30.09	-0.9	55 58 49 41 44 60 67 58 62 93 96 86 94 79 59 52 54 49	VFDGNGPGTSSNPVSFSK
2813	EPGSLDVHLEL	7.1	65	604.8119	2	34.743	0.7	92 91 91 91 92 26 26 61 46 61 28	EPGSLDVHLEL
997	KGQGADEEFEGALK	9	65	739.8587	2	13.936	-1.3	33 45 36 69 75 96 98 26 26 82 79 66 82 84	KGQGADEEFEGALK
2490	NLEVTKV	4.5	65	401.7367	2	30.796	-0.9	26 99 90 86 53 54 42	NLEVTKV
1345	FASPVLVACAPNEY	9	65	740.8609	2	17.622	0.3	27 33 33 88 26 91 89 90 83 51 54 70 85 76	FASPVLVACAPNEY
1686	KSKSGGSSPMPDSSGQNK	11.6	65	889.9186	2	21.279	-2.1	39 27 68 74 71 59 84 95 87 80 80 78 79 61 47 36 51 35	KSKSGGSSPMPDSSGQNK
2063	MPKYF	3.2	65	343.1721	2	25.504	-1.2	79 79 65 71 26	MPKYF
2073	LLPVLYPPVTTLYYK	9.7	65	890.5162	2	25.631	-2.4	26 57 57 98 98 98 99 99 35 36 48 80 48 40 40	LLPVLYPPVTTLYYK
3286	Y(+79.97)PMAMLSSVAGPRW	9	65	823.3688	2	40.569	2.4	26 71 72 81 66 63 70 74 72 76 85 58 51 31	Y(+79.97)PMAMLSSVAGPRW
1557	SSSLATGLADVSK	8.4	64	412.5544	3	19.888	0.8	26 26 64 50 45 56 81 91 90 90 94 94 26	SSSLATGLADVSK
3426	EPGSLVDPANPL	7.7	64	604.8112	2	42.272	-0.4	86 85 79 80 86 26 86 57 53 37 46 47	EPGSLVDPANPL
3813	WALLDVAM(+15.99)TAGHA	8.4	64	686.3401	2	46.954	0.4	39 38 59 93 97 94 54 44 53 55 85 95 26	WALLDVAM(+15.99)TAGHA
618	KTDVPFELPA	6.4	64	558.8003	2	9.459	-0.1	65 64 84 82 69 69 69 55 49 33	KTDVPFELPA
3738	CPTTRERPEAV	7.1	64	629.8125	2	46.034	-2.4	51 60 60 70 87 86 60 83 54 46 46	CPTTRERPEAV
1389	TVDLSAVKV	5.8	64	466.2767	2	18.104	0.3	26 26 26 26 95 93 92 95 95	TVDLSAVKV
756	VMTDDKTA	5.1	64	880.4073	1	11.218	-0.8	26 92 91 80 65 62 68 26	VMTDDKTA
1066	FGVLALGMFF	6.4	64	551.2934	2	14.698	-0.4	26 97 95 92 63 45 54 62 79 26	FGVLALGMFF
1846	WMKVMPNAGAPL	7.7	64	657.8378	2	22.979	-1	38 59 49 89 92 94 80 77 72 38 39 39	WMKVMPNAGAPL

2955	GMKSDGTGAVNVK	8.4	64	632.3202	2	36.485	-2.4	26 92 91 94 90 85 49 44 53 54 47 57 48	GMKSDGTGAVNVK
1432	WGLLVPYDKA	6.4	64	581.3188	2	18.543	0.1	39 37 53 91 26 99 98 77 59 59	WGLLVPYDKA
2088	RCGSTVLADVSK	7.7	64	412.5516	3	25.806	-0.9	37 35 48 63 68 76 79 73 79 91 91 26	RCGSTVLADVSK
1625	YAAPDPVAGVNDYKNL	10.3	64	853.9227	2	20.63	-0.1	46 46 61 72 61 80 92 90 84 70 58 77 79 35 35 32	YAAPDPVAGVNDYKNL
665	FDETSGA	4.5	64	726.2942	1	10.074	0.2	26 26 97 93 89 89 26	FDETSGA
2134	CNLLYPAANLMR	7.7	64	460.2374	3	26.365	0.5	84 75 78 68 68 77 71 58 47 47 55 36	CNLLYPAANLMR
2022	MPGSLSTLAALAQL	9	64	686.8776	2	25.005	-1.9	91 91 89 90 66 57 70 71 78 64 36 30 30 29	MPGSLSTLAALAQL
3972	YPAGTDLETVNQMK	9	64	783.8766	2	48.92	-0.5	76 78 53 57 71 69 73 69 73 85 53 41 57 37	YPAGTDLETVNQMK
3640	YAAPPDVANGVDYK	9	64	740.3601	2	44.856	1.1	31 31 40 87 26 93 86 83 58 69 83 71 75 57	YAAPPDVANGVDYK
1809	ESFLPMLK	5.1	64	964.5176	1	22.581	0.5	26 92 92 94 71 43 50 41	ESFLPMLK
2638	YNQAGSGPAGCGGQAELK	11.5	64	854.3893	2	32.624	-2.3	80 68 37 46 49 86 71 64 62 54 56 75 78 65 77 64 70 46	YNQAGSGPAGCGGQAELK
1729	WLLAPMFGLW	6.4	64	617.3293	2	21.723	2.1	37 37 50 78 74 58 66 81 91 65	WLLAPMFGLW
1146	AEAKSSMLDATVK	8.3	64	675.8499	2	15.532	-0.6	47 48 64 82 97 94 50 48 71 88 50 41 46	AEAKSSMLDATVK
1722	TLEDQLSEL	5.8	64	1047.52	1	21.659	-0.7	51 53 75 76 53 72 63 71 59	TLEDQLSEL
3693	LAGLVDDKL	5.8	64	472.2763	2	45.497	-0.5	54 58 70 73 67 91 58 60 40	LAGLVDDKL
2059	VM(+15.99)FPDVF	4.5	64	870.4049	1	25.452	-1.9	26 26 89 89 79 68 68	VM(+15.99)FPDVF
905	M(+15.99)AKAEQSGGGEM(+15.99)RAPA	10.2	64	811.8684	2	12.951	2.2	37 38 57 98 94 75 73 70 70 80 91 85 53 36 30 30	M(+15.99)AKAEQSGGGEM(+15.99)RAPA
2854	TAFALEGGVGW	7	64	554.2781	2	35.23	2	26 26 26 88 85 62 61 56 77 94 98	TAFALEGGVGW
3406	RQTPPHWASR	6.4	64	412.552	3	42.029	2	51 44 54 80 87 26 91 74 76 51	RQTPPHWASR
1578	M(+15.99)AM(+15.99)EGASLQKEY	7.7	64	695.3041	2	20.104	-1.1	35 47 47 93 95 94 51 43 35 57 91 76	M(+15.99)AM(+15.99)EGASLQKEY
2003	MVLSGNEALGVALA	9	64	672.8625	2	24.777	-1	26 26 92 88 87 54 57 71 92 63 55 60 58 60	MVLSGNEALGVALA
3839	YLPAPKQHFTR	7	64	679.3715	2	47.269	-1.3	79 77 88 68 50 41 39 78 55 74 50	YLPAPKQHFTR
3685	S(+79.97)LAAEPR	4.5	64	823.3685	1	45.393	-3	95 91 91 89 26 26 26	S(+79.97)LAAEPR
1977	TLLSVACSLPRV	7.7	64	629.8638	2	24.471	1.4	59 68 87 85 78 62 63 64 65 51 54 26	TLLSVACSLPRV
3305	M(+15.99)VAPAVCTPPSAV	8.3	64	629.8118	2	40.797	-0.5	45 44 44 66 69 73 91 87 84 61 54 50 58	M(+15.99)VAPAVCTPPSAV
2423	SPNLMDF	4.5	64	823.3672	1	29.961	2.1	64 64 65 68 69 88 26	SPNLMDF
3306	HPVGPPMREPSPQDK	9.6	64	836.4155	2	40.807	-2	26 83 77 75 80 83 77 78 64 90 49 48 40 47 34	HPVGPPMREPSPQDK
3267	FAESADQVEDFAEK	8.9	64	793.354	2	40.337	-0.5	26 85 81 80 85 83 61 78 96 99 26 30 30 29	FAESADQVEDFAEK
2611	ELACPM(+15.99)APGGQNTKR	9.6	64	530.2574	3	32.288	0.3	36 41 51 81 77 76 74 76 88 79 74 64 50 53 30	ELACPM(+15.99)APGGQNTKR
1224	ANADVAQW	5.1	64	874.4043	1	16.361	-1.2	49 47 66 77 77 63 66 63	ANADVAQW
2827	S(+79.97)LAAPER	4.5	64	823.3688	1	34.904	-2.6	95 90 90 91 26 26 26	S(+79.97)LAAPER

1317	GCTAEHPAACSELLL	9.6	64	757.8547	2	17.346	2.9	59 68 86 92 94 26 30 75 86 81 74 56 59 38 26	GCTAEHPAACSELLL
4056	QELEAEGALEAV	7.7	64	629.8109	2	49.966	-1.3	35 36 59 65 80 92 76 68 73 57 59 59	QELEAEGALEAV
1459	EYPPLPEGVLFL	7.7	64	687.3712	2	18.809	0.1	93 93 93 96 26 85 84 49 46 35 32 29	EYPPLPEGVLFL
1197	LSSTEL	3.8	64	649.3403	1	16.076	0	26 26 95 90 95 48	LSSTEL
3731	GGFGSVVLADW	7	64	554.2768	2	45.954	-0.4	30 30 60 58 49 42 67 95 94 95 76	GGFGSVVLADW
843	KAEPAPEPV	5.7	64	469.2532	2	12.258	0.3	63 63 83 26 26 26 94 94 94	KAEPAPEPV
3660	MGPSLMATGTPPV	8.3	64	629.811	2	45.092	-1.6	59 48 37 69 69 87 93 74 66 65 68 63 26	MGPSLMATGTPPV
1149	KQYEEGGAAELEGSLK	10.2	64	854.9231	2	15.57	0.1	32 38 34 62 67 84 78 76 79 81 92 92 72 51 37 39	KQYEEGGAAELEGSLK
942	LDKMMPK	4.5	64	431.7301	2	13.35	0.5	70 55 59 77 68 65 48	LDKMMPK
3725	RVPSATSTPA	6.4	64	493.7667	2	45.882	-0.4	26 26 87 80 80 26 59 79 85 85	RVPSATSTPA
2281	FTLHDVDEM(+15.99)PCK	7.6	64	725.8217	2	28.187	1.4	51 55 84 88 90 90 90 90 26 30 35 29	FTLHDVDEM(+15.99)PCK
729	DFETSGA	4.5	64	726.2943	1	10.889	0.3	26 26 96 93 87 87 26	DFETSGA
2005	EPTEATKFGR	6.4	64	568.2904	2	24.797	-0.5	26 26 96 93 80 67 59 63 70 53	EPTEATKFGR
1839	TGM(+15.99)PPDVAGNVDYKVK	10.2	64	853.9236	2	22.904	-1.1	28 34 36 80 29 76 89 92 90 71 80 86 82 48 61 30	TGM(+15.99)PPDVAGNVDYKVK
2890	S(+79.97)LAGPGNK	5.1	64	823.3685	1	35.669	-3	96 92 81 73 56 41 40 26	S(+79.97)LAGPGNK
3211	EEPSDKVKVK	6.4	64	579.8215	2	39.634	-0.6	26 92 92 69 53 54 69 76 60 41	EEPSDKVKVK
2673	FAQM(+15.99)DEVKDNMNK	8.3	64	793.3553	2	33.057	3.1	74 80 74 97 98 96 75 41 40 34 35 42 36	FAQM(+15.99)DEVKDNMNK
3975	GT(+79.97)ADVVAVVKGPTDA	9.5	64	740.3595	2	48.962	1.9	43 55 71 79 70 60 50 53 74 69 68 77 76 73 26	GT(+79.97)ADVVAVVKGPTDA
1467	TNTSDGVRPFVA	7.6	64	632.3204	2	18.906	0.7	33 31 50 64 92 92 92 83 74 41 50 55	TNTSDGVRPFVA
951	QESQLAGEYKEA	7.6	64	676.8197	2	13.455	-0.5	38 39 44 43 83 90 92 94 96 54 43 42	QESQLAGEYKEA
1019	SM(+15.99)LCKK	3.8	64	363.1884	2	14.193	1.5	97 95 64 57 40 26	SM(+15.99)LCKK
743	NKKLHPTGGPGMY	8.3	64	700.3631	2	11.061	2.8	32 32 43 64 74 82 82 73 78 83 75 77 26	NKKLHPTGGPGMY
2554	S(+79.97)LASHTK	4.4	64	823.3685	1	31.587	-2.9	96 96 84 48 47 45 26	S(+79.97)LASHTK
3376	EFPGLFHNLRK	7	64	679.3716	2	41.667	-1.2	90 90 84 79 67 72 85 39 30 30 28	EFPGLFHNLRK
1882	FGGELVAGGVCV	7.6	64	1107.551	1	23.387	0.4	28 78 77 79 93 83 52 52 73 44 42 55	FGGELVAGGVCV
3996	LLHHAAGMLNLVCR	8.9	64	516.6157	3	49.216	1.9	96 94 94 67 68 58 56 59 69 41 41 46 49 42	LLHHAAGMLNLVCR
2418	WSDMENGELDLK	7.6	64	718.8233	2	29.896	2.2	26 26 97 94 86 71 72 56 48 53 77 50	WSDMENGELDLK
1302	LYPRGCAKTVHLK	8.3	63	743.4194	2	17.184	-3	69 68 90 59 53 60 68 78 73 75 44 50 32	LYPRGCAKTVHLK
2499	VFDARGAQSSNMEAWK	10.2	63	599.618	3	30.912	0.6	51 54 50 53 53 46 38 38 85 96 82 90 82 68 72 50	VFDARGAQSSNMEAWK
2253	SCDPVLVAGNVDYK	8.9	63	740.36	2	27.841	-1.4	26 26 26 26 26 92 90 92 91 73 81 81 84 66	SCDPVLVAGNVDYK
760	SAETELGSLA	6.3	63	489.243	2	11.271	0.2	65 68 90 86 70 38 37 37 66 71	SAETELGSLA

3534	FAESADGAVEDFEKA	9.5	63	793.3564	2	43.572	2.5	26 78 69 64 68 79 73 75 90 94 99 26 34 37 31	FAESADGAVEDFEKA
2977	M(+15.99)EPCGSTLDVAAGPCLK	10.8	63	854.3895	2	36.752	-1.9	26 26 71 63 71 91 90 81 73 60 61 67 70 64 57 59 39	M(+15.99)EPCGSTLDVAAGPCLK
2485	YPCLDL	3.8	63	723.3372	1	30.735	-1.3	67 67 67 96 26 54	YPCLDL
2878	KTKKDDPSGDSCYVEKVV	11.4	63	666.6657	3	35.519	-1.1	61 64 84 77 75 63 55 64 42 40 40 71 70 81 70 69 81 26	KTKKDDPSGDSCYVEKVV
1949	FGDALAAVTGW	7	63	554.2773	2	24.129	0.4	41 57 76 95 95 81 51 45 50 74 26	FGDALAAVTGW
1113	DDLQAEEDQVSK	7.6	63	688.8125	2	15.186	0.1	29 32 32 45 90 95 95 89 51 78 92 26	DDLQAEEDQVSK
3348	M(+15.99)NLSHQLTSYYAA	8.2	63	757.8524	2	41.318	2.1	54 49 75 81 76 57 75 67 68 65 56 57 37	M(+15.99)NLSHQLTSYYAA
1051	EPAVCGALK	5.7	63	444.2362	2	14.527	-0.3	26 63 48 41 50 66 86 89 95	EPAVCGALK
841	NLETEKDDLK	6.3	63	602.8065	2	12.227	0.2	56 65 90 92 65 43 54 54 66 43	NLETEKDDLK
1779	WVPDNAMGEQLDNLRK	10.1	63	629.3129	3	22.257	0.9	36 36 66 70 36 41 48 75 77 69 96 95 82 57 69 49	WVPDNAMGEQLDNLRK
2799	EAYLPMLK	5.1	63	482.762	2	34.581	-0.4	26 79 78 90 86 53 55 36	EAYLPMLK
2098	DLVNLNM(+15.99)TVF	6.3	63	591.2955	2	25.938	-2.8	26 65 54 46 52 61 71 75 82 94	DLVNLNM(+15.99)TVF
3012	EPGSLDVPGQPL	7.6	63	604.8116	2	37.182	0.3	90 90 85 87 93 26 26 65 52 29 49 60	EPGSLDVPGQPL
2207	LGVLDLAGF	5.7	63	904.5139	1	27.265	0.1	39 35 37 72 81 69 57 80 93	LGVLDLAGF
3004	NVEFGSDVECASEPV	9.5	63	791.3394	2	37.086	-1.5	38 38 53 78 64 62 74 77 75 75 70 70 58 60 48	NVEFGSDVECASEPV
1889	NNKNGALVEDLMVDVWV	10.7	63	639.3232	3	23.461	-1.5	35 33 30 32 37 48 50 61 90 95 95 95 95 95 69 53 52	NNKNGALVEDLMVDVWV
3251	Y(+79.97)LRASPCGSGLAKLDNLGVK	12.6	63	714.6977	3	40.131	0.4	32 37 30 39 42 51 45 43 51 66 73 84 87 87 87 74 83 80 78 83	Y(+79.97)LRASPCGSGLAKLDNLGVK
4083	M(+15.99)TLVPVNGEEGCW	8.2	63	725.8202	2	50.307	-0.8	59 61 85 89 80 73 54 63 65 65 49 44 26	M(+15.99)TLVPVNGEEGCW
3824	LKVLDNEI	5	63	472.2763	2	47.093	-0.6	67 65 72 59 71 52 62 52	LKVLDNEI
3467	M(+15.99)DMVY(+79.97)	3.2	63	377.6133	2	42.767	0.9	26 26 87 87 87	M(+15.99)DMVY(+79.97)
1390	LQELL	3.2	63	615.3712	1	18.111	0.1	74 60 76 78 26	LQELL
1097	AEVAETQVNKLR	7.6	63	679.3748	2	15.005	-0.7	29 29 29 93 93 87 57 80 55 74 77 47	AEVAETQVNKLR
3142	Y(+79.97)NGALPRLVVVYVEYY	10.1	63	666.6651	3	38.779	1.7	45 44 38 56 44 39 45 69 72 83 85 89 90 85 92 26	Y(+79.97)NGALPRLVVVYVEYY
1210	RCNLSGAAGPVK	7.6	63	586.8123	2	16.209	-2.5	45 45 55 65 61 56 56 65 61 75 82 84	RCNLSGAAGPVK
1896	ACMPPDVAGNVDYKDYK	10.7	63	943.4267	2	23.536	0.1	28 39 42 85 75 85 93 92 70 55 60 93 70 51 41 43 42	ACMPPDVAGNVDYKDYK
1325	TLMLGALCMPVLL	8.2	63	458.9236	3	17.421	0.3	77 70 49 46 50 61 85 88 89 92 44 35 27	TLMLGALCMPVLL
3304	MVGVGGTGEVAI	7.6	63	545.2841	2	40.787	0.1	58 59 71 74 63 63 55 56 58 57 74 63	MVGVGGTGEVAI
870	EQFEEEQEAK	6.3	63	633.7776	2	12.558	-0.2	35 35 30 47 98 94 78 74 77 57	EQFEEEQEAK
1378	SSSDKVLADEGKKK	8.8	63	497.9371	3	17.983	-2.9	26 52 64 53 53 61 94 93 93 79 76 79 26 26	SSSDKVLADEGKKK
1979	LVAKDFNGAPW	6.9	63	609.3198	2	24.491	0.9	81 68 63 48 48 88 69 60 60 75 26	LVAKDFNGAPW
3576	SPNLMDF	4.4	63	823.3674	1	44.085	2.4	65 65 60 63 67 91 26	SPNLMDF

2947	M(+15.99)S(+79.97)LKRAAMLAPHHI	8.8	63	836.416	2	36.377	1.5	26 26 85 80 65 60 72 66 73 78 67 75 75 26	M(+15.99)S(+79.97)LKRAAMLAPHHI
2970	NHLEEGYMDLMV	7.5	63	725.8209	2	36.666	0.4	43 43 47 81 80 75 72 77 49 61 77 43	NHLEEGYMDLMV
3496	MDLPTF	3.8	63	723.3376	1	43.12	-0.8	76 76 85 55 55 26	MDLPTF
3027	MEKCGPAKSSNMGNKSK	10.7	63	599.6184	3	37.364	-2.4	33 32 32 36 61 69 65 70 93 96 88 84 68 58 71 75 26	MEKCGPAKSSNMGNKSK
761	GTSPNLSAGA	6.3	63	437.7169	2	11.281	0.2	29 33 38 58 57 91 97 97 98 26	GTSPNLSAGA
2927	VRLPEDAMMPGYF	8.2	63	763.3638	2	36.129	1.7	44 37 43 58 64 61 76 91 95 84 63 59 35	VRLPEDAMMPGYF
2261	MMS(+79.97)GRCDCVY(+79.97)Y(+79.97)	6.9	63	523.1135	3	27.94	-42.6	26 73 50 70 74 75 68 75 75 73 26	MMS(+79.97)GRCDCVY(+79.97)Y(+79.97)
2923	ELELAPGAAVSGI	8.2	63	613.8351	2	36.076	0.3	26 52 74 81 74 66 53 55 53 58 60 78 80	ELELAPGAAVSGI
2379	M(+15.99)EHGVVAMLVKK	7.5	63	679.3716	2	29.416	2.1	26 93 85 80 76 66 61 45 46 66 67 38	M(+15.99)EHGVVAMLVKK
2719	MTAQLVSEV	5.6	63	977.4969	1	33.607	-0.3	93 92 86 59 76 77 26 26 26	MTAQLVSEV
3289	M(+15.99)MCNCGCAAY(+79.97)	6.3	63	581.6481	2	40.602	-0.4	26 91 62 52 86 74 54 56 64 57	M(+15.99)MCNCGCAAY(+79.97)
2301	M(+15.99)CLLGTPLSSNPVCMSK	10.7	63	599.6184	3	28.446	-0.3	43 42 45 48 38 39 63 69 99 95 84 77 68 62 62 77 48	M(+15.99)CLLGTPLSSNPVCMSK
945	KLDLPEATKEKK	7.5	63	467.2766	3	13.389	-0.2	71 46 42 59 78 97 96 82 34 33 64 45	KLDLPEATKEKK
1236	SDLTEQI	4.4	63	805.3928	1	16.48	-1.1	26 81 81 83 50 63 52	SDLTEQI
1740	AEPVEALVNSK	6.9	63	578.8141	2	21.83	0.2	26 80 69 68 69 78 72 51 45 69 57	AEPVEALVNSK
3569	DNFKVLADASR	6.9	63	618.3239	2	44.002	2.2	39 44 47 87 66 59 63 67 78 82 51	DNFKVLADASR
3258	VLPLLGW	4.4	63	399.2503	2	40.218	1.8	26 75 63 52 80 88 51	VLPLLGW
3097	YPGGDALNEMELGA	8.8	63	718.8236	2	38.211	2.6	48 43 47 50 47 50 72 57 77 85 87 66 67 72	YPGGDALNEMELGA
2267	WKTRCVADLTW	6.9	63	460.237	3	28.015	2.1	55 55 42 60 64 85 79 73 68 66 37	WKTRCVADLTW
3617	STKSDGVRQNTA	7.5	63	632.3204	2	44.565	3.7	63 72 87 88 86 80 68 45 44 34 48 30	STKSDGVRQNTA
946	ADAKSY	3.8	63	654.3102	1	13.396	1.5	55 58 85 76 73 26	ADAKSY
2014	LKLGTLEEMVGDEAGRV	10.6	63	908.9766	2	24.912	-0.7	27 35 49 60 65 90 95 94 68 57 57 77 83 57 47 46 48	LKLGTLEEMVGDEAGRV
1605	KKTLAPYNMEASGDDNLPPK	12.5	63	730.3694	3	20.41	1.4	83 85 59 56 44 36 37 44 39 60 62 60 57 76 90 80 83 86 77 26	KKTLAPYNMEASGDDNLPPK
935	SVAGDNSPSLK	6.9	63	537.7756	2	13.278	1.5	31 31 31 66 72 77 85 87 75 80 48	SVAGDNSPSLK
3527	LFAGMVGATNDKDEV	9.4	63	783.877	2	43.489	0	57 62 91 95 97 94 55 43 50 61 61 56 39 41 28	LFAGMVGATNDKDEV
1189	QMEMNELDGELKK	8.1	62	782.8715	2	15.98	0.7	64 77 90 84 39 40 82 80 66 49 44 52 40	QMEMNELDGELKK
1151	M(+15.99)CPMAELAGPRVNSK	9.4	62	810.3909	2	15.586	2.6	26 65 65 69 87 88 87 78 76 80 46 34 33 49 47	M(+15.99)CPMAELAGPRVNSK
3604	M(+15.99)VFLPLADASR	6.9	62	412.5521	3	44.417	-2.9	26 26 26 27 85 94 91 89 80 81 57	M(+15.99)VFLPLADASR
2215	NLEVTVK	4.4	62	401.7371	2	27.359	0	26 99 90 90 44 51 33	NLEVTVK
921	RTLAAGDEEMEKLK	8.7	62	530.9434	3	13.131	0	30 31 37 52 67 73 88 96 26 86 84 81 90 26	RTLAAGDEEMEKLK
948	RNEGFSPRR	5.6	62	559.7938	2	13.414	-0.9	72 56 50 64 89 89 84 26 26	RNEGFSPRR

925	TSRSSRTDA	5.6	62	490.7412	2	13.168	-0.4	46 52 73 26 78 79 87 90 26	TSRSSRTDA
1381	YAPEELKCAA	6.2	62	547.7633	2	18.01	0.8	26 26 26 26 97 96 95 75 67 84	YAPEELKCAA
1799	DSDLEAEASAGLFGLL	10	62	804.3953	2	22.467	2.3	26 82 85 94 97 97 92 64 43 42 49 50 51 41 47 29	DSDLEAEASAGLFGLL
3474	EPTEKTAFGR	6.2	62	568.2906	2	42.849	-0.1	26 26 98 94 76 62 57 70 70 38	EPTEKTAFGR
3483	STQSDGVRQSKA	7.5	62	632.3196	2	42.963	2.5	60 60 55 88 93 92 91 75 31 31 32 36	STQSDGVRQSKA
3096	LLDM(+15.99)APMVYLRPL	8.1	62	516.6154	3	38.201	-0.6	87 57 43 42 56 61 66 77 84 84 46 64 35	LLDM(+15.99)APMVYLRPL
2760	FGGADALVAGMVK	8.1	62	618.3245	2	34.096	-2.9	27 60 80 91 92 81 81 60 54 53 45 45 34	FGGADALVAGMVK
1001	ELVVTVQELVDASER	9.3	62	562.9667	3	13.985	-3	46 46 46 26 52 48 44 91 96 95 89 86 65 64 31	ELVVTVQELVDASER
2643	YLPGGNSKHKTR	7.5	62	679.3715	2	32.69	1.8	85 83 92 86 48 46 55 88 44 40 42 33	YLPGGNSKHKTR
4034	LYPPANPACRKK	7.5	62	679.3722	2	49.698	-2.8	71 71 95 76 66 49 65 63 61 51 48 26	LYPPANPACRKK
2398	SDVPAVGAELVGL	8.1	62	613.8345	2	29.654	-0.6	81 81 81 49 36 34 52 68 60 56 49 78 78	SDVPAVGAELVGL
3219	GMQSANVGGTTKL	8.1	62	632.3199	2	39.743	-2.9	63 63 73 89 79 64 79 78 60 58 36 30 28	GMQSANVGGTTKL
4152	MVAETGNALLA	6.8	62	545.2849	2	51.163	1.6	93 93 92 88 47 45 50 52 46 37 36	MVAETGNALLA
2274	MPMVTTGGAKF	6.8	62	570.2843	2	28.1	2.2	80 84 74 73 74 59 54 54 46 45 36	MPMVTTGGAKF
2937	M(+15.99)TVSADQVEDFGASL	9.3	62	793.354	2	36.259	-2.7	38 38 42 71 70 78 53 67 93 98 95 73 38 35 36	M(+15.99)TVSADQVEDFGASL
2085	MDLFGNSSLAR	6.8	62	605.7996	2	25.777	2.7	69 69 93 86 86 49 44 62 43 44 32	MDLFGNSSLAR
730	Y(+79.97)LPM(+15.99)SEVAHKA	6.8	62	671.2989	2	10.898	-0.2	26 47 44 79 86 91 86 85 54 51 30	Y(+79.97)LPM(+15.99)SEVAHKA
2821	TM(+15.99)LSCAGGGYEAFK	8.7	62	725.8212	2	34.833	0.8	57 55 82 77 67 63 63 47 54 68 82 61 49 37	TM(+15.99)LSCAGGGYEAFK
1599	KPGSDNVTTVFHA	8.1	62	686.8453	2	20.341	-1.5	73 73 78 83 74 68 89 74 45 40 50 26 26	KPGSDNVTTVFHA
1158	NLQQEI	3.7	62	744.3887	1	15.658	0.2	52 70 63 49 91 45	NLQQEI
2067	LLDGGSLGPSPI	7.5	62	1125.614	1	25.557	-0.9	78 80 80 91 77 61 62 64 69 26 26 26	LLDGGSLGPSPI
1420	MVDVSSAATL	6.2	62	993.4928	1	18.415	0.7	26 65 60 60 61 53 54 75 80 83	MVDVSSAATL
919	ALGKGGYDKYV	6.8	62	1170.617	1	13.099	1.9	55 52 68 69 77 82 73 63 41 50 47	ALGKGGYDKYV
3779	EQLFEI	3.7	62	778.3978	1	46.529	-0.3	43 41 49 52 91 94	EQLFEI
4028	KSGMDGNSGLKVA	8.1	62	632.3201	2	49.625	-2.6	43 39 37 40 86 89 72 69 66 56 60 78 64	KSGMDGNSGLKVA
1221	MVSQNGTGANTLL	8.1	62	653.3267	2	16.331	-0.5	86 86 86 66 59 61 47 47 41 40 61 84 36	MVSQNGTGANTLL
1767	DVLASMGQL	5.6	62	933.4713	1	22.129	0.3	26 94 94 82 69 51 47 50 39	DVLASMGQL
3850	FAESADQVEDFEKA	8.7	62	793.3533	2	47.4	-1.4	26 91 88 78 75 57 41 55 87 98 26 49 51 39	FAESADQVEDFEKA
2039	YVKPPVDF	5	62	482.7618	2	25.215	2.7	26 26 47 47 87 86 86 86	YVKPPVDF
1192	GRNLKNR	4.3	62	429.2567	2	16.015	-0.3	47 55 70 73 65 67 54	GRNLKNR
1545	VLNLCHKQPKLVSLS(+79.97)V	9.9	62	620.0068	3	19.757	2.2	91 91 82 78 62 49 36 32 50 49 85 89 54 54 54 26	VLNLCHKQPKLVSLS(+79.97)V

4104	M(+15.99)LQMVTTAGQKDDL	8.7	62	783.877	2	50.555	-2.3	62 61 59 96 95 95 61 48 52 35 37 56 76 26	M(+15.99)LQMVTTAGQKDDL
1505	LEELESNGLEAEGV	8.7	62	744.8569	2	19.306	0.2	26 26 26 99 95 52 37 47 87 97 94 56 56 59	LEELESNGLEAEGV
2023	AVFPSLACL	5.6	62	920.4907	1	25.016	-0.3	56 61 88 95 26 83 54 56 33	AVFPSLACL
1956	RRYTKKLGHLSDLTEKLNDY(+79.97)	12.4	62	844.0972	3	24.216	-1.6	26 32 36 38 48 48 42 49 72 89 94 94 94 94 93 84 76 41 52 28	RRYTKKLGHLSDLTEKLNDY(+79.97)
2875	MLGEGASGVGLV	7.4	62	545.2841	2	35.476	0.1	54 56 63 82 50 42 36 37 50 85 89 93	MLGEGASGVGLV
1392	CMFEKKSGPTPT(+79.97)QTV	9.3	62	867.3876	2	18.126	2.3	26 26 26 89 89 98 94 81 74 70 67 84 31 31 33	CMFEKKSGPTPT(+79.97)QTV
1732	M(+15.99)VDPVF	3.7	62	723.3381	1	21.758	-0.1	97 97 97 26 26 26	M(+15.99)VDPVF
1579	GTFPPDVADTFSNK	8.7	62	748.3578	2	20.112	1.4	38 37 54 96 96 83 76 75 62 59 42 42 52 45	GTFPPDVADTFSNK
3707	TFGPYSLAADFYK	8	62	740.3597	2	45.667	-2.1	31 31 52 92 82 70 71 64 52 51 72 72 56	TFGPYSLAADFYK
2169	VM(+15.99)DDLAALSSNMEAVSK	10.5	62	599.6184	3	26.796	0.1	44 44 46 55 54 58 76 70 78 96 84 81 71 45 40 47 50	VM(+15.99)DDLAALSSNMEAVSK
3588	GFGELLNGCVV	6.8	62	554.2773	2	44.223	-2.5	27 27 96 96 90 53 52 67 52 52 61	GFGELLNGCVV
1735	DFETSQLI	4.9	62	952.4618	1	21.779	-0.4	26 26 98 95 84 57 78 26	DFETSQLI
973	LKEEAGEAL	5.6	62	959.5042	1	13.672	-0.2	44 43 73 87 65 57 51 60 71	LKEEAGEAL
2569	LRSAGAMMAMNKFPF	9.3	62	836.4143	2	31.768	2.7	37 38 44 51 66 63 76 76 76 77 77 81 67 61 26	LRSAGAMMAMNKFPF
2109	LQTLLDQI	4.9	62	472.2768	2	26.073	0.5	81 60 55 56 81 50 57 50	LQTLLDQI
526	MKGQEGS(+79.97)SGGELA	8	62	665.7698	2	8.06	-1.6	78 71 93 68 89 90 88 41 48 40 29 29 31	MKGQEGS(+79.97)SGGELA
661	TENGEFGR	4.9	62	455.2066	2	10.017	-0.1	26 97 94 86 85 32 39 30	TENGEFGR
3507	LYPWTRHKEK	6.2	62	679.3708	2	43.251	-2.3	77 76 90 87 70 46 46 35 48 37	LYPWTRHKEK
726	GYKPMDCT(+79.97)A	5.5	62	533.1915	2	10.843	-2.3	37 46 53 74 65 77 84 86 26	GYKPMDCT(+79.97)A
909	ALQESHQQTL	6.2	62	577.7953	2	13.005	2.9	61 63 52 89 88 51 44 40 76 49	ALQESHQQTL
3648	EQLFELS(+79.97)LKNVR	7.4	62	778.3978	2	44.947	0.2	46 45 53 67 86 90 71 79 71 41 44 40	EQLFELS(+79.97)LKNVR
1006	AQEQEKEY	4.9	62	1024.46	1	14.045	1.7	57 45 60 54 90 51 82 50	AQEQEKEY
871	M(+15.99)VGNGAPLGAPGAGQA	9.8	62	692.3369	2	12.566	-1.3	74 63 48 42 64 72 75 72 57 55 58 46 51 55 57 89	M(+15.99)VGNGAPLGAPGAGQA
2227	CVGPSVSGTELEMGA	9.2	62	718.8231	2	27.511	-0.5	33 33 73 93 93 68 61 49 59 76 44 39 40 69 84	CVGPSVSGTELEMGA
1282	LLKDPEATGSLKKEF	9.2	62	559.3144	3	16.979	1.3	30 35 34 55 90 89 88 92 84 60 60 82 41 42 33	LLKDPEATGSLKKEF
1810	GELLVGQM(+15.99)L	5.5	62	975.5152	1	22.589	-2.8	36 36 84 81 69 68 48 82 45	GELLVGQM(+15.99)L
2758	MGKSDGTRLADL	7.4	61	632.3203	2	34.076	-2.2	26 88 84 86 87 86 60 53 50 40 42 30	MGKSDGTRLADL
1804	KEKELGNKVDDLEGSLEQEK	12.3	61	763.3917	3	22.525	-0.5	35 35 44 45 34 35 38 50 71 89 96 97 95 92 88 88 75 38 44 32	KEKELGNKVDDLEGSLEQEK
1589	MGANHKNETMPLHETMK	10.4	61	656.9736	3	20.223	-1.3	34 34 38 53 52 45 46 51 85 87 92 75 68 72 71 79 56	MGANHKNETMPLHETMK
2571	LKRGNNNK	4.9	61	472.2764	2	31.802	2.6	26 26 65 64 64 87 81 75	LKRGNNNK
1031	MWEVGMDA	4.9	61	938.377	1	14.328	2.5	26 81 77 55 58 74 90 26	MWEVGMDA

883	MKLDQGCAGGATSA	8.6	61	655.2966	2	12.703	-1.2	30 34 41 59 41 60 81 76 78 60 59 75 76 82	MKLDQGCAGGATSA
958	WVAVSNKAAKNAAFAAHK	11.1	61	628.6788	3	13.526	-1.1	46 43 44 58 71 41 55 51 88 89 78 86 93 60 43 54 56 39	WVAVSNKAAKNAAFAAHK
1059	TNLEPFQSLGAAGLQKK	10.4	61	601.3304	3	14.628	-2.1	32 32 58 63 59 58 49 86 92 88 89 94 82 52 36 40 26	TNLEPFQSLGAAGLQKK
1480	QM(+15.99)GGQDDLAVTYQGNSK	10.4	61	914.4141	2	19.038	1.7	62 81 82 50 43 89 96 92 73 38 33 34 37 38 38 73 76	QM(+15.99)GGQDDLAVTYQGNSK
867	WVDDSMQEAR	6.1	61	618.7706	2	12.528	2	26 26 26 26 92 91 76 87 90 68	WVDDSMQEAR
3078	LLGSLVDPM(+15.99)TF	6.8	61	604.814	2	37.979	-1.8	94 95 94 95 96 26 26 26 40 40 40	LLGSLVDPM(+15.99)TF
681	T(+79.97)VSSNS(+79.97)MW	4.9	61	536.1648	2	10.284	-2.8	64 62 55 53 58 90 77 26	T(+79.97)VSSNS(+79.97)MW
757	WSDQQDPLS(+79.97)DFPY	8	61	839.3271	2	11.229	0.1	26 72 53 45 45 57 66 85 80 74 81 81 26	WSDQQDPLS(+79.97)DFPY
2235	QMCNVRLSSNMEAVSK	9.8	61	599.6187	3	27.618	-2	49 49 42 39 44 55 66 86 95 83 91 82 47 40 49 56	QMCNVRLSSNMEAVSK
1534	CKS(+79.97)LSNTLGPKPLGADR	10.4	61	918.9529	2	19.631	-2.9	28 28 60 65 92 75 86 49 35 28 58 88 57 52 70 73 89	CKS(+79.97)LSNTLGPKPLGADR
3075	CASLLDLADVSK	7.4	61	412.2154	3	37.949	-2.4	65 50 42 45 44 60 70 69 77 91 91 26	CASLLDLADVSK
3583	M(+15.99)LGLPGCEAGVPV	8	61	629.8114	2	44.163	-1.1	34 33 44 81 61 58 76 68 60 56 55 82 82	M(+15.99)LGLPGCEAGVPV
1356	LCPGTLDELEAV	7.3	61	630.3125	2	17.739	-0.9	26 38 43 47 77 82 91 86 83 53 53 50	LCPGTLDELEAV
2143	MPLTGSVLF	5.5	61	482.7624	2	26.474	0.3	83 80 79 64 53 63 71 26 26	MPLTGSVLF
1024	MEQPLEQLK	5.5	61	558.2914	2	14.254	-1	76 76 67 95 91 44 33 34 30	MEQPLEQLK
3564	NTVADLMR	4.9	61	460.2368	2	43.939	-0.3	65 74 91 89 67 36 35 30	NTVADLMR
2161	S(+79.97)LAEPRA	4.3	61	823.3694	1	26.687	-1.8	93 93 93 26 39 49 33	S(+79.97)LAEPRA
2815	GCTAEHGGGNGSRRR	9.2	61	757.8525	2	34.764	-0.8	47 58 76 91 87 86 72 40 49 53 72 77 36 36 31	GCTAEHGGGNGSRRR
1787	DGLVDAELGGGSGLDNLQR	11.6	61	943.4678	2	22.337	1.7	31 31 35 41 47 85 92 89 88 75 40 68 75 82 88 64 46 46 31	DGLVDAELGGGSGLDNLQR
2901	LKDVLDQL	4.9	61	472.2767	2	35.808	0.4	79 56 52 54 91 49 55 49	LKDVLDQL
3722	FDVPM(+15.99)VLK	4.9	61	482.7618	2	45.85	-0.9	83 83 83 26 64 51 59 36	FDVPM(+15.99)VLK
2662	MGLKGSVLAFGF	7.3	61	613.8351	2	32.92	2.3	62 62 84 72 51 43 54 55 53 57 61 73	MGLKGSVLAFGF
1901	YLLEEKPK	4.9	61	510.2923	2	23.594	0.2	76 76 94 93 41 39 40 26	YLLEEKPK
2147	NLEVTVK	4.3	61	401.7367	2	26.526	-0.9	26 99 91 91 45 37 34	NLEVTVK
821	ATVPDATHFLRV	7.3	61	663.8599	2	12.003	-3	33 32 35 94 87 81 66 68 85 54 54 40	ATVPDATHFLRV
1038	MELSLHGAGV	6.1	61	507.2568	2	14.403	-2	34 35 37 82 88 85 78 56 54 56	MELSLHGAGV
1549	EGLPDGKF	4.9	61	862.4303	1	19.794	-0.1	37 37 79 80 74 63 70 44	EGLPDGKF
3904	KVVGSK	3.7	61	309.2032	2	48.067	1.9	26 86 76 76 74 26	KVVGSK
2163	TSQSDGVRQGTK	7.3	61	632.3196	2	26.721	2.4	73 70 60 87 90 78 75 62 32 31 34 35	TSQSDGVRQGTK
1470	QSRESEKSSNMEAVSK	9.8	61	599.6187	3	18.93	-1.5	32 31 36 34 32 31 32 93 97 89 93 80 71 67 75 77	QSRESEKSSNMEAVSK
666	EQEVLRHTFM(+15.99)W	6.7	61	746.3552	2	10.086	-1.1	41 40 62 60 67 72 55 80 64 63 61	EQEVLRHTFM(+15.99)W

1563	FNCSPNTRLSK	6.7	61	422.8797	3	19.949	-1.2	57 51 69 46 44 40 68 88 79 80 44	FNCSPNTRLSK
1199	QQQEFVFRTSHRTSSNL	10.4	61	689.0107	3	16.09	-1.7	43 43 45 55 52 84 83 85 61 82 79 60 55 74 47 48 33	QQQEFVFRTSHRTSSNL
2157	LADLLGF	4.3	61	748.4243	1	26.649	0.5	44 42 58 76 72 85 46	LADLLGF
3371	VMGQTGVDVAL	6.7	61	545.2833	2	41.602	-1.2	68 71 85 78 56 42 44 60 67 67 26	VMGQTGVDVAL
3820	LHAEHVSASSNMCPVSK	10.4	61	599.6188	3	47.039	0	40 40 70 85 85 50 44 47 89 85 76 76 58 58 73 26 26	LHAEHVSASSNMCPVSK
3047	LYPSSPGLAGPLSV	8.5	61	679.3718	2	37.608	0.3	72 72 80 76 76 57 46 48 59 79 70 60 26 26	LYPSSPGLAGPLSV
1531	M(+15.99)PSGPAAMAPM(+15.99)EA	7.9	61	646.7695	2	19.592	-0.2	77 77 77 57 53 61 70 74 64 59 67 26 26	M(+15.99)PSGPAAMAPM(+15.99)EA
2159	S(+79.97)PM(+15.99)LALEV	4.9	61	955.4234	1	26.668	2.9	26 92 69 66 89 50 50 41	S(+79.97)PM(+15.99)LALEV
1733	GYPLALGV	4.9	61	789.45	1	21.764	-0.5	29 47 74 72 60 51 75 76	GYPLALGV
2387	VDSSLGSSLLGLLLVDDTPA	12.2	61	658.0198	3	29.513	-1.8	86 85 85 33 30 33 48 90 91 72 64 82 83 51 44 48 53 53 54 26	VDSSLGSSLLGLLLVDDTPA
2826	WANPLLKGRPT(+79.97)K	7.3	61	487.5962	3	34.894	-2.2	76 55 38 43 68 75 75 84 81 77 26 26	WANPLLKGRPT(+79.97)K
1914	MKTLVNSPNQGTMPDYVWL	11.6	61	1097.539	2	23.732	1.1	30 30 32 70 85 85 85 69 54 37 40 66 77 82 84 87 53 43 39	MKTLVNSPNQGTMPDYVWL
1231	KLDLVDQLK	5.5	61	357.8847	3	16.427	-1	48 36 36 61 98 94 62 67 42	KLDLVDQLK
3582	YPETVGL	4.3	61	778.3979	1	44.154	-0.3	83 83 83 51 31 31 62	YPETVGL
2764	WVM(+15.99)WLLSSNMGNQSK	9.1	61	599.6188	3	34.147	-2.1	26 26 26 54 87 63 88 96 88 85 64 56 47 50 49	WVM(+15.99)WLLSSNMGNQSK
3879	WPSLDVSRFGHA	7.3	61	686.3442	2	47.764	0.5	34 34 74 96 97 98 85 65 48 44 26 26	WPSLDVSRFGHA
847	KAEPAPEPV	5.5	61	937.4982	1	12.295	-0.7	67 67 75 26 26 26 85 85 85	KAEPAPEPV
2584	GMEVYMSAAVEGMVVGLV	11	61	921.4448	2	31.958	-1.2	58 68 86 97 91 71 43 43 48 47 53 60 66 85 70 33 31 36	GMEVYMSAAVEGMVVGLV
1655	YT(+79.97)SKEPKNKDVTLPTNVK	11	61	1071.547	2	20.961	0.7	64 59 40 32 32 54 79 74 85 90 72 70 80 50 45 46 67 48	YT(+79.97)SKEPKNKDVTLPTNVK
4286	LLLPKFPV	4.9	61	463.8068	2	52.921	-1.1	26 62 81 79 88 49 49 49	LLLPKFPV
1938	KLCKLLPGMPYKLLYK	9.7	61	954.5642	2	24.001	-0.1	48 42 32 36 45 94 89 61 51 73 93 92 73 52 48 36	KLCKLLPGMPYKLLYK
1933	EVNAALLQDTGKPLL	9.1	61	791.4457	2	23.941	-0.3	31 31 38 96 97 96 82 69 77 37 37 44 64 75 31	EVNAALLQDTGKPLL
3257	TM(+15.99)LHDKGGTECDK	7.9	61	725.82	2	40.207	1.9	59 61 87 73 65 78 83 47 47 67 39 44 34	TM(+15.99)LHDKGGTECDK
3445	M(+15.99)VAAVAEMPGPAV	7.9	61	629.8124	2	42.501	0.6	66 54 54 44 41 58 85 77 51 58 68 63 65	M(+15.99)VAAVAEMPGPAV
1373	WLDVLTAHGKCWFY	8.5	61	580.286	3	17.929	1.5	38 55 35 55 57 45 45 61 83 89 92 48 71 71	WLDVLTAHGKCWFY
3268	EPTETAKFGR	6.1	61	568.291	2	40.348	0.5	26 26 91 91 66 58 60 66 71 46	EPTETAKFGR
3442	LYPWTRSGHLK	6.7	61	679.3725	2	42.469	0.2	73 73 93 90 77 47 49 43 40 45 33	LYPWTRSGHLK
1824	MWVYDDLTGKPNSKPAL	10.3	61	967.9888	2	22.737	1.2	34 56 48 92 96 98 94 87 84 70 45 42 55 40 29 28 26	MWVYDDLTGKPNSKPAL
1602	LSPLGSVVAK	6.1	61	485.8007	2	20.368	1	26 26 51 58 73 74 72 70 74 79	LSPLGSVVAK
3022	S(+79.97)LASHTK	4.3	61	823.3685	1	37.304	-3	95 95 74 47 39 46 26	S(+79.97)LASHTK
3407	M(+15.99)TLMMDGNKASPKLDL	9.7	61	594.2942	3	42.039	2.2	52 37 37 63 62 64 72 67 56 57 76 63 63 77 81 37	M(+15.99)TLMMDGNKASPKLDL

1243	EQETNGDKFAQAELQR	9.7	61	932.4426	2	16.546	-2.7	83 68 56 35 34 35 39 40 59 95 87 97 95 50 56 35	EQETNGDKFAQAELQR
2361	FPGKGSNGDSKVA	7.9	61	632.3196	2	29.192	-0.6	26 32 37 44 61 70 82 78 74 80 82 58 58	FPGKGSNGDSKVA
1408	QLDLVDQLKMK	6.7	61	444.2517	3	18.296	0.5	42 44 47 60 96 93 53 72 56 74 26	QLDLVDQLKMK
3768	LS(+79.97)CTGTCGVANS(+79.97)Y(+79.97)	7.9	61	758.2218	2	46.399	2	77 77 56 48 48 46 50 57 64 61 57 78 65	LS(+79.97)CTGTCGVANS(+79.97)Y(+79.97)
2778	TAFALVAGDGW	6.7	61	554.277	2	34.312	0	26 26 26 95 93 75 67 67 71 89 26	TAFALVAGDGW
1702	MEAVLGQV	4.9	61	846.4388	1	21.453	-0.2	26 94 91 89 52 48 39 41	MEAVLGQV
1084	DGLLSKDDLR	6.1	61	377.872	3	14.88	1	34 34 67 85 81 75 76 51 57 40	DGLLSKDDLR
3473	FVGYHLADVSK	6.7	61	412.5522	3	42.839	0.1	26 42 39 38 59 79 81 84 93 93 26	FVGYHLADVSK
1690	CPQGMGFKF	5.5	61	507.7305	2	21.324	0.2	72 71 41 42 56 85 74 74 26	CPQGMGFKF
2341	YNNAGNNQGDELK	7.9	61	718.8241	2	28.935	0.6	79 66 48 41 43 47 54 60 61 62 79 84 58	YNNAGNNQGDELK
3109	WLS(+79.97)NGGVPPKLPL	7.9	61	486.5896	3	38.363	-0.6	65 53 34 49 64 56 52 82 75 75 69 75 31	WLS(+79.97)NGGVPPKLPL
2539	WGAAGTMVAMGKAK	8.5	61	460.2365	3	31.394	-1.3	80 63 63 41 37 39 59 86 77 62 58 68 83 26	WGAAGTMVAMGKAK
2676	TTGGNSLGKAHVR	7.9	61	649.3535	2	33.09	1.9	76 79 79 60 49 67 71 58 52 50 55 58 26	TTGGNSLGKAHVR
3826	STKSDGVWLDR	6.7	61	632.3193	2	47.113	-1.1	50 55 73 85 90 90 90 26 35 33 32	STKSDGVWLDR
459	HRRGRCQCHF	6.1	61	650.3062	2	7.037	-0.7	29 29 26 65 73 83 73 72 72 79	HRRGRCQCHF
1726	LGVLDLA	4.2	61	700.424	1	21.702	0.1	43 45 62 68 70 81 51	LGVLDLA
1743	QEQEAVAAETLEGSLEKEK	11.5	61	697.0153	3	21.869	1	43 43 45 48 39 36 45 47 61 72 85 95 93 92 93 86 42 42 33	QEQEAVAAETLEGSLEKEK
3282	KCTAAGMDSSLDDLELK	10.3	61	898.9236	2	40.514	-0.3	36 31 31 83 55 47 46 64 69 92 93 96 71 57 53 57 38	KCTAAGMDSSLDDLELK
736	QESDAGF	4.2	61	753.3052	1	10.972	0.3	26 77 54 46 46 85 86	QESDAGF
2154	TAKCTVLADASR	7.3	61	412.5518	3	26.609	-0.4	34 46 47 42 40 64 78 73 83 78 80 56	TAKCTVLADASR
2358	NLEVKTV	4.2	61	401.7366	2	29.15	-1.2	26 98 93 75 46 46 36	NLEVKTV
2241	LQLTLDQL	4.8	61	472.2766	2	27.693	0	26 79 72 67 83 48 56 48	LQLTLDQL
3621	CTKALFNSSLVRNTY(+79.97)	9.1	60	599.6183	3	44.618	0.3	47 39 38 39 43 51 67 91 97 78 71 76 56 62 43	CTKALFNSSLVRNTY(+79.97)
965	SAGHAM(+15.99)SPPGGPLR	8.5	60	450.8904	3	13.599	-1	35 37 45 52 76 82 82 83 66 69 76 51 52 33	SAGHAM(+15.99)SPPGGPLR
3920	LCFLGTTPL	5.4	60	482.762	2	48.269	-0.6	26 26 92 87 89 63 60 61 34	LCFLGTTPL
1697	LNLELNQI	4.8	60	956.5411	1	21.399	0.1	36 35 86 92 91 45 51 44	LNLELNQI
1003	YWVLGAVPQT(+79.97)SWA	7.9	60	779.3601	2	14.005	-0.5	33 33 44 74 55 51 75 78 75 76 75 49 62	YWVLGAVPQT(+79.97)SWA
2476	M(+15.99)TLHSGGAGEEMSK	8.5	60	725.8197	2	30.627	1.4	57 58 87 92 36 41 44 52 63 75 85 46 70 35	M(+15.99)TLHSGGAGEEMSK
3138	NMESPS(+79.97)VQAM(+15.99)AMCY(+79.97)	8.5	60	579.8222	3	38.724	-52.2	32 32 44 49 50 95 89 76 82 77 75 58 55 26	NMESPS(+79.97)VQAM(+15.99)AMCY(+79.97)
1849	AGLVDYL	4.2	60	750.4025	1	23.006	-1	34 38 51 79 77 89 51	AGLVDYL
1983	M(+15.99)LTPTMGTVGDGAGPK	9.7	60	774.8717	2	24.54	-2.3	44 43 47 61 63 78 69 71 80 74 75 47 41 44 58 62	M(+15.99)LTPTMGTVGDGAGPK

4175	AAWAEEKVNDSK	7.2	60	674.33	2	51.445	-0.8	59 42 58 67 79 83 82 76 46 43 45 39	AAWAEEKVNDSK
4120	AEM(+15.99)SADGAVEDFKSL	9.1	60	793.3553	2	50.763	-1.1	34 37 39 67 70 84 47 46 51 94 94 93 52 57 33	AEM(+15.99)SADGAVEDFKSL
1145	FNAEHKSTLKY(+79.97)PR	7.8	60	835.9078	2	15.522	2	45 43 47 68 92 89 57 48 58 75 50 50 55	FNAEHKSTLKY(+79.97)PR
1461	EPPMASPHTPW	6.6	60	625.2879	2	18.839	1.2	26 26 80 65 63 78 84 26 75 81 55	EPPMASPHTPW
2247	LYQARGKS(+79.97)VKK	6.6	60	679.3716	2	27.767	0.6	26 70 37 60 59 77 89 85 56 71 27	LYQARGKS(+79.97)VKK
1835	LELELGWGLF	6	60	588.8201	2	22.857	2.7	26 45 87 89 78 75 46 48 60 44	LELELGWGLF
4074	TTGEEPVVPVKAA	7.8	60	649.3523	2	50.188	-1.8	65 69 68 86 82 82 82 26 26 52 43 44 52	TTGEEPVVPVKAA
4205	RMGAAAYK	4.8	60	434.23	2	51.829	2.6	26 90 85 75 51 51 52 48	RMGAAAYK
4156	KLDPVGTTI	5.4	60	472.2772	2	51.218	1.4	55 51 66 82 50 49 45 62 78	KLDPVGTTI
1144	TFAAGFASVL	6	60	492.2621	2	15.514	-2.7	26 26 48 43 45 56 84 85 93 94	TFAAGFASVL
668	RNNQGV	3.6	60	344.181	2	10.106	2.1	26 72 50 42 76 92	RNNQGV
2273	LSYLAGMPL	5.4	60	482.7619	2	28.09	-0.7	26 26 84 81 63 57 62 67 72	LSYLAGMPL
2007	LLPVLYPDGLLLYYK	9	60	890.517	2	24.829	-1.6	26 76 76 98 96 83 81 57 30 30 33 73 51 42 43	LLPVLYPDGLLLYYK
2191	Y(+79.97)LDALYEKEAKAELQR	9.6	60	673.996	3	27.06	-2.6	33 53 37 70 80 79 45 44 82 95 93 91 67 29 29 28	Y(+79.97)LDALYEKEAKAELQR
2148	M(+15.99)LSSADQVEDFKEA	8.4	60	793.3546	2	26.535	-2	35 35 48 73 71 87 43 62 93 96 96 35 32 31	M(+15.99)LSSADQVEDFKEA
3485	ELLDASGVQVK	6.6	60	579.822	2	42.981	0.2	55 55 82 48 38 44 73 91 55 64 53	ELLDASGVQVK
2026	VQVLPF	3.6	60	702.4199	1	25.057	2.1	65 54 89 97 26 26	VQVLPF
3177	LYPGVMRKHEK	6.6	60	679.3731	2	39.22	-1.4	67 69 90 73 66 68 78 39 33 39 33	LYPGVMRKHEK
947	EPGPGAQGVV	6	60	455.7357	2	13.405	1.3	26 82 82 66 63 74 51 56 72 26	EPGPGAQGVV
1315	MAEKFGLF	4.8	60	942.4774	1	17.318	2.3	26 91 86 92 48 45 53 38	MAEKFGLF
3069	AFESADQVEDFAEK	8.4	60	793.3548	2	37.875	0.5	26 76 67 59 64 89 60 77 94 98 26 32 36 30	AFESADQVEDFAEK
2112	LVYPGLPVLYPVPVEEV	10.2	60	942.0298	2	26.1	-2.1	27 27 28 57 76 95 99 98 97 97 98 26 65 34 31 30 30	LVYPGLPVLYPVPVEEV
2735	EFPRAECDGAEGWRKL	9.6	60	621.9634	3	33.805	-2.6	58 58 39 40 45 66 73 75 76 82 84 76 74 41 34 32	EFPRAECDGAEGWRKL
2466	WKTTTGVAMPMR	7.2	60	460.2366	3	30.5	-1.1	60 56 40 72 67 67 82 81 60 51 53 26	WKTTTGVAMPMR
2849	EFPLVDPGGSLKV	7.8	60	679.3719	2	35.168	0.4	95 95 95 26 26 86 86 85 50 41 30 30 28	EFPLVDPGGSLKV
1171	QVQGDGDGTPLV	7.2	60	593.2903	2	15.788	-1.1	60 59 58 64 76 65 57 54 57 59 79 26	QVQGDGDGTPLV
2625	FAQGKGVGGGSEVA	8.4	60	632.3204	2	32.463	0.7	60 47 34 46 43 66 88 85 67 55 66 73 51 52	FAQGKGVGGGSEVA
3653	EMELEGLL	4.8	60	933.4576	1	45.009	-2.3	26 86 84 80 52 49 69 31	EMELEGLL
1277	SSMLTPLEPGLLSKDDRL	10.8	60	986.5264	2	16.921	1.8	65 67 66 39 34 33 50 86 93 54 46 54 55 71 78 65 66 49	SSMLTPLEPGLLSKDDRL
3323	M(+15.99)TLTCGGNYEAFK	7.8	60	725.8196	2	41.015	-1.3	63 59 83 54 53 75 62 44 64 57 68 54 36	M(+15.99)TLTCGGNYEAFK
2388	FNLVLGCAALNKMDY	9	60	836.4151	2	29.524	-0.1	58 47 74 75 71 72 65 67 65 73 84 44 33 33 28	FNLVLGCAALNKMDY

1737	DFETSAGLI	5.4	60	476.7349	2	21.808	0.3	26 26 66 66 61 78 91 94 26	DFETSAGLI
4044	VTVLGGHGATVL	7.2	60	562.3269	2	49.814	-0.3	26 69 66 70 59 57 63 77 86 53 39 46	VTVLGGHGATVL
2183	KVATDTALL	5.4	60	466.2761	2	26.963	-1	53 49 69 79 67 57 43 57 60	KVATDTALL
4275	KVFKALKTDS(+79.97)R	6.6	60	686.87	2	52.762	-1.5	26 26 66 66 75 81 79 68 66 73 26	KVFKALKTDS(+79.97)R
2794	VPKAAGTS(+79.97)GFVEPI	8.4	60	484.9079	3	34.515	-2.9	26 62 60 73 55 42 47 75 91 95 52 52 74 26	VPKAAGTS(+79.97)GFVEPI
3556	ETAAPGRGA	5.4	60	415.2113	2	43.845	-1.1	74 45 46 46 66 69 63 63 61	ETAAPGRGA
2038	M(+15.99)VDNGGFAGSLYTGHVR	10.2	60	599.6174	3	25.204	-0.4	60 67 65 59 54 50 43 52 72 88 61 55 53 85 91 26 26	M(+15.99)VDNGGFAGSLYTGHVR
2041	EVKGETLLNGVK	7.2	60	429.5814	3	25.236	-1.3	41 40 41 59 53 63 89 77 50 53 71 76	EVKGETLLNGVK
4052	ESFLPMLK	4.8	60	482.762	2	49.923	-0.4	26 72 72 88 85 48 49 33	ESFLPMLK
1823	T(+79.97)KYLTAMLLKELVPLLRNK	11.4	60	775.4457	3	22.728	2.2	32 32 32 39 56 47 43 45 80 87 87 95 92 91 94 73 37 37 27	T(+79.97)KYLTAMLLKELVPLLRNK
3888	S(+79.97)SRCDES(+79.97)K	4.8	60	536.1645	2	47.866	0.5	26 26 58 56 71 75 85 75	S(+79.97)SRCDES(+79.97)K
906	HKGAT(+79.97)TGAGPAR	7.2	60	602.2848	2	12.962	-0.5	81 70 53 46 64 72 71 62 45 42 50 53	HKGAT(+79.97)TGAGPAR
2913	FEPPVVELDGKK	7.2	60	679.3715	2	35.959	-0.2	96 96 96 26 26 70 67 67 47 47 47 26	FEPPVVELDGKK
3113	LYPGEEVPTPKK	7.2	60	679.3718	2	38.416	0.2	64 66 87 65 62 81 84 76 31 32 36 26	LYPGEEVPTPKK
3989	MSQFDEVGADPRYA	8.4	60	793.3539	2	49.131	3.5	44 43 41 95 96 90 70 57 51 58 66 45 35 37	MSQFDEVGADPRYA
2788	THDFATEFKGSTGPSKR	10.1	60	933.4595	2	34.44	-1.2	42 54 65 70 72 78 85 72 67 62 65 80 62 40 32 32 27	THDFATEFKGSTGPSKR
1989	KEFQLELL	4.8	60	510.2922	2	24.615	0.1	38 38 34 62 74 92 90 43	KEFQLELL
879	YNAGGAEELPVSA	7.8	60	639.3022	2	12.671	-2.8	56 48 84 87 92 95 98 26 26 26 44 44 44	YNAGGAEELPVSA
2965	ELKPCCVAPEAV	7.2	60	629.8115	2	36.602	-1	40 40 52 75 80 75 64 65 79 60 41 41	ELKPCCVAPEAV
2327	CGTAYCKLTSEPNK	8.4	60	757.8519	2	28.767	-0.8	46 55 73 76 55 55 86 71 68 61 61 44 51 26	CGTAYCKLTSEPNK
721	WMDCRALAKGER	7.2	60	479.2358	3	10.779	-0.2	41 45 39 68 75 84 87 73 52 48 57 41	WMDCRALAKGER
1902	EPGDFELAVQLR	7.2	60	687.3585	2	23.601	2.8	38 38 38 57 69 80 80 94 92 39 49 35	EPGDFELAVQLR
3357	VM(+15.99)WEAVLSSNMEAKW	8.9	60	599.6177	3	41.435	2.2	26 26 61 55 47 48 59 99 96 78 88 85 45 45 30	VM(+15.99)WEAVLSSNMEAKW
1866	QLEAGVPGMTALELK	8.9	60	778.9219	2	23.209	0.9	51 66 67 61 53 54 67 61 65 66 82 84 38 38 32	QLEAGVPGMTALELK
1323	DVMLQLSLLETL	7.1	60	687.8804	2	17.407	-1	26 87 74 74 72 85 82 73 42 31 32 29	DVMLQLSLLETL
2797	QSVAFAAVAMPMR	7.7	60	460.2368	3	34.548	-0.7	49 49 46 53 68 89 88 80 78 56 44 42 26	QSVAFAAVAMPMR
2211	FVTLTMF	4.2	60	858.4422	1	27.316	-0.9	40 40 40 85 90 92 26	FVTLTMF
1891	RSYHALRGRDPDALVKDY(+79.97)	10.7	60	738.0284	3	23.478	2.2	27 45 34 50 47 44 40 40 63 75 83 95 95 87 60 57 67 54	RSYHALRGRDPDALVKDY(+79.97)
3773	LYPTWRPAPTR	6.5	60	679.3717	2	46.46	-1	66 67 87 70 66 49 51 56 50 61 26	LYPTWRPAPTR
749	NSM(+15.99)QTV	3.6	60	695.3026	1	11.134	-0.4	26 79 67 50 73 59	NSM(+15.99)QTV
2381	LLFNNTLAGPNFAR	8.3	59	516.6153	3	29.437	-1.1	84 69 61 54 49 71 60 57 72 76 55 42 44 32	LLFNNTLAGPNFAR

2634	WWKGSTVCVMGAELR	8.9	59	574.9542	3	32.57	1.5	26 60 57 60 57 55 69 68 89 93 78 61 39 40 31	WWKGSTVCVMGAELR
1522	FDTASVAGDEDFKEA	8.9	59	801.3521	2	19.494	0.3	57 57 72 62 47 38 38 58 84 87 84 85 44 35 34	FDTASVAGDEDFKEA
2809	LEQVDDGALEAV	7.1	59	629.8133	2	34.689	2.5	40 33 30 54 71 84 66 61 75 62 62 66	LEQVDDGALEAV
3157	MCAGGNSTPTEAQAELK	10.1	59	854.3896	2	38.959	2.6	28 32 36 52 49 52 84 71 62 61 70 75 52 75 73 78 51	MCAGGNSTPTEAQAELK
1997	VVVVSGPF	4.8	59	803.4658	1	24.707	-0.4	28 30 31 49 59 85 94 94	VVVVSGPF
1504	TM(+15.99)LPGAGASHM(+15.99)MCK	8.3	59	733.818	2	19.296	1.9	57 57 84 73 66 58 58 64 63 73 73 46 26 26	TM(+15.99)LPGAGASHM(+15.99)MCK
1632	RHGRTLARCGHEM(+15.99)HK	8.9	59	902.9471	2	20.709	-2.7	31 35 47 62 68 63 69 82 76 72 75 81 43 44 34	RHGRTLARCGHEM(+15.99)HK
2493	MGKSDGVGGKEKA	7.7	59	632.3215	2	30.836	-0.4	26 83 74 76 89 94 91 68 38 39 29 29 28	MGKSDGVGGKEKA
1205	CAARALAGAVQK	7.1	59	1158.64	1	16.152	-1.1	31 36 55 87 89 87 75 63 63 38 42 40	CAARALAGAVQK
3647	MRPPGFYNTK	5.9	59	404.2065	3	44.936	1.1	39 49 58 55 67 70 63 68 68 52	MRPPGFYNTK
3639	FEAVLEKAPPEK	7.1	59	679.3723	2	44.845	1	26 86 67 66 72 56 57 71 64 48 54 38	FEAVLEKAPPEK
2136	MPLLRDPGCAFLK	7.7	59	487.5963	3	26.387	-0.5	66 65 65 77 72 70 68 59 57 52 40 41 32	MPLLRDPGCAFLK
1565	FEARVLADCSR	6.5	59	633.8159	2	19.964	-1.1	26 68 70 75 88 70 58 59 80 26 26	FEARVLADCSR
1290	DALALVGGFLDANGKA	9.5	59	766.4086	2	17.055	-1	28 28 33 92 78 73 74 68 68 74 81 56 49 46 46 47	DALALVGGFLDANGKA
3115	GCTAEMPPTPSQPAK	8.9	59	757.8525	2	38.437	0.1	56 64 79 87 82 81 85 28 42 53 59 43 45 48 30	GCTAEMPPTPSQPAK
1465	FEPGSPLTGGKLQA	8.3	59	701.3708	2	18.877	-2	82 82 80 65 61 57 69 68 54 53 40 43 36 31	FEPGSPLTGGKLQA
2413	TM(+15.99)LHDVLMECDK	7.1	59	725.8207	2	29.83	-2.2	59 62 83 75 76 47 49 50 83 39 47 35	TM(+15.99)LHDVLMECDK
2004	T(+79.97)QCAAELVSAGLDNLKR	10.1	59	934.9518	2	24.786	1.6	35 31 29 35 58 87 92 79 71 51 49 57 85 70 61 66 40	T(+79.97)QCAAELVSAGLDNLKR
3240	SQVAEMV	4.1	59	763.366	1	39.999	0.6	77 67 71 74 42 40 40	SQVAEMV
2599	TESLSLPPAAAGAL	8.3	59	649.3531	2	32.138	-0.5	58 64 64 71 73 83 26 44 51 57 57 59 54 59	TESLSLPPAAAGAL
4140	RSSMVFGFTLR	6.5	59	434.2332	3	51.01	1.5	26 57 58 58 76 86 74 72 51 52 36	RSSMVFGFTLR
2895	MEKFPVLSSNMGNM(+15.99)PV	9.5	59	599.6188	3	35.733	2	35 35 38 41 57 75 26 98 94 83 83 61 53 62 71 26	MEKFPVLSSNMGNM(+15.99)PV
2964	LQKGLDLAGSLVV	7.7	59	438.2656	3	36.591	-0.9	83 50 47 54 57 78 80 71 36 31 34 71 71	LQKGLDLAGSLVV
532	FKNAEDDQGAT(+79.97)A	7.1	59	673.77	2	8.16	5	83 50 34 35 87 92 72 52 69 46 47 38	FKNAEDDQGAT(+79.97)A
2427	SKMGDGNSGLKVA	7.7	59	632.3204	2	30.016	-2	34 34 46 80 91 94 69 63 51 46 45 60 48	SKMGDGNSGLKVA
3427	MEELAELV	4.7	59	933.4595	1	42.284	-0.3	26 26 83 77 58 50 67 80	MEELAELV
3162	FRGKQAAAGGFDLPL	8.9	59	516.6155	3	39.025	-0.4	57 53 49 36 31 54 71 59 60 78 79 75 70 75 32	FRGKQAAAGGFDLPL
3522	FGAARRVV	4.7	59	438.2655	2	43.424	3.2	26 44 71 89 91 95 26 26	FGAARRVV
2963	YPGGTVGVGLASR	7.7	59	617.3313	2	36.58	-2.7	62 59 66 60 39 39 64 70 63 64 65 66 45	YPGGTVGVGLASR
1776	QVLLGGETLDASERVGL	10	59	586.3193	3	22.22	-0.2	30 29 32 58 45 46 52 62 82 92 92 91 86 60 53 52 33	QVLLGGETLDASERVGL
1165	LM(+15.99)TNLAAALAK	6.5	59	378.2176	3	15.725	-0.9	32 32 39 42 71 94 98 95 48 46 48	LM(+15.99)TNLAAALAK

3549	STKSAGGVGTGGWV	8.3	59	632.3207	2	43.759	1.2	61 67 79 72 57 57 71 76 58 38 36 43 47 55	STKSAGGVGTGGWV
3088	S(+79.97)LAEPRA	4.1	59	823.3688	1	38.107	-2.5	92 92 92 26 34 44 31	S(+79.97)LAEPRA
2343	AEAYADQVEDFQTV	8.3	59	793.3542	2	28.968	-0.2	37 38 42 49 64 87 64 79 93 97 55 37 44 33	AEAYADQVEDFQTV
1126	HHLARSGASLGHAGRF	9.4	59	558.6292	3	15.318	0	26 68 62 49 46 54 49 54 87 94 94 83 64 40 38 28	HHLARSGASLGHAGRF
1332	VTFTLTLLGM(+15.99)AHHR	8.3	59	538.2918	3	17.492	-1.1	90 90 67 40 41 56 44 47 44 62 79 52 52 52	VTFTLTLLGM(+15.99)AHHR
3358	MQGFWTPFRSPV	7.1	59	484.9074	3	41.446	-1	78 45 50 66 67 57 58 76 76 76 26 26	MQGFWTPFRSPV
2190	GCVLVPPRSDAAL	7.7	59	649.3511	2	27.05	1.3	70 72 72 88 26 81 50 61 66 49 40 41 44	GCVLVPPRSDAAL
3673	FLKMVGGSAADENEV	8.8	59	783.8771	2	45.246	0.1	68 75 90 97 93 84 40 32 32 38 56 63 35 38 37	FLKMVGGSAADENEV
1909	S(+79.97)EKALNM(+15.99)EK	5.3	59	573.2496	2	23.674	1.1	39 72 71 78 68 52 50 48 48	S(+79.97)EKALNM(+15.99)EK
2394	CGTAEHGGGPGM(+15.99)LRR	8.8	59	757.8514	2	29.598	0.4	55 62 81 82 70 80 74 64 56 45 48 52 42 38 27	CGTAEHGGGPGM(+15.99)LRR
2344	WPFSGKGPADMLPW	8.2	59	530.2573	3	28.979	-2.8	26 49 38 37 50 74 79 67 66 65 63 73 84 47	WPFSGKGPADMLPW
1659	EEMLEAVL	4.7	59	933.4603	1	21.009	0.7	26 83 71 84 59 47 53 44	EEMLEAVL
1237	SQVADML	4.1	59	763.3644	1	16.489	-1.4	57 50 82 67 53 62 38	SQVADML
4022	LAGDVLDKL	5.3	59	472.276	2	49.55	-1.2	49 58 66 94 26 92 50 52 39	LAGDVLDKL
2103	MDDDVGVLSSNPVAYSK	10	59	599.6184	3	26	2	28 28 62 75 55 53 49 68 97 92 75 68 58 42 42 58 40	MDDDVGVLSSNPVAYSK
1573	KSTPVHLDEAEGGLACR	10	59	594.9652	3	20.049	0.4	62 57 58 60 26 80 79 83 81 77 62 45 39 44 52 55 32	KSTPVHLDEAEGGLACR
4092	MEELEALV	4.7	59	933.4579	1	50.412	-1.9	26 26 26 92 79 66 67 86	MEELEALV
2189	WTKETSLLGLNDKRDPV	10	59	658.02	3	27.039	-2.1	34 51 31 36 37 72 88 86 83 84 82 69 45 42 43 82 26	WTKETSLLGLNDKRDPV
2675	WNSNAVVAMKKK	7.1	59	459.255	3	33.079	-0.7	73 51 51 41 53 62 91 81 75 69 26 26	WNSNAVVAMKKK
3144	FLNAGASGSLTPKMMF	9.4	59	836.4158	2	38.802	0.7	65 47 46 73 59 45 45 47 45 42 58 86 82 83 84 26	FLNAGASGSLTPKMMF
3635	KKFTVF	3.5	59	385.2345	2	44.79	1.5	26 67 69 62 64 62	KKFTVF
2597	CGTAFAPPGNPGSEPL	9.4	59	757.8521	2	32.118	1.8	55 61 80 82 84 26 40 62 63 68 59 53 57 42 73 27	CGTAFAPPGNPGSEPL
2829	VM(+15.99)WWLLSSNMGNQSK	8.8	59	599.6185	3	34.936	-2.7	26 26 26 39 84 66 93 96 86 89 58 49 44 46 45	VM(+15.99)WWLLSSNMGNQSK
4070	NSYNKGEAASRKGT(+79.97)F	8.8	59	570.5941	3	50.15	2	62 62 52 40 31 35 35 56 78 78 82 79 68 68 46	NSYNKGEAASRKGT(+79.97)F
3154	S(+79.97)LAHSTK	4.1	59	823.3686	1	38.929	-2.8	96 96 80 37 37 35 26	S(+79.97)LAHSTK
4133	GCTAFKSAASEKEW	8.2	59	757.8521	2	50.92	1.7	42 49 63 73 66 72 71 75 79 58 53 40 40 33	GCTAFKSAASEKEW
2383	Y(+79.97)AAPLNAMLSPARA	8.2	59	763.3654	2	29.458	0.1	45 45 55 72 73 56 65 83 91 77 47 41 33 32	Y(+79.97)AAPLNAMLSPARA
911	VGSGVYEA	4.7	59	781.3748	1	13.022	2.7	32 33 39 62 84 94 94 26	VGSGVYEA
3864	FLQMVGATTAGQDEV	8.8	59	783.8776	2	47.574	0.7	64 61 47 97 86 57 53 57 64 51 51 61 44 55 26	FLQMVGATTAGQDEV
2440	EVSSSGPGVLKVK	7.6	59	429.5817	3	30.173	-0.6	26 76 76 76 26 60 48 55 47 54 66 86 59	EVSSSGPGVLKVK
2111	QLLGVPEDY	5.3	59	1033.523	1	26.09	2.7	26 91 92 78 58 63 63 26 26	QLLGVPEDY

1611	FEGDLS(+79.97)GGTHLQLSHVGNA	11.1	59	673.6354	3	20.48	-2.4	75 67 60 54 51 57 52 48 47 58 71 68 77 81 61 52 38 37 52	FEGDLS(+79.97)GGTHLQLSHVGNA
1775	MTEPAAPPSLDEQY(+79.97)VL	9.4	59	614.2744	3	22.211	0.8	35 39 51 45 45 66 75 77 71 70 84 82 56 47 43 45	MTEPAAPPSLDEQY(+79.97)VL
3444	STEVYDNMACNKVVRL	9.4	59	921.4451	2	42.489	-3	60 70 86 98 88 55 47 45 44 45 45 60 91 33 33 30	STEVYDNMACNKVVRL
3124	LEAGESAAPVLVAA	8.2	59	649.354	2	38.553	0.8	36 36 40 42 59 66 71 83 84 88 84 39 39 44	LEAGESAAPVLVAA
1680	TKRRENAAVDDLEGSLETRQK	12.3	59	806.0901	3	21.218	0.8	32 30 33 38 39 37 39 47 68 90 97 97 96 91 80 79 74 42 38 39 34	TKRRENAAVDDLEGSLETRQK
3229	WALVDCAPVDAV	7	59	629.8122	2	39.859	2.7	36 37 38 77 83 82 74 68 67 48 43 43	WALVDCAPVDAV
2557	DLHPVDDGEKTAR	7.6	59	484.9067	3	31.615	-1.4	67 66 86 26 26 90 91 86 49 44 44 46 33	DLHPVDDGEKTAR
1446	MVRCSLLGGNLTQDLPV	9.9	59	908.476	2	18.678	-0.4	35 33 41 60 94 96 81 77 87 79 45 45 38 50 51 48 26	MVRCSLLGGNLTQDLPV
1257	WWKGSMATVMGAELR	8.8	59	574.954	3	16.71	1.3	26 50 51 62 52 43 50 75 92 93 78 75 44 45 35	WWKGSMATVMGAELR
1457	FARNNPKL	4.7	59	480.2761	2	18.792	2.9	26 58 56 67 86 66 67 37	FARNNPKL
2671	SPLTM(+15.99)AGA	4.7	58	763.3657	1	33.025	0.2	26 81 76 77 45 45 49 65	SPLTM(+15.99)AGA
3310	FEPGVKRPKGGW	7	58	679.3718	2	40.863	-0.8	95 94 93 79 65 53 45 43 40 37 27 26	FEPGVKRPKGGW
1499	NSYPMLPTPAEADYANK	9.9	58	471.2218	4	19.238	-1.7	50 52 54 53 40 33 31 29 36 46 78 91 91 89 84 70 58	NSYPMLPTPAEADYANK
3285	SKMGDGNSGLKVA	7.6	58	632.32	2	40.559	-2.7	36 36 46 78 91 91 66 62 60 46 40 56 45	SKMGDGNSGLKVA
1741	ENESTLFI	4.7	58	952.4621	1	21.838	-0.1	86 77 65 56 57 71 26 26	ENESTLFI
2055	FWM(+15.99)LEV	3.5	58	840.3952	1	25.41	-0.9	26 26 93 66 70 67	FWM(+15.99)LEV
2536	EVTALVWF	4.7	58	482.7617	2	31.364	2.3	44 44 48 46 47 68 89 78	EVTALVWF
2609	WEVLALTTCGKAHSVK	9.3	58	581.6472	3	32.266	0.7	47 48 53 70 55 48 60 84 76 72 67 61 64 71 26 26	WEVLALTTCGKAHSVK
4005	ECYVLF	3.5	58	387.1799	2	49.332	-1.7	81 64 64 85 26 26	ECYVLF
2524	ELLGAETAQVK	6.4	58	579.8213	2	31.219	-0.9	52 52 74 59 57 57 63 65 53 55 50	ELLGAETAQVK
1444	VKLSFKLSSDFVDR	8.2	58	547.6371	3	18.664	-2.2	36 40 62 44 44 53 64 64 81 81 79 50 71 42	VKLSFKLSSDFVDR
3089	MTAVAAVDSL	5.8	58	977.4976	1	38.116	0.4	66 65 74 64 53 54 54 60 63 26	MTAVAAVDSL
2691	MGKSANVGAARMA	7.6	58	632.3199	2	33.275	2.4	26 80 70 71 74 67 70 82 77 37 33 36 30	MGKSANVGAARMA
4209	M(+15.99)AKDGTEEWR	5.8	58	619.7787	2	51.883	2.6	33 38 33 38 38 78 86 80 77 77	M(+15.99)AKDGTEEWR
2326	M(+15.99)PMCACGT(+79.97)GDNEY(+79.97)	7.6	58	523.1135	3	28.755	-48	26 81 64 58 48 53 53 53 64 82 53 65 51	M(+15.99)PMCACGT(+79.97)GDNEY(+79.97)
4138	WGAAGSAAVAMKKK	8.2	58	459.2545	3	50.987	-1.9	62 56 59 63 62 43 46 63 83 84 72 63 26 26	WGAAGSAAVAMKKK
1667	LCLRANAELEELR	7.6	58	510.6086	3	21.088	0.4	27 32 51 58 46 45 80 92 96 26 75 77 46	LCLRANAELEELR
3655	WLNGFLTGETLPL	7.6	58	487.597	3	45.029	-1.2	63 61 37 69 70 60 52 55 62 73 54 66 29	WLNGFLTGETLPL
1309	KELTAMMSGLVMVHV	8.7	58	823.4295	2	17.254	2.7	34 34 39 49 59 81 66 55 56 69 82 92 97 26 26	KELTAMMSGLVMVHV
3185	TM(+15.99)LHDGNATEMSK	7.6	58	725.8203	2	39.316	2.2	65 66 87 67 61 55 49 52 61 60 41 54 32	TM(+15.99)LHDGNATEMSK
2896	YPCLDL	3.5	58	723.3384	1	35.744	0.4	57 57 57 96 26 54	YPCLDL

2133	FSLMPL	3.5	58	707.3798	1	26.356	0.2	44 44 78 64 71 43	FSLMPL
2332	WKGSLGPAHGKSHV	8.1	58	487.5968	3	28.831	0.3	47 41 40 53 57 73 75 76 62 63 79 86 26 26	WKGSLGPAHGKSHV
4038	MTLAEKGEV	5.2	58	977.4982	1	49.739	1.1	90 73 62 42 42 43 53 53 61	MTLAEKGEV
1283	LEPNSGLKDAKNK	7.5	58	471.9286	3	16.987	1.2	26 81 74 60 65 60 62 70 72 72 37 38 31	LEPNSGLKDAKNK
2411	WDLVM(+15.99)APGKGKKY(+79.97)	7.5	58	530.2568	3	29.81	-2.1	40 51 39 66 71 75 70 74 75 66 43 43 34	WDLVM(+15.99)APGKGKKY(+79.97)
2053	YLPGGVGTAAELPL	8.1	58	679.3713	2	25.378	-0.4	82 80 91 78 49 43 59 53 60 64 51 40 26 30	YLPGGVGTAAELPL
2897	M(+15.99)MNCCGACAY(+79.97)	5.8	58	581.6479	2	35.753	-0.8	82 81 53 59 85 54 43 35 56 26	M(+15.99)MNCCGACAY(+79.97)
786	KLAEQDEEFEQLKR	8.1	58	881.954	2	11.575	2.2	41 43 60 80 82 94 98 26 26 82 39 54 40 39	KLAEQDEEFEQLKR
2680	SLVTSDLADASR	7	58	412.2137	3	33.145	-0.7	26 40 36 39 50 69 74 74 83 74 76 49	SLVTSDLADASR
2195	GCTAFMAGTTSDPKK	8.7	58	757.8515	2	27.116	-1.3	52 61 79 84 81 67 62 63 69 61 55 36 32 33 26	GCTAFMAGTTSDPKK
1597	LLRS(+79.97)VYDGCAHPGMRM(+15.99)V	9.9	58	667.6365	3	20.308	2.3	26 26 26 27 52 77 78 80 75 76 70 62 68 63 64 41 65	LLRS(+79.97)VYDGCAHPGMRM(+15.99)V
2508	EAGDAKALKRVK	7	58	429.2578	3	31.017	0.4	54 51 53 52 43 42 86 81 63 51 66 49	EAGDAKALKRVK
2988	TAFALVGADGW	6.4	58	554.2767	2	36.889	-0.7	26 26 26 96 88 61 50 57 80 96 26	TAFALVGADGW
1123	TWTEQELANMGTVPHKSA	10.4	58	667.3239	3	15.28	1.4	70 70 47 36 45 64 77 77 69 76 41 41 52 58 53 59 61 39	TWTEQELANMGTVPHKSA
4060	LLHVPAGAANPNFNI	8.7	58	516.6155	3	50.02	-0.6	53 53 53 85 71 56 50 74 70 46 55 44 49 52 52	LLHVPAGAANPNFNI
850	DEAENL	3.5	58	690.2936	1	12.335	-0.6	26 26 95 92 79 26	DEAENL
1306	ATLLASGDDL	5.8	58	488.253	2	17.23	-0.5	46 45 87 97 54 38 38 59 83 26	ATLLASGDDL
2952	MTPGTGFCLKR	6.4	58	404.2065	3	36.441	-1.8	39 56 61 64 58 59 66 86 52 53 39	MTPGTGFCLKR
2907	GCTAFCVELESTVR	8.1	58	757.8519	2	35.884	-0.7	45 54 71 81 81 58 57 64 81 62 62 31 29 29	GCTAFCVELESTVR
4113	EPNRFRLQVK	5.8	58	429.5819	3	50.677	-1.1	62 48 39 42 26 77 73 72 71 64	EPNRFRLQVK
3137	RHHLEELS(+79.97)LVRSYF	8.1	58	933.4592	2	38.713	2.9	26 26 58 82 82 69 72 58 79 71 69 39 33 39	RHHLEELS(+79.97)LVRSYF
2328	LLQVLEATDAAKK	7.5	58	467.2764	3	28.778	-0.5	52 51 37 60 65 72 86 89 57 54 45 53 26	LLQVLEATDAAKK
3808	QWGSSSAAPPMVDL	8.1	58	723.3381	2	46.891	-2.6	49 51 68 26 56 44 45 64 56 97 97 97 26 26	QWGSSSAAPPMVDL
3079	FKFLYPKHPSLFKK	8.1	58	890.5202	2	37.991	1.4	29 49 43 92 82 90 82 60 63 60 49 39 37 28	FKFLYPKHPSLFKK
3487	MLQCLTPF	4.6	58	476.7343	2	43.003	-1.9	26 95 54 54 54 73 77 26	MLQCLTPF
3923	KVLTSYGYAKVGQQV	8.7	58	547.6368	3	48.304	-2.9	32 40 57 75 69 57 61 58 63 76 72 52 48 41 58	KVLTSYGYAKVGQQV
2175	LQLTLDQI	4.6	58	472.2764	2	26.871	-0.3	26 69 61 58 84 51 59 52	LQLTLDQI
2200	WKAMGTVAVEMR	6.9	58	460.2377	3	27.179	1.1	60 43 43 55 50 51 86 87 55 48 64 46	WKAMGTVAVEMR
2855	ELLTDGGVQVK	6.4	58	579.8228	2	35.24	1.6	47 47 77 63 52 46 71 76 46 59 46	ELLTDGGVQVK
2581	WCLKATLSHNK	6.4	58	434.2335	3	31.914	2.2	26 72 67 60 64 78 71 63 42 55 32	WCLKATLSHNK
2406	MPLFDTLK	4.6	58	482.7626	2	29.749	0.8	69 68 68 26 64 62 74 26	MPLFDTLK

1313	DCFEGASGALK	6.4	58	1097.494	1	17.299	0.7	26 26 26 84 79 80 67 58 37 59 86	DCFEGASGALK
2724	EDEALKGVAVK	6.4	58	579.8229	2	33.668	1.9	26 79 80 68 57 54 38 36 35 78 80	EDEALKGVAVK
2975	ETVTSLPGGVPGAL	8.1	58	649.3528	2	36.732	-1	48 48 36 47 66 68 67 63 61 62 73 58 51 55	ETVTSLPGGVPGAL
1351	YLPPVVEEVGGAK	7.5	58	679.3714	2	17.683	-0.4	83 81 94 26 26 68 61 58 55 49 41 43 58	YLPPVVEEVGGAK
1959	FTTDRAGEYMVK	6.9	58	709.3441	2	24.26	2.1	37 49 60 60 70 70 60 59 82 44 60 36	FTTDRAGEYMVK
2932	NSYALGEEAENKGDGR	9.2	58	570.5944	3	36.193	-2.2	63 59 57 52 52 53 76 85 86 79 72 56 37 35 28 26	NSYALGEEAENKGDGR
1509	Y(+79.97)WVVAGLGLLSKDDVKKK	10.4	58	729.3861	3	19.355	1.3	31 31 40 40 41 45 64 76 83 96 93 52 52 79 66 68 46 26	Y(+79.97)WVVAGLGLLSKDDVKKK
1468	Y(+79.97)AKKSQNGLGEKLDNLRK	10.4	58	714.7101	3	18.913	4.4	27 32 31 42 63 36 38 40 68 91 91 91 85 83 80 47 50 35	Y(+79.97)AKKSQNGLGEKLDNLRK
2717	Y(+79.97)EAEAPEAMAPFLA	8.1	58	795.3344	2	33.583	1.4	26 26 92 88 89 26 76 70 70 76 79 28 28 27	Y(+79.97)EAEAPEAMAPFLA
2683	FTLNCSNGHNDTK	7.5	58	725.8211	2	33.176	-2	72 73 83 52 58 65 58 71 44 33 33 58 45	FTLNCSNGHNDTK
773	SQPGVPFCA	5.2	58	905.4203	1	11.419	2	26 48 59 86 81 81 81 26 26	SQPGVPFCA
3093	CQMRAAALSSNMEGLSK	9.8	58	599.6185	3	38.169	-2.3	72 47 50 36 50 46 55 65 88 92 82 84 50 44 33 38 39	CQMRAAALSSNMEGLSK
685	RVLGLCEY	4.6	58	476.75	2	10.328	0.8	53 60 87 77 59 49 36 36	RVLGLCEY
1494	NKSAEVELSADCERHA	9.2	58	586.9393	3	19.183	-2.3	38 39 49 54 74 61 57 65 64 67 64 70 63 63 42 44	NKSAEVELSADCERHA
784	KLAEKDEEM(+15.99)EQLKR	8.1	58	588.3051	3	11.553	0.2	78 55 48 55 57 79 91 26 26 86 44 64 45 44	KLAEKDEEM(+15.99)EQLKR
987	LCPGAEEEVDATAKRR	9.2	58	582.2946	3	13.826	2.6	29 34 45 56 59 61 82 74 73 75 69 58 58 50 50 40	LCPGAEEEVDATAKRR
3042	ETAPTTGAPVLGAL	8.1	58	649.3526	2	37.548	-1.3	44 46 58 65 72 59 58 74 78 75 69 33 33 35	ETAPTTGAPVLGAL
2082	KNALLLLAGYAY	6.9	58	437.2551	3	25.733	-0.4	54 50 42 47 53 94 90 77 56 47 41 32	KNALLLLAGYAY
3215	KCTYPVGPLLA	6.3	58	581.3195	2	39.687	-1.6	35 35 42 95 97 26 46 52 69 64 65	KCTYPVGPLLA
3136	DVESACEVSATM(+15.99)PNL	8.6	58	791.3402	2	38.702	-2.5	64 67 47 52 84 92 79 47 46 44 68 60 36 41 29	DVESACEVSATM(+15.99)PNL
4274	GYYTWDF	4	57	476.1981	2	52.75	0.6	40 40 78 81 46 46 66	GYYTWDF
1529	DEQLLGSL	4.6	57	874.4516	1	19.573	0	80 75 70 71 35 28 28 68	DEQLLGSL
2443	SSFAFLLAAVGVK	7.5	57	437.2553	3	30.205	-0.1	54 59 58 79 68 78 89 86 40 36 30 31 32	SSFAFLLAAVGVK
3891	STQSDGVRAVMI	6.9	57	632.3206	2	47.91	-1.8	65 64 52 56 66 71 79 72 41 42 48 26	STQSDGVRAVMI
4172	HATDNRAVDPPMR	7.5	57	740.3586	2	51.411	-1.5	54 58 64 89 53 50 67 81 86 26 59 26 26	HATDNRAVDPPMR
4062	FNAFACLAGGTTAEAA	9.2	57	757.8516	2	50.041	1	75 65 86 90 73 68 75 78 48 41 47 35 31 31 34 34	FNAFACLAGGTTAEAA
2203	MGSVGVAPRPGAK	7.5	57	613.8362	2	27.212	-1.8	58 57 72 83 64 46 44 69 57 50 49 46 47	MGSVGVAPRPGAK
4119	VTYLAGMPL	5.2	57	482.7627	2	50.753	1	26 85 79 64 44 47 52 56 59	VTYLAGMPL
780	AAEPNDL	4	57	729.3416	1	11.501	0.3	26 26 72 72 61 86 55	AAEPNDL
1515	NNKLVDKLQLK	6.3	57	438.2691	3	19.422	-1.3	38 42 42 64 77 89 68 81 38 52 35	NNKLVDKLQLK
891	KLSSGPDEEMEKLKR	8.6	57	582.9727	3	12.8	-1.2	35 35 41 35 47 59 86 26 26 95 92 79 68 78 50	KLSSGPDEEMEKLKR

1629	TLVNSPGMLVLDDYVEGRL	10.9	57	697.6979	3	20.681	0	38 38 44 46 64 55 48 35 34 40 89 91 94 93 92 81 35 35 28	TLVNSPGMLVLDDYVEGRL
2631	VFDASPDLSSNMEAVSK	9.7	57	599.6186	3	32.535	2.3	50 55 52 41 42 39 59 73 86 91 83 69 48 41 39 45 52	VFDASPDLSSNMEAVSK
3205	ECVVLEELMMGESLKR	9.2	57	933.4622	2	39.558	0.1	31 30 30 37 72 72 83 80 90 87 67 62 50 41 44 31	ECVVLEELMMGESLKR
3678	M(+15.99)S(+79.97)T(+79.97)CGMEDL	5.2	57	581.6476	2	45.309	-2	26 26 84 73 62 60 68 77 35	M(+15.99)S(+79.97)T(+79.97)CGMEDL
1360	FALQGANVGANDWNR	8.6	57	816.8983	2	17.785	1	50 54 79 43 52 69 80 94 79 62 45 58 28 29 28	FALQGANVGANDWNR
3234	MLVTTAGADV	5.7	57	977.496	1	39.922	-1.2	26 26 44 43 50 64 73 76 78 86	MLVTTAGADV
2722	EFLQEI	3.4	57	778.3984	1	33.65	0.5	80 45 42 40 78 55	EFLQEI
1905	VHVQSDGVVGDLW	7.4	57	705.8542	2	23.638	0.1	26 95 91 69 82 56 55 64 50 45 36 36 31	VHVQSDGVVGDLW
2231	VQLALGPALASSGRSDV	9.7	57	547.6379	3	27.565	1.8	50 47 64 49 41 39 48 67 72 78 83 70 67 76 42 40 31	VQLALGPALASSGRSDV
1033	KVSDMDSADMLK	6.9	57	447.2129	3	14.348	0.7	26 67 67 51 31 93 90 80 70 38 38 30	KVSDMDSADMLK
2259	NMQVPGGWLR	5.7	57	579.299	2	27.918	2	54 56 71 87 79 56 53 39 41 31	NMQVPGGWLR
1014	ELHAAALTVMGLR	7.4	57	461.2588	3	14.133	0	85 49 45 40 63 74 78 69 48 46 48 55 37	ELHAAALTVMGLR
1840	RHVPVPGGM(+15.99)PAKKPPVVEEVGKK	13.1	57	613.851	4	22.912	-1.3	34 33 41 26 44 42 42 38 43 44 45 49 62 77 89 97 92 91 85 77 65 61 26	RHVPVPGGM(+15.99)PAKKPPVVEEVGKK
1080	M(+15.99)EAPPHL	4	57	405.6948	2	14.837	1.2	97 97 97 26 26 26 26	M(+15.99)EAPPHL
2790	CNRTPTGSPYPVLLPK	9.1	57	581.6473	3	34.461	0.9	40 38 52 53 57 48 52 66 77 92 92 77 65 35 34 29	CNRTPTGSPYPVLLPK
2382	LLDAGSGSGVLLGI	8	57	424.5782	3	29.448	-0.4	61 69 67 63 54 48 64 82 76 62 49 30 30 38	LLDAGSGSGVLLGI
4181	LLWAAPV	4	57	385.2345	2	51.523	1.3	26 61 34 51 74 74 74	LLWAAPV
2431	TTAPELAPSGLVAA	8	57	649.3533	2	30.057	-0.3	73 77 60 62 82 79 54 53 47 51 53 33 33 36	TTAPELAPSGLVAA
1927	LPVLYPPVDDNLLAK	8.6	57	833.9746	2	23.875	0.4	26 26 26 99 98 99 99 26 78 81 45 45 38 35 29	LPVLYPPVDDNLLAK
3876	LSVMLFTTVL	5.7	57	562.3266	2	47.721	2.6	26 70 70 70 76 67 68 42 45 32	LSVMLFTTVL
3153	LTCDRVGDSKVA	6.8	57	632.32	2	38.919	-2.7	35 35 52 79 77 77 83 70 51 40 40 40	LTCDRVGDSKVA
1324	TSLVM(+15.99)YTVLAL	6.3	57	613.8377	2	17.414	-1.6	63 63 93 96 96 26 39 44 37 31 35	TSLVM(+15.99)YTVLAL
3414	ELLGASDVQVK	6.3	57	579.8212	2	42.118	-1.2	45 45 66 45 35 39 74 83 67 65 59	ELLGASDVQVK
1643	NMNPTLDAAKTNPLNGSVVK	11.4	57	1042.543	2	20.83	-1.2	34 31 31 32 38 90 93 88 83 78 78 61 53 53 59 52 47 49 54 26	NMNPTLDAAKTNPLNGSVVK
1462	WMAGMTPEI	5.1	57	518.2367	2	18.85	2.2	62 61 67 62 76 62 66 26 26	WMAGMTPEI
3726	MEELAELV	4.6	57	933.4583	1	45.894	-1.5	26 26 79 73 61 55 58 74	MEELAELV
2533	GCTAFM(+15.99)LASSATPNK	8.6	57	757.8531	2	31.322	0.9	50 57 75 81 78 59 57 58 73 68 49 45 35 35 26	GCTAFM(+15.99)LASSATPNK
4276	T(+79.97)EM(+15.99)FDF	3.4	57	443.1407	2	52.773	0.8	26 26 87 87 87 26	T(+79.97)EM(+15.99)FDF
3547	TGRVGSKHGHAAPSV	8.6	57	487.5958	3	43.725	0.9	30 30 35 39 56 43 48 75 80 64 60 60 68 80 80	TGRVGSKHGHAAPSV
3013	VEFVDMAGMDLLL	7.4	57	484.9072	3	37.193	-2.9	26 26 69 69 44 44 47 77 82 77 78 71 26	VEFVDMAGMDLLL
2725	FKSS(+79.97)VGKPDTSQQLR	8.6	57	879.4313	2	33.678	-1.5	53 53 57 78 75 71 61 59 63 73 54 44 36 42 29	FKSS(+79.97)VGKPDTSQQLR

2224	S(+79.97)LATHSK	4	57	823.3694	1	27.479	-1.8	90 83 79 43 37 37 26	S(+79.97)LATHSK
4109	WPSKFSVT(+79.97)LLYKAPV	8.5	57	605.9859	3	50.62	-0.7	68 32 31 32 49 55 73 75 81 42 43 40 51 88 88	WPSKFSVT(+79.97)LLYKAPV
3382	MPTGVYAMGRK	6.3	57	404.2064	3	41.741	-2	44 62 57 62 58 62 72 60 55 63 26	MPTGVYAMGRK
639	DGPDVSMPW	5.1	57	502.2137	2	9.726	1.2	27 32 33 56 91 84 84 76 26	DGPDVSMPW
3151	Y(+79.97)LLANGTTTRVVKAR	8.5	57	581.6475	3	38.885	-1.9	50 50 38 58 50 55 66 91 83 82 84 42 34 34 29	Y(+79.97)LLANGTTTRVVKAR
792	T(+79.97)MFAAVDR	4.6	57	330.8092	3	11.648	1.7	28 40 34 62 68 65 77 77	T(+79.97)MFAAVDR
1871	LEWLEKKVDDLEGSLEEKQKL	12	57	843.7851	3	23.266	-1.4	26 35 32 36 38 59 62 65 66 89 92 93 74 66 67 83 66 46 29 32 28	LEWLEKKVDDLEGSLEEKQKL
3327	DTLFPMLK	4.6	57	482.762	2	41.07	-0.6	58 47 53 26 91 69 70 38	DTLFPMLK
3526	NSYEPSSVAEPVCNTL	9.1	57	570.5944	3	43.478	-0.1	65 74 74 56 44 43 47 73 79 83 80 41 38 38 38 30	NSYEPSSVAEPVCNTL
2565	MDDAVTVLSSNMEAVSK	9.7	57	599.6182	3	31.724	-0.2	27 54 65 47 45 39 45 77 98 91 68 71 48 45 40 47 50	MDDAVTVLSSNMEAVSK
2668	SNYELGPCAELEGSQL	9.1	57	570.5947	3	32.993	0.5	54 50 53 36 36 46 61 72 88 87 87 76 64 31 30 31	SNYELGPCAELEGSQL
1279	FKLAPSMTVAPKEA	8	57	745.4087	2	16.938	1.2	31 31 34 43 52 74 76 79 82 75 73 50 51 37	FKLAPSMTVAPKEA
1102	KLEEGNAAKV	5.7	57	529.7941	2	15.063	-2.9	64 64 85 76 43 37 38 44 55 57	KLEEGNAAKV
2801	LFQATELLDHGCMWTV	9.1	57	621.9622	3	34.601	-2.6	51 49 45 57 56 63 77 65 57 47 51 77 74 52 55 26	LFQATELLDHGCMWTV
1293	FEPVPKVEREKK	6.8	57	495.9537	3	17.095	3	82 81 81 42 36 42 74 71 67 31 36 31	FEPVPKVEREKK
620	DGPEGADDENAEK	7.4	57	673.7689	2	9.493	-2.6	26 41 55 70 67 52 53 70 72 78 52 53 43	DGPEGADDENAEK
3457	M(+15.99)TLTGGS(+79.97)VNM(+15.99)VTK	7.4	57	725.8199	2	42.641	0.6	44 43 70 63 49 52 75 63 51 57 57 61 45	M(+15.99)TLTGGS(+79.97)VNM(+15.99)VTK
4203	FDKCYEF	4	57	476.1993	2	51.807	-0.3	35 34 34 84 89 91 26	FDKCYEF
2509	LCGPGPKLAAARR	7.4	57	437.2553	3	31.027	-0.6	33 32 36 39 61 62 70 86 90 83 63 46 32	LCGPGPKLAAARR
1057	KWADLM(+15.99)GV	4.5	57	935.4655	1	14.597	-0.1	54 51 59 64 72 44 45 61	KWADLM(+15.99)GV
791	RDTKGGYFKAR	6.2	57	433.57	3	11.637	-0.6	65 53 52 65 66 69 60 49 45 55 40	RDTKGGYFKAR
1363	FSEPEI	3.4	57	721.3397	1	17.812	-0.8	26 86 86 87 26 26	FSEPEI
959	KLVVKKHPDAGHA	7.4	57	350.7103	4	13.534	1.9	47 45 46 31 31 49 56 79 79 82 79 81 26	KLVVKKHPDAGHA
1818	WKWAELWQLDNLQVGNL	9.7	57	1057.048	2	22.669	1.4	32 43 39 89 92 93 73 54 69 91 52 60 49 31 28 30 31	WKWAELWQLDNLQVGNL
873	NVQGQL	3.4	57	658.3519	1	12.598	0	26 93 57 68 51 42	NVQGQL
3071	MVAELEEI	4.5	57	933.4601	1	37.895	0.4	74 62 61 80 94 26 26 26	MVAELEEI
2614	FVGPCVLADASR	6.8	57	412.2132	3	32.333	0.3	26 26 38 43 60 69 71 72 80 71 72 45	FVGPCVLADASR
1793	LEQTAANSLQGLLDHA	9.1	57	560.9571	3	22.403	1	46 46 44 54 55 41 37 52 69 69 60 61 79 79 80 26	LEQTAANSLQGLLDHA
1591	AM(+15.99)SPLVVAMNGT(+79.97)PK	7.9	57	756.3539	2	20.241	0.6	28 34 34 87 26 94 89 78 53 50 61 63 63 26	AM(+15.99)SPLVVAMNGT(+79.97)PK
2260	CGTAM(+15.99)MGVACSRALK	8.5	57	757.8514	2	27.929	0.7	57 64 82 79 72 63 43 42 60 87 55 43 34 34 29	CGTAM(+15.99)MGVACSRALK
4016	CM(+15.99)QGPGLAASSNPVPHSK	10.2	57	599.6183	3	49.474	-0.8	51 51 42 36 37 42 40 52 76 89 93 82 92 93 26 57 26 26	CM(+15.99)QGPGLAASSNPVPHSK

1321	RCNALGAVVGA	6.2	57	1030.544	1	17.378	-2.3	26 86 75 68 52 35 35 41 66 67 67	RCNALGAVVGA
3951	Y(+79.97)QMAALPSFGT(+79.97)DF	7.4	57	536.5352	3	48.658	1.5	39 35 35 53 55 66 75 77 65 60 56 67 46	Y(+79.97)QMAALPSFGT(+79.97)DF
2556	YPCLDL	3.4	57	723.3372	1	31.605	-1.3	53 53 53 96 26 55	YPCLDL
1626	NYAHTACTGGANSSVALK	10.2	57	882.9194	2	20.64	-1	41 42 73 74 60 43 36 35 39 52 65 46 56 89 89 61 66 42	NYAHTACTGGANSSVALK
3713	VPKMVPV	4	57	385.2352	2	45.737	-1.1	26 50 50 70 83 88 26	VPKMVPV
2938	Y(+79.97)T(+79.97)VVVLLVMGAKNR	7.9	57	574.9542	3	36.27	3.9	38 38 36 54 62 86 94 93 90 63 42 32 31 27	Y(+79.97)T(+79.97)VVVLLVMGAKNR
2916	MTVTLGAGEV	5.7	57	977.4973	1	35.991	0.1	26 78 59 52 55 42 50 61 60 78	MTVTLGAGEV
2957	WARGTGGHGLAPAPL	8.5	57	487.5959	3	36.505	-1.6	68 50 40 52 46 45 44 61 81 54 49 56 64 64 66	WARGTGGHGLAPAPL
2608	M(+15.99)TLHDKGGTEDCK	7.3	57	725.8203	2	32.255	2.3	57 59 74 62 53 58 65 52 56 86 35 41 32	M(+15.99)TLHDKGGTEDCK
777	RANSACM(+15.99)K	4.5	57	448.7078	2	11.469	0.7	71 70 47 43 52 50 58 58	RANSACM(+15.99)K
2598	MGLPVTPVVGAW	6.8	57	613.8348	2	32.128	1.9	68 68 90 92 26 26 26 83 59 49 52 33	MGLPVTPVVGAW
933	LQDLVDK	4	56	415.7347	2	13.264	0.4	26 91 98 99 26 26 26	LQDLVDK
2115	ETSLSLPAPAAGLA	7.9	56	649.3546	2	26.143	1.7	61 63 57 61 71 80 66 61 51 55 49 42 34 31	ETSLSLPAPAAGLA
2009	S(+79.97)PKGFLSAAHHY	6.8	56	465.5462	3	24.849	-0.7	26 55 53 57 69 71 64 68 79 47 41 41	S(+79.97)PKGFLSAAHHY
3193	DSPLSGTAPVLVAA	7.9	56	649.3531	2	39.41	-0.6	26 26 26 65 63 59 69 84 88 89 78 35 36 37	DSPLSGTAPVLVAA
170	WAPGGDA	4	56	337.15	2	2.519	-1.8	26 75 71 84 83 26 26	WAPGGDA
3252	LTHPEPGYRGAVMT(+79.97)TR	9	56	467.2224	4	40.142	-2.7	32 35 46 55 59 52 55 70 71 78 84 80 74 34 35 35	LTHPEPGYRGAVMT(+79.97)TR
2416	Y(+79.97)LKHMVLVVVYVEYY	8.5	56	666.665	3	29.873	-2.1	38 43 32 48 40 39 40 78 73 75 76 76 73 82 26	Y(+79.97)LKHMVLVVVYVEYY
4124	VVTWNGGHDAPAGYVEGLR	10.7	56	666.6655	3	50.818	-0.4	26 84 69 70 44 53 41 56 63 65 58 60 65 76 69 52 38 44 31	VVTWNGGHDAPAGYVEGLR
1749	Y(+79.97)VLVMLWKGTLDDYVLTQL	10.7	56	784.0641	3	21.937	-1.1	26 26 57 52 47 42 35 38 58 64 85 92 93 93 86 50 43 44 31	Y(+79.97)VLVMLWKGTLDDYVLTQL
602	HCFTDF	3.4	56	385.1526	2	9.242	0.9	26 86 86 86 26 26	HCFTDF
2856	MGLLPGPAGGLPF	7.3	56	613.8353	2	35.249	2.6	56 56 80 84 62 62 56 40 39 46 53 67 26	MGLLPGPAGGLPF
1821	LVPTAGNPVLSSPVI	8.5	56	732.4286	2	22.71	2.2	26 26 61 57 64 58 59 84 92 26 78 78 78 26 26	LVPTAGNPVLSSPVI
922	HSYKLTHGLKEM(+15.99)F	7.3	56	536.2745	3	13.139	2.7	68 62 57 60 41 59 67 68 69 60 41 35 38	HSYKLTHGLKEM(+15.99)F
1665	STRKPVEVDASESKPL	9	56	581.6481	3	21.072	0.8	33 33 36 39 38 35 40 79 87 85 77 66 68 69 71 38	STRKPVEVDASESKPL
3107	STSGVLLDPAGPL	7.3	56	613.8346	2	38.342	-0.5	26 89 73 57 52 64 84 74 58 46 33 34 36	STSGVLLDPAGPL
1847	LQHGVCDKTNLFF	7.3	56	507.9209	3	22.988	-2.5	47 43 55 60 74 40 40 46 75 38 43 77 86	LQHGVCDKTNLFF
2209	VTGLALMPY	5.1	56	482.7625	2	27.285	0.4	44 43 48 44 61 76 76 83 26	VTGLALMPY
1738	YSLCLL	3.4	56	711.3744	1	21.814	-0.3	26 98 95 61 29 27	YSLCLL
1374	ALRFDATSLESLY(+79.97)VPV	9	56	620.9777	3	17.939	2.4	71 71 72 35 33 42 49 66 78 84 80 80 52 26 26 26	ALRFDATSLESLY(+79.97)VPV
1267	EDLKAVGNM(+15.99)NSSYVW	8.4	56	864.8999	2	16.81	1.6	32 34 38 60 49 43 49 41 44 45 78 81 80 79 82	EDLKAVGNM(+15.99)NSSYVW

2269	FMPAAGGPPVLAV	7.3	56	613.8344	2	28.037	1.1	26 50 53 48 41 38 53 74 82 92 81 43 43	FMPAAGGPPVLAV
3263	SNYNGKPCAESRTPW	8.4	56	570.5944	3	40.284	-0.9	54 50 56 55 57 58 66 68 87 76 68 41 32 33 36	SNYNGKPCAESRTPW
762	VQNDLSAGA	5.1	56	874.4265	1	11.29	0	26 46 44 47 69 81 78 83 26	VQNDLSAGA
2748	M(+15.99)TLDQANGAAPDCK	7.9	56	725.82	2	33.961	1.9	74 74 45 44 39 55 54 83 80 38 37 40 71 47	M(+15.99)TLDQANGAAPDCK
1240	SQVADM(+15.99)L	3.9	56	779.3622	1	16.526	2.3	52 41 50 96 99 26 26	SQVADM(+15.99)L
2219	EPGSLVDPPAGGL	7.3	56	604.8109	2	27.412	-0.9	88 88 89 92 94 26 26 26 44 41 34 34 41	EPGSLVDPPAGGL
3988	LGSLYAPPF	5.1	56	482.7626	2	49.121	4.3	39 39 50 55 75 76 56 56 56	LGSLYAPPF
3759	STAGSATNGAKLW	7.3	56	632.3192	2	46.299	-1.3	68 70 83 86 88 58 46 49 46 36 30 33 30	STAGSATNGAKLW
3535	SLGPGPALLGNK	6.7	56	562.327	2	43.583	-0.2	45 44 45 44 50 58 67 91 76 62 62 26	SLGPGPALLGNK
2077	RNVGVVPESWEKVYR	8.4	56	455.2482	4	25.67	3	59 47 44 45 58 60 69 62 64 62 77 76 39 39 32	RNVGVVPESWEKVYR
3235	YYPMGGFAFSGKTNK	8.4	56	834.4	2	39.932	2.6	39 52 42 47 41 40 60 72 83 91 89 52 46 46 37	YYPMGGFAFSGKTNK
2891	WLGGGFVNGCKLPL	7.9	56	487.5965	3	35.678	2.1	81 62 55 59 59 41 35 33 43 55 83 68 73 30	WLGGGFVNGCKLPL
1248	EAPLYML	3.9	56	836.4219	1	16.601	-0.4	26 84 83 93 38 33 32	EAPLYML
2271	FVWAPEDCGAEADGRKL	9.5	56	621.9622	3	28.069	1.4	26 77 66 52 47 49 46 53 72 79 79 69 68 67 34 34 30	FVWAPEDCGAEADGRKL
2176	KMKPVHACTASK	6.7	56	434.2331	3	26.88	-1.4	26 56 56 66 78 78 52 46 41 44 56 70	KMKPVHACTASK
2101	LLKDEPATTVGKK	7.3	56	467.2768	3	25.967	0.3	38 46 43 60 67 91 89 89 38 36 35 65 26	LLKDEPATTVGKK
2773	WTMGLRKVVVKSCGHDR	9.5	56	493.766	4	34.247	2.8	56 59 38 51 64 50 41 37 43 43 83 78 76 75 58 58 34	WTMGLRKVVVKSCGHDR
3821	RLCGMHL	3.9	56	415.2116	2	47.05	-1.4	59 58 62 61 63 62 26	RLCGMHL
1962	RKHLGPVVPPYLMSGGTTKK	11.2	56	722.7442	3	24.292	-1.5	26 35 31 41 49 49 46 26 97 96 96 89 60 75 70 61 58 48 34 26	RKHLGPVVPPYLMSGGTTKK
4148	YSS(+79.97)AVWASDYKGRKV	8.4	56	599.6187	3	51.118	2.6	26 74 61 59 64 69 71 79 76 69 36 41 35 41 34	YSS(+79.97)AVWASDYKGRKV
3114	VFAPALNNCGSGMYKNR	9.5	56	921.4435	2	38.426	0.6	53 53 53 82 81 35 34 50 67 64 81 73 69 68 30 27 27	VFAPALNNCGSGMYKNR
1108	LDEAENI	3.9	56	402.1931	2	15.129	1	26 26 26 97 96 91 26	LDEAENI
1585	DEWVAQVVNPGHA	7.3	56	711.343	2	20.176	-1.5	56 64 54 63 51 47 47 59 49 68 67 72 26	DEWVAQVVNPGHA
808	EERLTQQPDVSELER	8.4	56	457.9814	4	11.85	0.1	26 48 47 55 56 45 40 54 52 54 53 63 88 91 60	EERLTQQPDVSELER
2969	KVRPGNMCPKGARAR	8.4	56	547.6372	3	36.655	1.4	69 69 55 44 55 52 54 56 83 72 64 51 46 33 29	KVRPGNMCPKGARAR
1090	EAM(+15.99)MSGHVGVVM(+15.99)PL	7.8	56	497.2344	3	14.938	2.7	53 46 37 40 49 63 26 63 68 65 69 66 78 54	EAM(+15.99)MSGHVGVVM(+15.99)PL
1894	CASSRRLK	4.5	56	920.5085	1	23.516	-1	93 91 91 62 27 27 26 26	CASSRRLK
4066	MNAFGNLGAARSPF	7.8	56	484.907	3	50.093	0.9	92 79 59 56 69 60 48 48 61 43 41 40 40 40	MNAFGNLGAARSPF
3291	FVDNGGAALSSNDGQFVV	10.1	56	599.6191	3	40.636	-1.2	32 44 42 54 55 47 49 75 75 80 94 81 49 32 31 51 80 26	FVDNGGAALSSNDGQFVV
2512	QNLAAAPYGTCDLPL	8.4	56	516.2566	3	31.071	-1.2	34 34 44 51 70 56 45 56 62 65 64 79 66 74 31	QNLAAAPYGTCDLPL
2647	TLRNAVALSSLLFY(+79.97)PA	9	56	605.9863	3	32.728	2.2	39 42 57 53 40 34 40 47 69 88 88 93 82 35 45 34	TLRNAVALSSLLFY(+79.97)PA

1827	TKLAPSPGNFFLDDVQAERPK	11.7	56	583.3079	4	22.777	-1.8	34 34 41 40 38 39 66 65 49 55 55 72 82 82 80 69 78 77 42 38 27	TKLAPSPGNFFLDDVQAERPK
3391	FTMPGSSHMEVEV	7.3	56	725.8196	2	41.844	-1.3	55 55 60 64 74 91 26 26 59 53 53 79 26	FTMPGSSHMEVEV
2049	KFFLYPSKAKLYYK	7.8	56	898.513	2	25.337	2.4	27 27 26 98 90 72 47 47 60 67 77 45 46 47	KFFLYPSKAKLYYK
1507	RATHEGKLPKDSTMFEY	9.5	56	670.6617	3	19.325	-2.1	43 46 58 50 51 57 43 42 65 72 87 61 60 73 80 26 26	RATHEGKLPKDSTMFEY
1287	AWKDATTASTKALPA	8.4	56	511.2749	3	17.033	-0.8	41 41 31 29 36 46 45 47 61 61 68 85 79 79 80	AWKDATTASTKALPA
1469	WVAVGGNGSYKHKLDNLQR	10.6	56	536.2847	4	18.921	-1.6	50 48 35 35 33 30 35 47 43 42 35 65 93 92 90 80 74 78 46	WVAVGGNGSYKHKLDNLQR
3325	M(+15.99)VPVSGGNSCVMRTLR	8.9	56	574.9535	3	41.037	0.7	62 62 62 61 59 48 49 53 61 72 88 79 41 32 30 28	M(+15.99)VPVSGGNSCVMRTLR
3127	QSLGGAASVK	5.6	56	459.2555	2	38.586	-1.4	31 32 33 51 74 78 64 60 63 68	QSLGGAASVK
3186	MGLLGPGTVVPW	6.7	56	613.8348	2	39.326	1.9	72 69 89 73 57 46 57 61 63 26 26 26	MGLLGPGTVVPW
4019	WPLYAVSGRMAPL	7.3	56	487.596	3	49.507	1.1	91 81 50 37 36 43 82 80 61 52 38 40 29	WPLYAVSGRMAPL
4031	TPTDAMSMVATGVYVLW	9.5	56	921.4427	2	49.656	-1.7	40 33 33 49 75 81 61 39 38 49 52 53 59 68 90 94 26	TPTDAMSMVATGVYVLW
1944	TSAVYWGCPKLPAL	7.8	56	753.3958	2	24.07	1.4	66 58 58 71 75 79 74 65 63 43 37 30 27 27	TSAVYWGCPKLPAL
1961	M(+15.99)LLWSAM(+15.99)PEPR	6.1	56	681.8288	2	24.282	-3	40 40 65 64 63 65 81 97 40 26 26	M(+15.99)LLWSAM(+15.99)PEPR
3028	TDLAHDCV	4.5	56	437.1932	2	37.375	2.4	68 75 93 96 26 28 28 28	TDLAHDCV
2044	FESFLPPKF	5	56	556.2963	2	25.278	2.9	26 26 96 96 98 61 34 34 26	FESFLPPKF
939	QLDLVDK	3.9	56	830.4639	1	13.324	2.6	26 93 93 96 26 26 26	QLDLVDK
3743	TM(+15.99)TEEWGTHNTK	6.7	56	725.8173	2	46.096	0.4	62 57 65 66 38 35 42 52 60 54 80 51	TM(+15.99)TEEWGTHNTK
2040	WLDRTVYARPV	6.1	56	459.2535	3	25.225	-1.4	58 56 35 61 78 85 62 47 42 56 26	WLDRTVYARPV
3083	ALEKKPPFQTW	6.1	56	448.9171	3	38.043	4.3	71 70 72 77 61 45 73 36 33 39 29	ALEKKPPFQTW
2495	ERSPLLFLNDAQLDNLGNL	10.6	56	714.71	3	30.857	-1.5	33 33 39 41 44 71 54 47 47 62 78 67 89 88 76 75 39 31 31	ERSPLLFLNDAQLDNLGNL
984	NAGLAQGLDK	5.6	56	493.7669	2	13.789	0	43 51 85 94 92 29 29 30 61 38	NAGLAQGLDK
4091	TLAVTKKHAFSNSDALTPA	10.6	56	493.7667	4	50.4	-2.5	44 45 30 30 32 55 60 59 52 49 44 38 54 58 59 76 85 86 93	TLAVTKKHAFSNSDALTPA
3595	MEAGMNGGTVVNKMK	8.4	56	783.8774	2	44.302	2.6	81 81 92 92 36 36 41 49 51 72 34 32 34 68 26	MEAGMNGGTVVNKMK
3129	DTFLPMLK	4.5	56	482.7623	2	38.62	0.2	26 26 26 92 85 70 71 44	DTFLPMLK
1965	FLALPPTVLELVPYVAYKY	10.6	56	732.7479	3	24.335	-2.8	27 27 33 56 53 32 35 47 86 96 86 65 62 83 59 54 50 54 44	FLALPPTVLELVPYVAYKY
2334	TSLVPPTVGGDAL	7.2	56	613.8351	2	28.853	0.4	63 61 90 26 84 70 47 45 54 56 48 36 38	TSLVPPTVGGDAL
904	RT(+79.97)HGASNGSQEAKTV	8.3	56	541.582	3	12.94	1.9	34 36 33 60 61 62 56 48 46 44 72 91 79 51 52	RT(+79.97)HGASNGSQEAKTV
3174	QFFLYPKFAPPLALK	8.3	56	890.515	2	39.176	1.9	34 31 30 86 85 91 89 86 77 62 36 31 30 30 28	QFFLYPKFAPPLALK
2313	LYPRGTSGGHGKK	7.2	56	679.3718	2	28.592	2.2	71 70 90 61 41 36 40 40 47 61 65 69 26	LYPRGTSGGHGKK
1788	DSYEEGLAAENKNDR	8.3	56	570.9229	3	22.347	-1.4	26 95 84 72 39 46 47 60 83 78 66 39 33 34 26	DSYEEGLAAENKNDR
3271	FHVNTNGNGSGPATAA	8.9	56	757.8521	2	40.379	-0.8	26 45 40 40 58 54 79 54 67 74 49 51 63 59 59 66	FHVNTNGNGSGPATAA

2593	EVKGETLLNGVK	6.7	56	429.5814	3	32.064	-1.3	52 51 46 33 33 41 81 63 44 50 82 86	EVKGETLLNGVK
2305	MVAEKNEGVI	5.6	56	545.2841	2	28.488	0.2	50 50 50 80 60 59 57 60 60 26	MVAEKNEGVI
1211	MVDAKNAANGL	6.1	56	552.2802	2	16.218	1.4	26 98 74 66 47 45 61 65 40 41 43	MVDAKNAANGL
2314	WSVDAVGLLRR	6.1	56	424.5778	3	28.603	-2.4	82 68 49 48 50 70 77 72 34 29 27	WSVDAVGLLRR
3557	EPETVTGAKVK	6.1	56	579.8214	2	43.856	-0.8	26 26 87 52 45 51 47 66 77 88 40	EPETVTGAKVK
1606	KWRDPMKAEEDKVNTWR	9.4	56	1095.051	2	20.419	1.2	41 34 37 48 66 67 77 92 93 48 47 47 74 56 40 34 35	KWRDPMKAEEDKVNTWR
735	EGETEM(+15.99)A	3.9	56	782.287	1	10.962	-0.2	26 57 52 57 84 84 26	EGETEM(+15.99)A
1618	WQKGEANGAWGALDNLRK	10	56	672.0114	3	20.555	-2.9	42 34 33 40 34 33 32 45 56 91 86 87 91 81 72 47 50 34	WQKGEANGAWGALDNLRK
3990	EDQVSAGPKRA	6.1	56	579.2986	2	49.141	-0.6	74 64 44 46 43 48 69 72 54 51 40	EDQVSAGPKRA
3577	MEELEALV	4.4	55	933.4587	1	44.097	-1.1	26 26 26 80 68 65 69 80	MEELEALV
1143	LKEAKNTCASHGNSK	8.3	55	794.3983	2	15.506	-0.9	43 43 76 78 70 32 34 35 63 65 45 55 42 51 93	LKEAKNTCASHGNSK
2610	WAVTGGDNLHEMTHAAR	9.4	55	467.2222	4	32.277	-2.1	69 45 40 41 45 45 57 53 56 55 48 57 72 85 71 64 32	WAVTGGDNLHEMTHAAR
3563	EPGSLEGALPPAA	7.2	55	604.8118	2	43.928	0.5	95 93 58 58 78 66 61 42 38 47 26 26 26	EPGSLEGALPPAA
3225	FVDDLAALACNMEAKW	8.9	55	599.6184	3	39.817	3.4	43 47 47 52 51 46 41 47 58 59 77 89 77 53 53 38	FVDDLAALACNMEAKW
676	MQQGEDENHDK	6.1	55	665.7698	2	10.219	-0.4	51 41 42 47 77 83 75 62 44 47 35	MQQGEDENHDK
2981	WMVYHNVGSGKPSSHR	8.9	55	921.4443	2	36.807	-2.7	36 36 47 69 62 39 51 60 63 73 66 66 77 80 26 26	WMVYHNVGSGKPSSHR
2850	MWVYDDTLNSMVVVVA	8.9	55	921.4437	2	35.178	-0.6	41 41 34 81 90 82 42 41 48 72 74 78 57 36 30 31	MWVYDDTLNSMVVVVA
1966	LYQVFVNGSTVL	6.6	55	670.3657	2	24.343	-1	32 63 39 76 84 90 56 67 51 34 37 32	LYQVFVNGSTVL
2257	NKQCGPTRAAMVER	7.8	55	520.9282	3	27.885	-2.2	36 31 31 46 61 54 53 67 88 90 75 44 48 44	NKQCGPTRAAMVER
2092	NRRKLLTSSLKLAANPSKEGAMRDER	14.4	55	981.2067	3	25.86	-1.8	37 38 31 32 44 62 58 61 66 51 57 87 93 95 82 35 32 32 39 81 81 71 63 31 35 32	NRRKLLTSSLKLAANPSKEGAMRDER
2746	MRTQHVVLVETMVEYY	8.9	55	666.6656	3	33.941	-0.1	38 36 36 36 48 49 26 90 85 64 51 55 64 83 93 26	MRTQHVVLVETMVEYY
2452	MWVSLWVLNVKSHY(+79.97)	7.8	55	921.4433	2	30.326	-0.8	45 68 57 97 26 26 80 78 46 44 49 51 51 49	MWVSLWVLNVKSHY(+79.97)
1984	FDVMGPL	3.9	55	778.3806	1	24.551	0.3	26 26 26 83 63 67 92	FDVMGPL
1434	EAPLGSNF	4.4	55	834.3992	1	18.558	0.1	26 88 86 75 58 54 26 26	EAPLGSNF
2535	NSYEGLAEAELGVGDW	8.8	55	570.5938	3	31.355	1	53 63 75 85 41 39 54 62 75 76 74 56 34 31 33 26	NSYEGLAEAELGVGDW
2339	MPLFSELK	4.4	55	482.7625	2	28.915	0.6	65 58 58 76 44 39 61 38	MPLFSELK
1095	SVLAESKGGVSAPR	7.7	55	453.2524	3	14.989	-0.5	26 89 88 87 72 63 47 50 56 49 41 34 36 29	SVLAESKGGVSAPR
1992	TLVGTFGGDPL	6.1	55	538.7861	2	24.646	2.5	46 45 48 55 65 69 69 62 54 63 26	TLVGTFGGDPL
1501	RVLWTAPKCGKVGNNKKPY(+79.97)	10.5	55	747.0577	3	19.256	0.7	33 37 52 63 48 67 57 55 44 43 58 82 85 59 63 61 49 47 36	RVLWTAPKCGKVGNNKKPY(+79.97)
3845	DEVVNEVKVK	5.5	55	579.8222	2	47.338	0.6	39 33 46 60 52 56 81 87 56 39	DEVVNEVKVK
1530	LLGSCGNSVGGVACEYQR	9.9	55	604.9503	3	19.582	-0.2	60 57 51 50 58 72 48 48 52 86 60 42 42 74 77 39 35 32	LLGSCGNSVGGVACEYQR

3424	SPGSAAPSR	5	55	415.2111	2	42.251	-1.5	26 26 79 61 65 70 70 70 26	SPGSAAPSR
3331	EFKPCTPLDACADGRQL	9.4	55	621.962	3	41.11	-0.7	26 64 62 51 43 43 57 66 63 61 67 85 66 57 43 44 31	EFKPCTPLDACADGRQL
1101	LSGANNEKAAM(+15.99)VER	7.7	55	502.5837	3	15.054	-0.8	48 48 56 31 30 36 43 43 80 88 82 59 62 59	LSGANNEKAAM(+15.99)VER
4263	Y(+79.97)EGCTHYL	4.4	55	533.19	2	52.595	-1.8	26 26 69 62 66 61 65 61	Y(+79.97)EGCTHYL
3679	SLYENMVEDASAEK	7.7	55	793.3553	2	45.321	-1	35 35 61 54 63 77 75 67 59 60 77 35 35 31	SLYENMVEDASAEK
678	CCTM(+15.99)M(+15.99)GHA	4.4	55	443.14	2	10.24	0.6	26 26 87 87 87 71 26 26	CCTM(+15.99)M(+15.99)GHA
3223	FSSCLMNATLTVAKW	8.3	55	836.4155	2	39.782	0.3	82 82 65 67 36 33 34 53 74 62 55 54 43 44 35	FSSCLMNATLTVAKW
1551	LEEDLLAADERELDPV	8.8	55	609.6388	3	19.824	0	37 37 70 62 60 41 52 54 54 77 67 60 62 52 63 26	LEEDLLAADERELDPV
3073	T(+79.97)VT(+79.97)CEMQAGSPPNY(+79.97)	7.7	55	579.8226	3	37.915	-46.3	27 35 32 60 53 81 76 82 65 61 60 46 46 41	T(+79.97)VT(+79.97)CEMQAGSPPNY(+79.97)
2562	HPTKNTALASFARAR	8.3	55	547.6373	3	31.678	-0.2	51 59 53 52 52 54 79 62 65 76 65 59 39 26 26	HPTKNTALASFARAR
2310	CLLKVKSEVYK	6.1	55	437.2554	3	28.549	-2.4	43 43 57 54 59 76 81 56 44 54 34	CLLKVKSEVYK
3761	M(+15.99)NGS(+79.97)ESGPCMF	6.1	55	628.1937	2	46.319	-2.3	62 46 49 56 57 62 69 52 54 68 26	M(+15.99)NGS(+79.97)ESGPCMF
3952	EPTPAAPNSPCGSEQRR	9.4	55	599.6177	3	48.669	2.3	40 41 50 62 57 56 55 65 88 80 45 44 44 65 47 54 36	EPTPAAPNSPCGSEQRR
1407	LEATALNVLEHAYVEYY	9.4	55	666.6657	3	18.287	-1.5	31 37 50 68 61 34 33 48 45 45 42 66 83 87 82 90 26	LEATALNVLEHAYVEYY
2958	VVPKVHAVGYGVDHA	8.3	55	516.6152	3	36.515	-1.2	26 60 54 52 53 59 43 39 50 85 77 79 89 26 26	VVPKVHAVGYGVDHA
3126	VPHPLTFTVL	5.5	55	562.3275	2	38.574	-3	26 26 26 89 85 79 74 48 58 35	VPHPLTFTVL
2442	LLMSSTVPES(+79.97)DATHAVK	9.4	55	467.2224	4	30.194	-2	53 38 36 37 49 26 67 65 64 67 67 71 78 73 49 51 36	LLMSSTVPES(+79.97)DATHAVK
1007	AEELELR	3.9	55	430.2305	2	14.055	2.1	26 26 26 91 81 82 50	AEELELR
2193	YPLVPPGVGAAFAAYY(+79.97)	8.8	55	579.2761	3	27.094	0.3	62 61 61 26 30 59 64 85 65 65 70 57 51 41 42 34	YPLVPPGVGAAFAAYY(+79.97)
2709	EFPGEEKLPALK	6.6	55	679.3721	2	33.487	0.7	93 93 85 52 44 42 43 59 48 33 33 29	EFPGEEKLPALK
4023	AAVKGAADTLCVLV	7.7	55	444.2509	3	49.559	-1.3	52 54 53 58 59 62 70 67 69 66 40 40 46 26	AAVKGAADTLCVLV
1607	T(+79.97)DLLGTMDVYPKHKW	8.3	55	628.6299	3	20.43	-0.6	38 43 37 47 40 42 75 84 85 68 67 58 43 51 40	T(+79.97)DLLGTMDVYPKHKW
664	DSPGPAGA	4.4	55	671.2987	1	10.063	-1.1	26 26 26 75 79 87 91 26	DSPGPAGA

APPENDIX P
DE NOVO SEQUENCING RESULTS FOR CEM HIGH

De novo summary report (generated by Peaks DB software)

1. Notes

2. Result Statistics

Figure 1: The distribution of de novo ALC score: **(a)** histogram of score **(b)** The plot of error vs. score

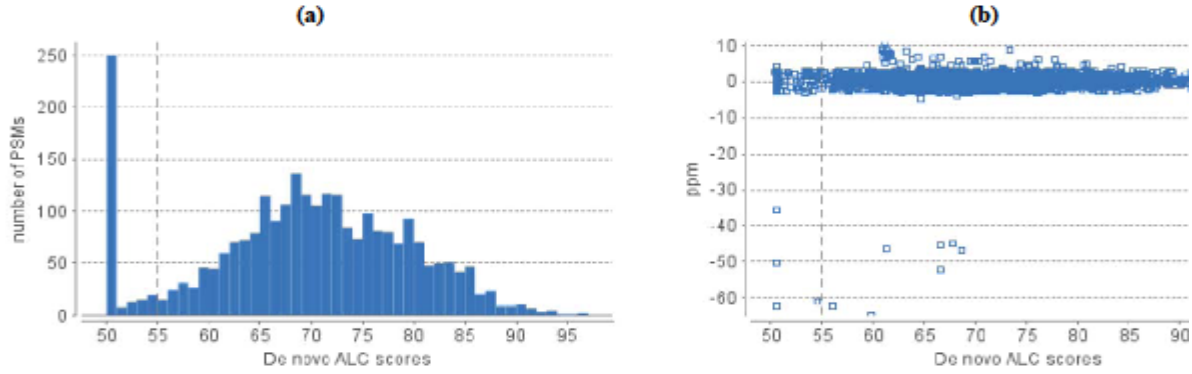

Table 1. Statistics of data and result.

# of MS Scans	883
# of MS/MS Scans	3564
Peptides after filter	2343

Table 2. Result filtration parameters.

De Novo ALC ≥55%
De Novo TLC ≥3

3. Other Information

Table 3. Search parameters.

Parent Mass Error Tolerance: 3.0 ppm
Fragment Mass Error Tolerance: 0.5 Da
Enzyme: CEM_SC
Variable Modifications:
Phosphorylation-STY: 79.97
Oxidation M: 15.99
Max variable PTM per peptide: 3
Report # peptides: 2
Data Refine dependencies: 1

Table 4. Instrument parameters.

Fractions: CEM_HIGH.RAW
Ion Source: ESI(nano-spray)
Fragmentation Mode: CID, CAD, IRMPD (y and b ions
MS Scan Mode: FT-ICR/Orbitrap
MS/MS Scan Mode: Linear Ion Trap

Peptide results for CEM high digested myosin – derived by De novo sequencing with PEAKS DB software

Scan	Sequence	TLC	ALC (%)	m/z	z	RT	ppm	local confidence (%)	tag (>=0%)
816	M(+15.99)VDVER	5.9	98	382.6839	2	11.993	-0.2	99 99 99 96 97 96	M(+15.99)VDVER
864	LEVDASER	7.7	96	459.73	2	12.538	0.2	96 96 96 97 97 95 96 92	LEVDASER
1055	KVAEQELVDASER	12.4	96	737.3821	2	14.632	1.7	95 94 97 98 90 97 99 99 99 97 93 92 85	KVAEQELVDASER
770	VGNEYVTK	7.5	94	455.237	2	11.471	-0.9	97 97 87 93 89 97 99 89	VGNEYVTK
1712	VM(+15.99)LW	3.8	94	564.2851	1	21.628	0.1	92 94 94 95	VM(+15.99)LW
854	ESGDNLNDAEER	11.2	93	674.7842	2	12.435	0.2	74 79 96 97 92 97 94 97 97 97 98 98	ESGDNLNDAEER
1428	M(+15.99)SPEELKNF	8.4	93	555.7605	2	18.596	0.1	93 93 93 96 96 95 86 95 86	M(+15.99)SPEELKNF
1017	FSAEELK	6.5	93	412.2124	2	14.224	-2.4	96 96 99 99 92 92 75	FSAEELK
957	MASEGDNLNDAEER	13	93	775.8229	2	13.576	0	79 81 91 97 97 97 91 96 93 97 98 96 97 87	MASEGDNLNDAEER
1095	VFDQEGNGTVF	10.2	92	606.7822	2	15.049	3.2	97 87 95 84 94 95 93 89 88 93 96	VFDQEGNGTVF
1509	KMELDDLSSNMEAVSK	14.8	92	898.9237	2	19.444	-0.2	91 91 94 97 99 99 98 98 96 84 86 86 87 84 87 92	KMELDDLSSNMEAVSK
902	QFAGDDAPR	8.3	92	488.7275	2	12.965	-0.4	67 85 95 98 98 97 97 98 89	QFAGDDAPR
2628	MFSPANK	6.4	92	397.6967	2	32.553	-0.5	93 86 87 97 96 91 89	MFSPANK
702	KNAYSSPV	7.3	92	433.2238	2	10.66	-1.2	91 90 97 99 99 84 84 84	KNAYSSPV
1029	LNTFPDTK	7.3	92	468.2469	2	14.352	3.6	87 83 97 97 91 90 96 87	LNTFPDTK
1114	SDLTEQLGETGK	11	91	639.3146	2	15.248	0	50 95 95 98 97 88 97 97 96 93 94 92	SDLTEQLGETGK
1388	LEDDLSNSMEAVSK	12.8	91	769.3563	2	18.165	0.2	66 65 90 98 98 98 86 90 95 96 96 96 99 99	LEDDLSNSMEAVSK
1280	MGVKPFSTW	8.2	91	526.7667	2	17.013	2.5	96 95 97 98 50 93 93 98 98	MGVKPFSTW
1534	NSYEETLDHL	9.1	91	610.7739	2	19.706	-1.9	82 90 98 99 97 97 96 93 95 61	NSYEETLDHL
866	EGVDDDAKEAR	10	91	602.7756	2	12.568	0.1	90 92 91 98 95 75 75 97 95 96 89	EGVDDDAKEAR
1148	LVEEELDRA	8.2	91	537.2776	2	15.599	0.7	98 98 98 99 98 96 81 81 63	LVEEELDRA
1360	HKMFWR	5.4	91	904.4626	1	17.862	1.8	94 93 94 76 91 91	HKMFWR
862	FGAGDDAPR	8.1	90	453.2093	2	12.518	0.2	88 88 96 94 90 87 88 95 83	FGAGDDAPR
1187	DDLSSNMEAVSK	10.9	90	648.2924	2	16.003	-0.6	80 88 87 93 89 79 86 92 94 94 98 99	DDLSSNMEAVSK
950	LTENADFGR	8.1	90	511.749	2	13.502	0.7	94 95 95 90 87 88 90 93 76	LTENADFGR
1677	NSYEETLDHLETMK	12.6	90	855.3875	2	21.251	-0.6	67 75 87 98 93 98 98 97 95 95 96 90 90 76	NSYEETLDHLETMK
1392	ELDDLSSNM(+15.99)EAVSK	12.6	90	777.3535	2	18.201	-0.1	68 68 86 97 97 98 95 83 87 90 93 94 98 99	ELDDLSSNM(+15.99)EAVSK
518	MQGQEDENGSHV	10.8	90	665.7695	2	8.251	-0.9	86 82 95 83 96 98 96 89 90 85 88 88	MQGQEDENGSHV

966	M(+15.99)ASEGDNLNDAEER	12.6	90	783.8211	2	13.666	0.8	91 91 91 96 92 92 79 92 87 96 95 88 89 74	M(+15.99)ASEGDNLNDAEER
1221	VLLESDLER	8.1	90	537.2956	2	16.364	0.2	50 99 98 97 97 96 95 96 77	VLLESDLER
819	DSYVGDEAQSK	9.9	90	599.7647	2	12.031	0	50 99 99 99 98 97 96 97 85 84 76	DSYVGDEAQSK
845	QFPSPSYEPV	8.9	89	575.7739	2	12.325	-0.8	97 97 97 85 85 82 86 84 90 87	QFPSPSYEPV
1220	LEDEQSLGAQLQK	11.6	89	729.8752	2	16.355	-0.1	78 78 95 97 87 97 97 98 97 88 92 80 73	LEDEQSLGAQLQK
1244	YEEGQAELEGSLK	11.6	89	726.847	2	16.611	1	50 99 98 96 89 98 98 98 96 90 81 79 85	YEEGQAELEGSLK
963	KSYETDAL	7.1	89	463.7271	2	13.641	0.3	85 88 97 97 96 90 90 68	KSYETDAL
934	GEVDDSVQEA	8.9	89	524.7265	2	13.321	2.8	75 74 74 97 98 96 95 94 98 83	GEVDDSVQEA
1041	WSPLESEVDNEKR	11.6	89	794.8858	2	14.484	2.6	90 90 94 96 96 97 97 97 98 69 75 76 77	WSPLESEVDNEKR
2550	M(+15.99)SSVSV	5.3	89	313.1476	2	31.594	2.9	50 96 96 96 97 97	M(+15.99)SSVSV
1522	MEMQDLDGELGA	10.7	89	654.7766	2	19.577	0.9	97 96 97 87 93 90 75 76 87 83 86 92	MEMQDLDGELGA
1449	MGEVMPF	6.2	89	810.3517	1	18.824	-0.8	95 94 95 95 95 94 50	MGEVMPF
1155	DDLQAEEDKV	8.9	89	581.2672	2	15.669	0	70 84 83 87 98 99 98 91 92 81	DDLQAEEDKV
1474	YLGVL	4.4	89	564.3403	1	19.087	2.2	87 87 91 86 89	YLGVL
939	VFDKEGNGTV	8.9	89	533.264	2	13.383	-0.3	98 98 93 91 89 86 82 83 80 83	VFDKEGNGTV
1616	NFDAGVLWVSK	9.7	89	618.3247	2	20.58	0.3	70 75 94 95 97 97 97 98 98 99 50	NFDAGVLWVSK
1246	S(+79.97)KHLY(+79.97)F	5.3	88	954.3549	1	16.626	2.8	50 95 94 96 96 96	S(+79.97)KHLY(+79.97)F
1013	VDEM(+15.99)L	4.4	88	622.2753	1	14.178	0	94 94 90 81 81	VDEM(+15.99)L
989	ELNQLKGEVDR	9.7	88	650.8467	2	13.919	0.6	87 87 80 72 96 89 95 94 92 94 79	ELNQLKGEVDR
1144	WLQEVLDASER	9.7	88	673.34	2	15.558	-1.4	50 81 61 96 97 98 98 98 96 96 91	WLQEVLDASER
946	QSLEDEQSLGAK	10.5	88	652.8208	2	13.455	1.2	53 54 92 97 98 95 87 95 95 91 93 98	QSLEDEQSLGAK
1023	LQGEVEDLK	7.9	88	515.7742	2	14.288	-0.4	87 78 97 95 93 93 86 88 69	LQGEVEDLK
4092	M(+15.99)SSVSV	5.3	88	313.1475	2	50.178	2.5	50 92 94 94 97 97	M(+15.99)SSVSV
1311	AYVTDVKEL	7.9	88	519.2797	2	17.339	0.7	96 96 96 50 97 97 91 94 67	AYVTDVKEL
1922	QLLGTLEEMR	8.8	88	595.3158	2	24.037	-0.1	53 54 95 99 98 98 99 95 97 85	QLLGTLEEMR
1151	ALLGSPSDDDMANK	12.3	88	717.3327	2	15.624	0.3	61 76 93 97 98 99 99 50 98 96 94 91 92 77	ALLGSPSDDDMANK
1724	LELLEKPMGL	8.8	88	571.8284	2	21.762	0.5	80 88 98 99 97 93 80 67 81 89	LELLEKPMGL
1154	DLESEVDNEQR	9.6	88	667.2972	2	15.662	0.4	75 83 93 98 98 98 98 90 75 76 76	DLESEVDNEQR
2865	MFSPANK	6.1	88	397.6968	2	35.381	-0.2	86 80 81 96 95 88 84	MFSPANK
743	MCCY	3.5	88	519.139	1	11.154	-1.9	50 99 99 99	MCCY
1158	DDLQAEEDKV	8.8	88	1161.527	1	15.69	0.1	96 94 93 87 98 98 85 77 77 66	DDLQAEEDKV

3398	MDLTPF	5.2	87	723.3378	1	41.769	-0.4	95 95 96 94 93 50	MDLTPF
1490	MKELDDLSSACA	10.5	87	641.7864	2	19.25	0.1	72 72 85 96 98 96 91 99 95 95 94 50	MKELDDLSSACA
1257	VQTEEMASQDESVAK	13.1	87	826.3798	2	16.75	2.7	53 53 86 96 98 98 98 97 88 96 96 93 81 81 88	VQTEEMASQDESVAK
1973	M(+15.99)VPMHLCRGK	8.7	87	594.2949	2	24.641	-1.7	92 93 93 93 92 91 90 87 88 50	M(+15.99)VPMHLCRGK
1904	DLAGFEL	6.1	87	764.3825	1	23.824	0.1	74 74 87 88 95 95 95	DLAGFEL
850	EEAEGTLEHEESK	11.4	87	744.3281	2	12.385	-0.4	50 50 97 96 90 90 92 94 98 98 94 95 83	EEAEGTLEHEESK
2165	MGVSPKFTW	7.9	87	526.7661	2	26.923	1.5	95 94 97 79 75 69 83 92 96	MGVSPKFTW
1233	MPESEVDNWA	8.7	87	589.2458	2	16.491	1	50 97 96 95 95 98 97 86 72 79	MPESEVDNWA
1671	EFLDFGA	6.1	87	798.3664	1	21.184	-0.5	92 92 92 50 92 93 95	EFLDFGA
1328	AELGEQLDNLQR	10.5	87	693.3547	2	17.519	0.2	62 73 90 96 95 89 97 98 88 94 80 76	AELGEQLDNLQR
1598	HWPW	3.5	87	625.2883	1	20.392	0.2	50 99 99 99	HWPW
2841	SPEDKLSELK	8.7	87	573.3066	2	35.091	1.1	89 89 91 86 85 93 94 86 87 66	SPEDKLSELK
1275	DLTEAGL	6.1	87	718.3617	1	16.956	0	83 84 93 96 77 79 93	DLTEAGL
1481	QELSDLTEQLGETGK	13	87	824.4066	2	19.157	-0.7	64 68 94 96 97 97 96 95 87 97 96 94 77 81 57	QELSDLTEQLGETGK
1923	LPEYGFQQGGALLVR	12.2	87	760.415	2	24.046	-2.6	80 86 85 96 98 97 85 92 83 85 96 82 81 63	LPEYGFQQGGALLVR
1535	HWPW	3.5	87	625.2866	1	19.713	-2.4	50 99 99 99	HWPW
2906	SPEDKLSELK	8.7	87	573.3054	2	35.88	-1	90 90 92 84 84 93 95 85 86 64	SPEDKLSELK
1797	LNFEI	4.3	87	635.3397	1	22.585	-0.2	77 71 90 97 97	LNFEI
1844	MGEVYVPTW	7.8	87	1081.504	1	23.12	1.8	95 94 95 95 95 95 69 69 69	MGEVYVPTW
1335	MDDLELK	6.1	87	432.213	2	17.593	1.1	85 95 98 96 83 83 63	MDDLELK
1457	LQLVEEELDR	8.7	87	622.3311	2	18.903	1.8	56 54 96 98 99 99 97 94 95 75	LQLVEEELDR
1552	LMPDVAGVNDYK	10.4	87	661.3251	2	19.893	-2	74 75 96 97 97 96 93 81 77 81 89 78	LMPDVAGVNDYK
3303	SPEDKLSELK	8.7	87	573.3063	2	40.647	0.5	91 91 92 90 90 96 95 78 79 60	SPEDKLSELK
1251	M(+15.99)VEVWKNHK	7.8	87	593.8068	2	16.686	2.3	98 98 98 97 97 91 68 79 50	M(+15.99)VEVWKNHK
1128	LALGNPSDEDMNSK	12.1	87	745.8438	2	15.386	0.7	50 66 93 97 94 98 97 95 95 95 91 79 92 63	LALGNPSDEDMNSK
2445	SPEDKLSELK	8.7	87	573.3064	2	30.333	0.7	89 89 91 87 87 93 94 82 83 65	SPEDKLSELK
3017	M(+15.99)SSVSV	5.2	87	313.1476	2	37.207	2.8	50 90 92 92 96 96	M(+15.99)SSVSV
1259	ARTEEFASQDESVAGA	13.8	86	834.3776	2	16.77	-1.6	59 70 82 93 98 99 94 93 80 95 94 89 81 78 83 88	ARTEEFASQDESVAGA
935	KLAEQDEEMEKLK	11.2	86	795.9075	2	13.33	2.1	91 91 94 95 90 98 99 50 92 90 86 93 50	KLAEQDEEMEKLK
995	LAEKDEEMEQLK	10.4	86	731.8587	2	13.977	0.5	91 91 94 95 98 99 50 98 96 73 83 63	LAEKDEEMEQLK
2312	SPEDKLSELK	8.6	86	573.3064	2	28.722	0.7	89 89 91 89 89 94 94 81 81 61	SPEDKLSELK

1648	MELDDLSSACA	9.5	86	577.7394	2	20.919	1.1	69 71 84 95 97 95 99 95 95 94 50	MELDDLSSACA
1667	HWPW	3.4	86	625.2883	1	21.136	0.2	50 98 98 98	HWPW
760	DDQLAEEDK	7.7	86	1062.458	1	11.353	-0.6	98 95 82 84 91 95 77 84 65	DDQLAEEDK
2642	SPEDKLSELK	8.6	86	573.3066	2	32.735	1.1	90 90 92 90 90 94 93 78 78 59	SPEDKLSELK
1395	ALEDQLSELK	8.6	86	573.3058	2	18.241	-0.3	79 84 93 87 75 94 97 87 89 69	ALEDQLSELK
873	SAEGDNLNDAEER	11.2	86	710.3024	2	12.642	-0.3	52 55 65 92 96 92 96 91 97 97 96 96 86	SAEGDNLNDAEER
1725	LTEDQLSEL	7.7	86	524.2642	2	21.769	0.6	65 67 84 89 78 96 96 98 95	LTEDQLSEL
2406	M(+15.99)SSVSV	5.2	86	313.1476	2	29.848	2.9	50 86 91 91 97 97	M(+15.99)SSVSV
1588	SAFPPDVA	6.9	86	803.3939	1	20.282	0.7	67 67 91 96 96 91 87 87	SAFPPDVA
1605	LLGSLDVTM(+15.99)T(+79.97)LL	10.3	86	686.3438	2	20.462	-2.8	96 96 94 95 97 99 97 95 95 58 50 51	LLGSLDVTM(+15.99)T(+79.97)LL
1899	LDAGFEI	6	86	764.3819	1	23.765	-0.7	63 62 84 95 98 98 98	LDAGFEI
831	KEKES(+79.97)L	5.2	86	407.1922	2	12.174	2.3	95 92 85 83 71 87	KEKES(+79.97)L
1622	GTFPPDVAGNVDYK	12	86	740.3593	2	20.644	-0.1	59 59 83 99 99 99 97 93 86 76 90 88 88 77	GTFPPDVAGNVDYK
788	TLLDQGGR	6.9	86	859.4628	1	11.679	-0.4	79 79 93 94 74 83 85 96	TLLDQGGR
1400	LELLEQML	6.9	86	494.7729	2	18.298	0.1	81 87 98 98 95 81 92 50	LELLEQML
986	NLEVTVK	6	86	401.7372	2	13.894	0.5	50 99 97 97 89 91 73	NLEVTVK
3257	HWPW	3.4	86	625.2892	1	40.095	1.8	50 97 97 97	HWPW
3116	GTFPPDVAGNVDYK	12	86	740.3594	2	38.403	0.2	61 61 84 99 99 98 97 95 88 72 90 86 88 76	GTFPPDVAGNVDYK
4174	TGFPPDVANGVDYK	12	86	740.3592	2	51.182	-0.2	75 74 93 99 99 97 95 92 70 72 79 85 88 76	TGFPPDVANGVDYK
2994	HWPW	3.4	86	625.288	1	36.931	-0.3	50 97 97 97	HWPW
1424	GTYDDYVEGLK	9.4	86	630.2933	2	18.561	0.2	72 80 91 97 93 94 95 91 71 80 73	GTYDDYVEGLK
1082	MTEAELDA	6.9	86	879.3779	1	14.915	1.7	87 86 91 88 81 83 96 70	MTEAELDA
1793	FSGDEEFPDLSHI	11.1	86	746.8325	2	22.535	-0.7	74 74 90 92 97 99 99 97 95 95 95 50 50	FSGDEEFPDLSHI
3149	M(+15.99)SSVSV	5.1	86	313.1469	2	38.794	0.8	50 89 91 91 95 95	M(+15.99)SSVSV
2469	MDLTPF	5.1	86	723.3371	1	30.623	-1.4	92 92 95 92 90 50	MDLTPF
1802	WLLDA	4.3	86	617.3297	1	22.646	0.6	50 99 97 97 81	WLLDA
2468	FTLHDVDEETSSA	11.1	86	725.8196	2	30.613	-0.9	80 82 95 94 95 88 88 94 97 97 97 50 50	FTLHDVDEETSSA
1038	TVDVTM(+15.99)PFYK	8.6	86	608.7997	2	14.446	0.4	50 99 99 95 94 88 87 81 85 73	TVDVTM(+15.99)PFYK
1672	CPLEEESFTMFPK	11.1	86	779.3529	2	21.192	1.5	80 89 89 97 99 96 81 64 66 67 95 97 85	CPLEEESFTMFPK
940	LQKDPEDV	6.8	86	472.24	2	13.391	-0.3	75 65 75 95 97 91 91 91	LQKDPEDV
3191	HWPW	3.4	85	625.2886	1	39.303	0.7	50 97 97 97	HWPW

3395	HWPW	3.4	85	625.2884	1	41.729	0.4	50 97 97 97	HWPW
1666	EVVYEPDLRPV	9.4	85	658.3483	2	21.127	0.1	50 98 98 98 99 87 78 85 95 97 50	EVVYEPDLRPV
2529	HWPW	3.4	85	625.2886	1	31.352	0.8	50 97 97 97	HWPW
1546	NLTEEMASQDESVAKLTK	15.4	85	997.4929	2	19.829	2	70 69 80 93 97 97 96 86 65 83 94 93 90 89 92 86 87 62	NLTEEMASQDESVAKLTK
3328	HWPW	3.4	85	625.29	1	40.94	2.9	50 97 97 97	HWPW
1617	WADSPLLDGGAK	10.2	85	615.3124	2	20.588	1.4	92 91 96 99 77 88 97 95 82 64 59 77	WADSPLLDGGAK
1611	VDLASMGAGLNVK	11.1	85	637.8419	2	20.527	-0.6	50 92 91 93 92 93 91 87 88 92 75 84 75	VDLASMGAGLNVK
880	WVSVGAGGM(+15.99)SK	9.4	85	547.769	2	12.717	0.7	72 75 89 93 94 95 93 86 83 77 77	WVSVGAGGM(+15.99)SK
2596	HWPW	3.4	85	625.2885	1	32.167	0.5	50 96 96 96	HWPW
828	GEVDDSVQEAK	9.4	85	588.7726	2	12.131	0.2	86 86 86 98 97 91 91 75 78 79 66	GEVDDSVQEAK
588	MQGQEDENGSHV	10.2	85	665.7697	2	9.218	-0.6	71 63 94 84 98 98 94 86 91 81 78 78	MQGQEDENGSHV
2399	HWPW	3.4	85	625.2888	1	29.77	1	50 96 96 96	HWPW
1408	QEQVDDLEGSLEQEK	12.8	85	873.9046	2	18.378	-0.4	63 64 76 96 98 97 97 97 97 97 97 95 68 71 57	QEQVDDLEGSLEQEK
3124	MKMPPAEV	6.8	85	902.4457	1	38.495	-1.8	93 92 89 89 50 88 88 88	MKMPPAEV
983	TGDAREDFK	7.7	85	519.7449	2	13.856	-2.5	85 88 93 76 74 88 82 93 83	TGDAREDFK
2463	HWPW	3.4	85	625.2884	1	30.55	0.4	50 96 96 96	HWPW
1344	LPDGEGAVDFDDLKK	12.8	85	809.9001	2	17.682	-1.8	79 81 80 72 70 85 89 92 98 99 98 94 84 88 59	LPDGEGAVDFDDLKK
594	MKVSEDKDHY(+79.97)	8.5	85	666.2711	2	9.293	1	91 89 94 95 84 82 79 88 92 50	MKVSEDKDHY(+79.97)
2504	ASDKVEDFAGEA	10.2	85	619.7803	2	31.052	-0.1	60 65 82 88 95 97 98 96 83 77 81 93	ASDKVEDFAGEA
856	CLGDNLGGDCEER	11	85	690.7783	2	12.45	-1.7	66 68 81 90 89 89 85 83 80 88 92 92 93	CLGDNLGGDCEER
622	ETDAEM(+15.99)A	5.9	85	782.2872	1	9.652	0	89 87 86 88 96 96 50	ETDAEM(+15.99)A
1593	LQLVEEELDRA	9.3	85	657.8483	2	20.339	-0.4	58 57 96 98 99 99 97 96 81 82 65	LQLVEEELDRA
3663	DMLTPF	5.1	85	723.338	1	44.954	-0.3	87 87 96 94 92 50	DMLTPF
1420	GFEI	3.4	85	465.2342	1	18.513	-0.3	50 96 96 96	GFEI
2258	TGFPPDVAGNVDYK	11.9	85	740.3593	2	28.056	-0.1	63 63 87 99 99 99 97 95 90 71 76 83 86 74	TGFPPDVAGNVDYK
3369	SPEDKLSELK	8.5	85	573.3062	2	41.429	0.3	91 91 91 81 81 93 93 81 81 60	SPEDKLSELK
1164	MPESEMDNEKR	9.3	85	683.2912	2	15.753	-1.6	50 98 96 95 94 93 94 83 79 80 66	MPESEMDNEKR
2709	ALEDQLSELK	8.5	85	573.3063	2	33.537	0.5	92 92 96 86 79 93 94 77 77 58	ALEDQLSELK
2682	FGTSSTPSVGL	9.3	85	526.7668	2	33.201	0.5	83 84 92 96 71 71 71 81 93 93 95	FGTSSTPSVGL
879	ATLSVGGAGDSK	10.2	85	1062.542	1	12.707	-0.8	64 68 82 91 98 98 99 92 84 75 82 77	ATLSVGGAGDSK
800	CCAGGAEELRVV	10.2	85	603.783	2	11.823	-1.5	50 97 93 91 93 96 98 89 87 82 85 50	CCAGGAEELRVV

2776	SPEDKLSELK	8.5	85	573.3068	2	34.307	1.5	91 91 92 83 81 89 94 80 81 59	SPEDKLSELK
1643	LYPPVVEEV	7.6	85	1044.561	1	20.863	0.1	87 88 97 98 50 90 82 84 82	LYPPVVEEV
2205	FTLHDVDEETSSA	11	85	725.8208	2	27.407	0.8	76 80 95 91 93 92 92 94 95 95 94 50 50	FTLHDVDEETSSA
3105	SPEDKLSELK	8.5	85	573.3055	2	38.27	-0.9	88 88 89 89 89 93 93 78 78 59	SPEDKLSELK
1372	LEFDNY	5.1	85	800.346	1	17.993	-0.1	92 92 93 93 85 50	LEFDNY
1028	LNTLM(+15.99)DTK	6.8	85	476.2442	2	14.344	-0.4	87 87 80 71 65 97 98 89	LNTLM(+15.99)DTK
1515	M(+15.99)TLHDLTEECSR	10.2	85	725.8199	2	19.508	1.8	71 74 94 95 94 79 79 90 94 95 94 50	M(+15.99)TLHDLTEECSR
782	ATLSVGGAGDSKK	11	85	595.8221	2	11.609	-0.4	59 69 87 97 98 96 93 91 92 91 85 86 50	ATLSVGGAGDSKK
2056	LKDLVDGA	6.8	85	415.7342	2	25.637	-0.7	92 91 94 95 50 79 81 91	LKDLVDGA
1227	GSPESDLVKVK	9.3	85	579.8211	2	16.424	-1.3	50 85 88 87 95 95 98 97 95 75 60	GSPESDLVKVK
896	ATLAVSGGGDKPADAGAGK	16.1	85	821.9234	2	12.903	0.1	51 56 67 94 97 99 97 94 92 90 90 94 93 93 96 85 65 68 74	ATLAVSGGGDKPADAGAGK
695	FLTDVGY(+79.97)K	6.8	84	511.7321	2	10.577	-2.5	93 93 96 91 78 74 84 63	FLTDVGY(+79.97)K
1362	ASFPPDVAGNVDYK	11.8	84	740.3595	2	17.882	0.2	51 57 70 97 99 99 97 94 89 78 89 88 89 77	ASFPPDVAGNVDYK
1001	FQPVSEEF	6.8	84	982.4498	1	14.042	-1.9	89 87 87 88 90 90 90 50	FQPVSEEF
1562	LEQQVDDLEGSLEQEK	13.5	84	930.4474	2	20.006	0.3	64 64 61 76 96 98 98 97 97 98 97 97 96 69 75 58	LEQQVDDLEGSLEQEK
2588	GTFPPDVAGNVDYK	11.8	84	740.3592	2	32.074	-0.2	52 52 72 98 98 99 97 95 89 77 91 88 89 77	GTFPPDVAGNVDYK
2662	HWPW	3.4	84	625.288	1	32.968	-0.2	50 95 95 95	HWPW
1278	GFTSEDKVGL	8.4	84	1052.526	1	16.982	-0.2	65 71 83 90 91 94 86 78 86 94	GFTSEDKVGL
1218	LTM(+15.99)FGEK	5.9	84	421.2117	2	16.326	4.3	90 91 91 96 76 80 62	LTM(+15.99)FGEK
932	FGTNEDKVA	7.6	84	490.7388	2	13.306	2.1	83 85 91 84 87 85 82 86 70	FGTNEDKVA
2804	MDLTPF	5.1	84	723.3381	1	34.648	-0.1	93 93 93 89 84 50	MDLTPF
4103	SPEDKLSELK	8.4	84	573.3062	2	50.313	0.3	94 94 94 90 89 89 80 71 77 59	SPEDKLSELK
2870	MDLTPF	5.1	84	723.3381	1	35.444	-0.1	90 90 94 91 88 50	MDLTPF
869	ELVDASER	6.7	84	918.452	1	12.594	-0.7	82 82 84 95 91 83 82 71	ELVDASER
1529	LALPV	4.2	84	512.3444	1	19.651	0.2	81 74 82 91 91	LALPV
1263	FGTNEDKVGL	8.4	84	540.2722	2	16.821	0.2	62 65 67 77 90 93 93 95 96 98	FGTNEDKVGL
1125	LSDDKEELDATDA	10.9	84	711.3182	2	15.361	0.9	54 54 78 79 75 76 92 98 97 96 94 95 98	LSDDKEELDATDA
1556	SAFPPDVAGNVDYK	11.8	84	740.3599	2	19.94	0.8	55 55 85 99 99 99 97 95 82 70 83 86 88 76	SAFPPDVAGNVDYK
839	LDKNKPDL	6.7	84	471.7659	2	12.257	-1	95 94 87 75 72 87 94 64	LDKNKPDL
645	M(+15.99)QGQEDENGSHV	10.1	84	673.7668	2	9.958	-1	59 57 95 88 97 96 88 81 86 82 86 86	M(+15.99)QGQEDENGSHV
832	LDDAVRA	5.9	84	380.2032	2	12.183	-0.6	96 96 97 97 98 50 50	LDDAVRA

746	LEEAGGATSA	8.4	84	905.4203	1	11.194	-0.7	50 50 95 94 95 89 87 88 90 97	LEEAGGATSA
2332	HWPW	3.4	84	625.2875	1	28.958	-1	50 95 95 95	HWPW
3512	GTFPPDVAGNVDYK	11.7	84	740.3594	2	43.136	0.2	52 52 73 98 98 97 96 94 89 79 92 86 87 74	GTFPPDVAGNVDYK
1708	TTDMGPF	5.9	84	768.3238	1	21.581	0.7	82 87 88 92 92 92 50	TTDMGPF
2862	HWPW	3.4	84	625.2879	1	35.338	-0.4	50 95 95 95	HWPW
1533	SALEEAEGTLEHEESK	13.4	84	879.9026	2	19.698	-2.6	50 50 54 82 96 99 98 94 92 94 97 98 95 82 83 68	SALEEAEGTLEHEESK
1472	MNVLPVMV	6.7	84	902.4844	1	19.071	0.7	87 84 87 96 71 76 76 92	MNVLPVMV
1980	EKEDQLLAANPL	10.1	84	670.8571	2	24.72	1	54 54 66 89 80 89 98 98 99 86 93 95	EKEDQLLAANPL
922	DVAVSGAGTKAPDA	11.7	84	629.8184	2	13.189	1.6	92 93 92 95 97 92 71 63 76 92 86 83 84 50	DVAVSGAGTKAPDA
1191	NSTTMYPGLADR	10.1	84	663.3101	2	16.05	-1.9	56 54 67 97 97 97 95 87 86 92 93 77	NSTTMYPGLADR
885	VVERGYTK	6.7	84	476.2666	2	12.777	0.1	50 96 93 92 94 88 88 67	VVERGYTK
1966	QFELF	4.2	84	683.3391	1	24.56	-1.1	50 88 90 90 98	QFELF
1322	DGLLSKDDL	7.5	84	975.4987	1	17.46	-0.6	92 91 92 98 97 74 74 83 50	DGLLSKDDL
3066	FGMPL	4.2	84	564.2845	1	37.792	-0.9	50 91 89 91 95	FGMPL
1816	MPACKPLFDV	8.4	84	560.7792	2	22.795	-1.5	94 91 74 72 81 94 98 77 77 77	MPACKPLFDV
849	LAQETV	5	84	660.3561	1	12.376	-0.3	50 94 80 89 91 94	LAQETV
890	ATLSVGGAEK	8.4	84	466.7555	2	12.837	-1	75 81 95 96 93 93 78 68 78 75	ATLSVGGAEK
899	QSYETDALK	7.5	84	527.7562	2	12.928	0	60 63 89 97 97 94 88 90 70	QSYETDALK
2926	HWPW	3.3	84	625.2882	1	36.118	0.1	50 94 94 94	HWPW
810	GADPEDV	5.9	84	702.2941	1	11.929	0.2	86 85 92 50 90 90 90	GADPEDV
2288	DVEDLKSELK	8.4	84	588.3111	2	28.423	-0.4	94 94 94 80 69 71 92 83 86 67	DVEDLKSELK
3861	MDLTPF	5	84	723.3374	1	47.364	-1	89 89 95 89 86 50	MDLTPF
1902	FELEQLLK	6.7	84	510.2919	2	23.792	-0.7	92 92 93 93 75 84 81 54	FELEQLLK
1554	TLEDAAVSELK	9.2	84	588.3116	2	19.91	0.5	87 90 97 93 77 65 67 95 86 88 69	TLEDAAVSELK
1804	DLGELKDLPF	8.4	84	573.8057	2	22.658	0.2	82 82 83 84 94 83 83 93 97 50	DLGELKDLPF
3182	ASFPPDVAGNVDYK	11.7	84	740.3591	2	39.2	-0.3	51 56 68 96 98 97 96 94 86 75 90 88 89 77	ASFPPDVAGNVDYK
2577	SPEDKLSELK	8.4	84	573.3068	2	31.939	1.4	88 88 89 79 79 90 92 81 82 61	SPEDKLSELK
2535	M(+15.99)TLHDLTEESCR	10	83	725.8204	2	31.425	2.4	70 72 92 92 89 77 78 91 95 95 95 50	M(+15.99)TLHDLTEESCR
4036	SPEDKLSELK	8.3	83	573.306	2	49.515	0	89 89 90 84 84 93 93 74 74 59	SPEDKLSELK
1194	LLTENGEFGR	8.3	83	568.2899	2	16.076	-1.4	98 98 97 94 57 58 60 93 95 81	LLTENGEFGR
2819	M(+15.99)SSVSV	5	83	313.1475	2	34.819	2.6	50 86 90 88 92 92	M(+15.99)SSVSV

4050	MPSFANK	5.8	83	397.6969	2	49.679	0.2	72 72 82 90 94 89 81	MPSFANK
758	TEAPLNPK	6.7	83	435.2397	2	11.332	-0.6	94 94 98 95 96 87 50 50	TEAPLNPK
1209	LTMFADK	5.8	83	413.2139	2	16.235	3.6	94 93 97 96 63 82 55	LTMFADK
1492	ASFPPDVAGNVDYK	11.7	83	740.3593	2	19.263	0	52 58 71 96 99 98 96 94 84 72 88 87 88 76	ASFPPDVAGNVDYK
684	MLTDNGNNK	7.5	83	503.7348	2	10.44	0.1	90 90 92 81 69 58 86 94 85	MLTDNGNNK
2936	MDLTPF	5	83	723.3375	1	36.244	-0.8	93 93 93 87 80 50	MDLTPF
2720	GTFPPDVAGNVDYK	11.7	83	740.3592	2	33.67	-0.2	51 51 69 99 99 99 96 94 89 79 94 84 85 72	GTFPPDVAGNVDYK
2188	LPTSVLAGF	7.5	83	904.5129	1	27.204	-1	85 78 78 81 90 81 73 85 93	LPTSVLAGF
1682	MGEMNSSLDDLELK	11.7	83	791.36	2	21.306	-0.5	73 76 87 94 88 96 95 91 93 95 92 63 63 53	MGEMNSSLDDLELK
2522	GTFPPDVAGNVDYK	11.6	83	740.3599	2	31.268	0.8	51 51 67 98 98 98 96 94 88 76 90 87 88 76	GTFPPDVAGNVDYK
941	TALAVSGGGDKADVQGK	14.1	83	787.4122	2	13.4	-0.5	60 60 89 97 97 97 94 87 85 84 85 90 91 93 63 79 54	TALAVSGGGDKADVQGK
740	ELEANATSAGA	9.1	83	517.2435	2	11.123	0.1	50 87 86 91 86 96 96 90 87 91 50	ELEANATSAGA
1514	EFPPVVEEVGKK	10	83	679.3721	2	19.501	0.6	96 96 96 98 50 90 89 82 79 82 83 50	EFPPVVEEVGKK
982	GSLDVFCI	6.6	83	427.2093	2	13.848	-1.3	65 65 89 99 98 98 97 50	GSLDVFCI
1780	MGEVYVPMV	7.5	83	1024.483	1	22.384	-1.7	87 78 80 90 92 81 77 77 81	MGEVYVPMV
1739	WLLDA	4.2	83	617.3289	1	21.913	-0.6	50 99 95 95 74	WLLDA
1305	YPPVVEEVGQK	9.1	83	622.8308	2	17.277	1.9	96 96 96 50 97 96 94 85 76 64 59	YPPVVEEVGQK
1504	LQDLVDKL	6.6	83	943.5463	1	19.385	0.5	86 78 91 98 95 75 77 59	LQDLVDKL
2324	GTFPPDVAGNVDYK	11.6	83	740.3598	2	28.866	0.7	51 51 68 99 99 98 96 95 87 72 87 86 90 76	GTFPPDVAGNVDYK
1570	LVDTPGPPLNLQPR	11.6	83	758.9272	2	20.087	-0.6	53 54 68 78 96 95 91 87 86 81 91 88 97 89	LVDTPGPPLNLQPR
3126	HWPW	3.3	83	625.2877	1	38.514	-0.8	50 93 93 93	HWPW
1944	LLMVPI	5	83	685.4316	1	24.295	-0.1	86 86 87 93 93 50	LLMVPI
1437	AELGEQLDNLGA	9.9	83	615.3054	2	18.698	2.3	55 60 77 85 88 87 98 98 92 82 83 84	AELGEQLDNLGA
858	SQYEDTALKR	8.3	83	605.8069	2	12.468	0.3	64 61 95 85 90 91 95 96 96 50	SQYEDTALKR
3170	SPEDKLSELK	8.3	83	573.3068	2	39.053	1.4	89 89 90 88 88 94 96 68 68 54	SPEDKLSELK
1743	FELQEI	5	83	778.3976	1	21.957	-0.5	94 93 84 68 87 67	FELQEI
2487	MDCGVLLCLMV	9.1	83	598.78	2	30.838	-1.5	84 88 93 92 89 88 59 83 88 89 50	MDCGVLLCLMV
1074	CCVTGTAKKDEV	9.9	83	627.2958	2	14.821	-1.6	95 96 96 95 92 70 64 70 93 76 83 55	CCVTGTAKKDEV
3268	FTLHDEDVETSSA	10.8	83	725.8195	2	40.228	-1	73 75 88 85 85 90 91 95 96 96 95 50 50	FTLHDEDVETSSA
2223	LTEDGLASELK	9.1	83	588.311	2	27.628	-0.6	79 83 96 94 77 72 79 96 81 83 65	LTEDGLASELK
794	ESRLEEAGGA	8.3	83	509.7437	2	11.752	0.1	61 67 86 87 88 98 97 94 95 50	ESRLEEAGGA

933	ADVDDSVAGEA	9.1	83	1048.446	1	13.314	2.8	80 80 80 50 95 95 90 84 76 79 96	ADVDDSVAGEA
1510	M(+15.99)AMNSSLDDLEGLA	11.6	83	741.8262	2	19.452	0.2	68 72 93 89 97 96 91 92 94 86 68 62 69 73	M(+15.99)AMNSSLDDLEGLA
798	VLEQEREDENA	9.1	83	666.3073	2	11.79	-0.1	93 93 84 70 92 75 70 81 82 82 81	VLEQEREDENA
1168	LLDVRNEADL	8.3	83	579.31	2	15.802	-2.7	95 95 93 75 69 60 86 91 92 67	LLDVRNEADL
2204	MDLTPF	5	83	723.3384	1	27.398	0.4	86 87 93 90 87 50	MDLTPF
3446	GTFPPDVAGNVDYK	11.6	83	740.3597	2	42.343	0.5	53 53 72 98 98 98 96 91 80 71 89 87 88 77	GTFPPDVAGNVDYK
2796	DLESEVDNEGAR	9.9	83	667.2974	2	34.542	0.7	69 76 87 95 96 95 94 79 87 76 75 54	DLESEVDNEGAR
3189	LQEGVEDL	6.6	83	902.4462	1	39.285	-0.3	84 76 81 83 92 94 97 50	LQEGVEDL
878	CCAAGGAEELRVV	10.7	83	639.3015	2	12.7	-1.5	50 79 80 91 92 94 96 98 91 88 79 78 50	CCAAGGAEELRVV
696	LEQML	4.1	83	317.1671	2	10.587	-1	96 95 82 88 50	LEQML
1874	FGGELVQGCVV	9.1	83	554.2772	2	23.477	-2.9	50 94 98 98 91 63 59 92 85 85 89	FGGELVQGCVV
888	QGEVDDSVQEAR	9.9	83	666.8047	2	12.805	-0.2	61 65 66 92 98 97 90 89 83 86 89 69	QGEVDDSVQEAR
836	TQQVEELK	6.6	83	487.7609	2	12.234	-0.8	66 60 70 97 98 94 95 77	TQQVEELK
717	HELEEAEER	7.4	82	571.2595	2	10.847	-0.2	99 99 99 50 50 50 97 97 97	HELEEAEER
2336	M(+15.99)TLHDLTEESCR	9.9	82	725.8199	2	29.009	1.8	77 79 93 93 88 72 72 85 91 92 91 50	M(+15.99)TLHDLTEESCR
1088	SADQVEDM(+15.99)KTV	9.1	82	619.7804	2	14.982	-2.7	62 67 87 76 95 98 98 88 74 85 71	SADQVEDM(+15.99)KTV
2850	MGVKMLSTW	7.4	82	526.7675	2	35.192	0.9	93 92 89 77 65 61 69 94 97	MGVKMLSTW
974	SKLEDEQSLGA	9.1	82	588.7905	2	13.767	-0.4	65 67 89 95 97 96 78 84 74 75 80	SKLEDEQSLGA
4042	FTGPPDVAGNVDYK	11.5	82	740.3589	2	49.585	-0.5	59 63 67 91 97 97 93 88 81 73 87 85 89 76	FTGPPDVAGNVDYK
1421	YSELPDGQV	7.4	82	1007.468	1	18.521	-0.5	79 85 85 97 88 79 74 62 88	YSELPDGQV
1050	DDLEGSLEQEKK	9.9	82	695.8375	2	14.576	-1.3	59 76 83 96 97 96 95 95 63 75 68 79	DDLEGSLEQEKK
1224	CLPEAEGTLEHECL	11.5	82	772.3412	2	16.386	-1	50 70 70 85 98 97 94 94 97 96 97 97 50 50	CLPEAEGTLEHECL
3050	GTFPPDVAGNVDYK	11.5	82	740.3589	2	37.61	-0.5	52 52 68 98 98 98 96 93 87 73 88 84 86 72	GTFPPDVAGNVDYK
1524	FGTPPDVA	6.6	82	803.393	1	19.596	-0.5	81 83 84 97 50 89 86 86	FGTPPDVA
736	QEAAMVER	6.6	82	467.2264	2	11.071	-0.2	60 61 90 96 91 84 86 85	QEAAMVER
2818	DVEDKLSELK	8.2	82	588.3114	2	34.81	0.1	91 92 93 85 69 70 91 81 82 64	DVEDKLSELK
876	YALGEEEAGEQA	9.9	82	633.7778	2	12.67	0	88 74 67 75 88 98 85 81 81 82 71 90	YALGEEEAGEQA
784	TLLDQNR	5.8	82	430.235	2	11.628	-0.6	82 82 97 95 69 78 69	TLLDQNR
808	M(+15.99)TAMGHSALV	8.2	82	517.2438	2	11.909	-0.1	81 84 92 89 83 77 78 75 79 79	M(+15.99)TAMGHSALV
2127	CSDPLVVAGNVDYK	11.5	82	740.3589	2	26.475	-2.9	50 50 95 94 95 97 95 94 80 66 85 82 87 73	CSDPLVVAGNVDYK
2456	GTFPPDVAGGGVDYK	12.3	82	740.3602	2	30.47	1.2	51 51 69 99 99 98 96 94 91 76 70 80 85 88 77	GTFPPDVAGGGVDYK

2654	TGFPPDVAGNVDYK	11.5	82	740.3596	2	32.879	0.3	50 50 62 97 97 99 97 95 90 79 92 82 82 70	TGFPPDVAGNVDYK
968	KLLDPAETGSLKK	10.7	82	700.4128	2	13.699	2.2	92 92 98 97 90 74 72 78 76 76 77 89 50	KLLDPAETGSLKK
3035	MGVKVMTTW	7.4	82	526.7673	2	37.422	0.6	94 93 93 85 63 65 67 91 82	MGVKVMTTW
3478	M(+15.99)ANYVPLLPK	8.2	82	581.3188	2	42.724	-2.7	91 90 86 96 97 93 91 61 58 51	M(+15.99)ANYVPLLPK
1461	EAGVSDALLA	8.2	82	473.2485	2	18.95	1.2	59 61 72 78 86 92 96 96 88 87	EAGVSDALLA
2410	EVESEVDGGEGAR	10.7	82	667.2984	2	29.898	2.2	64 70 92 93 94 94 93 90 85 85 72 74 53	EVESEVDGGEGAR
1284	FGTSGVESVGL	9	82	526.7667	2	17.045	0.2	78 81 90 79 73 69 71 90 89 89 90	FGTSGVESVGL
2274	TVDVGGAGSY	8.2	82	463.2162	2	28.243	-1.1	50 97 97 96 95 96 65 66 71 82	TVDVGGAGSY
1289	YPPVVEEVGGAK	9.8	82	622.8301	2	17.101	0.8	97 97 97 50 96 95 92 88 74 59 59 72	YPPVVEEVGGAK
3555	VFFFATDMPL	8.2	82	594.2953	2	43.644	2.4	87 87 72 69 79 94 92 86 87 62	VFFFATDMPL
2817	MDCGVLLCLMV	9	82	598.78	2	34.798	-1.5	86 88 91 88 86 88 65 83 84 85 50	MDCGVLLCLMV
1391	LASEELDHANL	9	82	606.299	2	18.193	0.3	69 69 88 90 94 95 94 90 76 72 59	LASEELDHANL
4060	MDLTPF	4.9	82	723.338	1	49.806	-0.2	92 92 92 86 76 50	MDLTPF
1700	FSMPI	4.1	82	594.2963	1	21.504	1.2	84 84 94 94 50	FSMPI
990	EGSDNAFK	6.5	82	867.3842	1	13.926	0	89 89 86 78 65 82 87 76	EGSDNAFK
2998	EMPCLVDGGEQR	9.8	82	667.2976	2	36.984	0.5	50 96 96 95 95 93 92 81 74 64 67 72	EMPCLVDGGEQR
3082	TLEDLQSELK	8.2	82	588.3112	2	37.991	-0.3	88 89 95 89 63 59 88 84 89 69	TLEDLQSELK
1473	TLEDQLSELK	8.2	82	1175.618	1	19.078	2	78 79 88 91 80 93 84 78 82 60	TLEDQLSELK
1192	NTSTM(+15.99)YPGLADR	9.8	82	671.3076	2	16.058	-1.7	60 54 54 93 93 89 92 88 88 93 93 77	NTSTM(+15.99)YPGLADR
1132	NPPQPTAHLEM(+15.99)V	9.8	82	675.3315	2	15.434	2.9	60 90 93 76 78 79 85 86 89 81 81 77	NPPQPTAHLEM(+15.99)V
2728	LQGEVEDI	6.5	82	902.446	1	33.756	-0.6	86 79 85 83 84 87 96 50	LQGEVEDI
2574	YEEGQAELEGSLK	10.6	82	726.8463	2	31.897	0.1	50 99 93 91 78 90 90 94 89 81 61 60 79	YEEGQAELEGSLK
1283	ALEDKAEELKAK	9.8	82	672.8715	2	17.035	-0.8	66 72 86 97 77 68 68 98 97 92 92 61	ALEDKAEELKAK
2918	SAFPPDVAGNVDYK	11.4	82	740.359	2	36.023	-0.4	53 53 78 99 99 98 96 95 78 63 72 86 89 77	SAFPPDVAGNVDYK
3345	TLEDGLASELK	9	82	588.3115	2	41.141	0.2	85 88 94 94 76 62 68 86 85 87 68	TLEDGLASELK
2132	S(+79.97)PM(+15.99)LALDL	6.5	82	955.4225	1	26.54	2	50 96 87 84 92 90 94 55	S(+79.97)PM(+15.99)LALDL
2073	M(+15.99)VGVPKLGLGY(+79.97)	9	82	615.3039	2	25.841	0.4	94 93 93 92 93 93 94 77 54 57 51	M(+15.99)VGVPKLGLGY(+79.97)
1089	NQDPLNDSVVK	9	81	614.812	2	14.988	-0.1	69 67 95 78 73 80 93 95 95 97 50	NQDPLNDSVVK
2666	M(+15.99)VLCEL	4.9	81	723.3397	1	33.021	-2.5	95 96 96 99 50 50	M(+15.99)VLCEL
1488	QELPDKGFLDNK	9.8	81	702.3622	2	19.221	0.5	59 62 84 88 82 76 79 87 90 91 92 79	QELPDKGFLDNK
1448	EFPPVVEEVGKK	9.8	81	679.372	2	18.816	0.5	98 98 98 99 50 94 93 86 75 68 63 50	EFPPVVEEVGKK

1425	GTFPPDVAGNVDYK	11.4	81	740.3594	2	18.57	0.2	50 50 67 99 99 97 93 89 83 74 88 84 86 73	GTFPPDVAGNVDYK
1577	MPAKVMPTAA	8.1	81	508.7663	2	20.164	-1.4	93 94 90 76 72 72 76 82 84 70	MPAKVMPTAA
2752	FTHMVGNYDL	8.1	81	598.7742	2	34.018	0.6	90 79 67 65 81 84 85 92 95 71	FTHMVGNYDL
962	ATLAVSGNDKPADA	11.4	81	665.3362	2	13.634	0.5	52 57 63 94 98 98 97 88 94 94 84 78 86 50	ATLAVSGNDKPADA
1320	LTLTSNPY	6.5	81	908.4727	1	17.43	0.4	50 57 88 87 87 89 98 91	LTLTSNPY
1587	LEELEEELEAERAA	11.4	81	815.8942	2	20.274	0.4	57 57 85 91 89 93 50 98 97 97 96 85 83 52	LEELEEELEAERAA
824	NFAEENGDPEAQESYK	13	81	914.3851	2	12.09	-2.1	64 66 85 97 91 84 95 91 92 97 97 81 73 61 67 53	NFAEENGDPEAQESYK
2601	FTLHDLTEECGW	9.8	81	725.8206	2	32.229	2.1	78 81 94 92 90 72 72 82 94 84 81 50	FTLHDLTEECGW
796	DDQATGF	5.7	81	753.3047	1	11.771	-0.3	92 86 71 78 69 84 86	DDQATGF
2360	MLGGM(+15.99)ALVPA	8.1	81	488.2533	2	29.298	-0.8	82 71 64 71 83 87 96 84 85 85	MLGGM(+15.99)ALVPA
1592	AELGEQLDNL	8.1	81	551.2745	2	20.331	-0.4	57 64 81 86 88 88 98 88 88 68	AELGEQLDNL
2133	FLLHVVELW	7.3	81	578.3333	2	26.549	3	50 96 83 83 50 85 90 95 95	FLLHVVELW
2939	MGLNALFTW	7.3	81	526.7666	2	36.272	2.4	90 89 79 76 75 66 73 85 93	MGLNALFTW
952	LQM(+15.99)LVGW	5.7	81	431.7292	2	13.518	2.3	85 77 83 86 89 96 50	LQM(+15.99)LVGW
2246	LLDGAQSDVLI	8.9	81	572.3168	2	27.911	0.7	97 97 95 82 77 73 88 89 89 50 50	LLDGAQSDVLI
559	MMGPY	4.1	81	598.2358	1	8.854	-0.8	96 94 82 82 50	MMGPY
812	REQFEEEQEAK	8.9	81	711.8284	2	11.96	0	64 82 63 77 77 99 96 76 87 89 76	REQFEEEQEAK
1516	MTVGLDDLSSNMEAVSK	13.8	81	898.9239	2	19.515	0	71 68 81 79 81 93 99 99 98 93 70 81 86 78 63 63 67	MTVGLDDLSSNMEAVSK
2974	GTDQVEDFKEA	8.9	81	619.7807	2	36.697	0.6	61 67 80 78 95 98 96 96 81 68 67	GTDQVEDFKEA
1068	KGSVLSM(+15.99)Y	6.5	81	900.4507	1	14.762	1.3	61 66 80 90 99 99 99 50	KGSVLSM(+15.99)Y
1061	NQDLPNGSVVK	8.9	81	585.8091	2	14.693	-0.2	70 67 95 79 77 78 90 90 93 97 50	NQDLPNGSVVK
908	TALAVSGGGDKPA	10.5	81	572.3043	2	13.032	1	55 55 76 96 97 98 93 61 73 81 83 96 83	TALAVSGGGDKPA
1386	SAFPPDVAGNDV	9.7	81	1188.554	1	18.134	0.5	67 67 85 93 93 94 86 83 75 66 78 80	SAFPPDVAGNDV
3578	TFGPPDVAGNVDYK	11.3	81	740.36	2	43.93	1	51 51 60 92 97 98 95 94 85 74 85 85 87 74	TFGPPDVAGNVDYK
1022	LLDPEATGSLKK	9.7	81	636.3637	2	14.28	-0.2	98 98 98 99 92 73 71 73 64 65 85 50	LLDPEATGSLKK
1610	MGELVGMGDNK	8.9	81	575.7645	2	20.519	-1.2	96 96 98 98 90 85 72 66 64 65 56	MGELVGMGDNK
1450	LKGSLEDQLL	8.1	81	558.3192	2	18.833	0.5	94 93 74 69 72 90 93 76 89 56	LKGSLEDQLL
3380	SCDPLVVAGGGVDYK	12.1	81	740.3604	2	41.56	-0.8	50 50 94 93 94 97 92 84 74 64 78 87 86 89 77	SCDPLVVAGGGVDYK
3310	FAQM(+15.99)DEAPWK	8.1	81	619.7821	2	40.725	4.8	86 87 83 97 93 91 95 60 59 53	FAQM(+15.99)DEAPWK
3040	DLDKTPSELK	8.1	81	573.307	2	37.483	1.8	76 94 97 77 65 65 92 86 86 66	DLDKTPSELK
1137	LDSELGA	5.7	81	704.3476	1	15.489	2.2	50 97 92 90 77 78 79	LDSELGA

2553	TLEDALGSELK	8.9	81	588.3108	2	31.637	-0.9	83 85 89 82 79 67 72 88 85 87 68	TLEDALGSELK
918	FAYHML	4.9	81	781.3718	1	13.14	2.2	50 99 96 96 93 50	FAYHML
1247	TGFPPDVA	6.5	81	803.3935	1	16.635	0.2	73 73 88 97 97 78 68 68	TGFPPDVA
3412	DVESGLVSELK	8.9	81	588.311	2	41.928	-0.6	92 93 92 74 68 65 71 96 84 85 64	DVESGLVSELK
2667	FTLHDEDVETSSA	10.5	81	725.8223	2	33.03	2.8	74 77 88 80 80 90 90 89 89 95 94 50 50	FTLHDEDVETSSA
1371	ALEDQLSELK	8.1	81	1145.605	1	17.986	0.1	72 72 82 94 80 92 83 79 86 63	ALEDQLSELK
1446	MPLELAGPPK	8.1	81	526.7942	2	18.785	0.3	87 83 83 93 90 76 71 76 93 50	MPLELAGPPK
3218	MLGGM(+15.99)ALVPA	8.1	81	488.2532	2	39.626	-1.1	81 78 65 63 73 86 97 87 87 87	MLGGM(+15.99)ALVPA
3783	LQEGVEDI	6.5	81	902.4463	1	46.412	-0.3	84 73 78 79 90 93 95 50	LQEGVEDI
2402	M(+15.99)TLHDTLEESCR	9.7	81	725.8201	2	29.81	1.9	72 75 93 92 90 70 67 83 91 91 92 50	M(+15.99)TLHDTLEESCR
2786	GTFPPDVAGNVDYK	11.3	81	740.3597	2	34.433	0.5	51 51 67 98 98 98 95 90 78 68 82 86 88 75	GTFPPDVAGNVDYK
3401	MPCPAAGLDNLK	9.7	81	615.3037	2	41.797	-1.3	82 82 82 59 78 88 88 93 94 79 79 59	MPCPAAGLDNLK
2319	M(+15.99)NAYVPLLPK	8.1	81	581.3196	2	28.804	-1.4	73 58 59 94 97 94 94 87 86 62	M(+15.99)NAYVPLLPK
1527	FVDQSGGGVTVMGAEL	12.9	81	783.877	2	19.633	-0.1	85 87 83 71 68 63 69 82 81 84 97 97 84 72 79 82	FVDQSGGGVTVMGAEL
2160	TLEDGLASELK	8.9	81	588.3116	2	26.858	0.4	85 87 94 91 77 71 77 91 75 77 59	TLEDGLASELK
852	SEDGPTV	5.7	81	704.3095	1	12.404	-0.3	90 93 92 81 75 82 50	SEDGPTV
1824	SPGLYPPVVESAVVGK	12.9	81	799.9437	2	22.882	0.8	64 74 80 94 97 99 99 94 90 74 71 77 81 60 60 70	SPGLYPPVVESAVVGK
747	QNELSEEGV	7.3	81	502.7302	2	11.203	0	63 64 83 84 89 90 88 81 81	QNELSEEGV
1640	LGLTNWDDMEK	8.9	81	661.309	2	20.838	1.1	50 65 92 97 93 90 92 96 72 72 62	LGLTNWDDMEK
663	VLMMSHY	5.6	81	440.707	2	10.181	1.4	50 87 87 92 82 82 82	VLMMSHY
912	LTSGGPY	5.6	81	694.3411	1	13.072	0.7	50 94 90 90 92 95 50	LTSGGPY
2852	ASFPPDVAGNVDYK	11.3	81	740.3594	2	35.224	0.2	61 67 83 97 99 98 95 93 72 59 62 80 84 71	ASFPPDVAGNVDYK
2139	LSDVGGAGSY	8.1	81	463.2161	2	26.62	-1.2	50 97 97 97 97 98 59 59 66 81	LSDVGGAGSY
1978	FVTPML	4.8	81	707.3796	1	24.702	0	94 94 90 73 73 56	FVTPML
2782	LM(+15.99)WR	3.2	81	311.1639	2	34.381	4.5	50 90 90 90	LM(+15.99)WR
1934	MDLTPF	4.8	81	723.3378	1	24.18	-0.5	84 84 88 87 87 50	MDLTPF
2888	MLGGM(+15.99)ALVPA	8.1	81	488.2531	2	35.657	-1.2	79 78 73 64 64 83 98 87 87 87	MLGGM(+15.99)ALVPA
2950	MDCGVLLCLMV	8.9	81	598.78	2	36.406	-1.5	85 90 92 88 83 83 66 80 81 83 50	MDCGVLLCLMV
2117	LLDQQSVDLL	8.1	81	572.3167	2	26.354	0.5	98 98 96 70 76 91 92 76 50 51	LLDQQSVDLL
1913	DLLFPPPVVEEVGKK	12.1	81	556.3187	3	23.922	0.2	52 52 66 83 90 90 94 98 94 92 90 87 83 82 50	DLLFPPPVVEEVGKK
3435	LAEDAGLSELK	8.9	81	573.306	2	42.208	0.1	67 71 91 83 73 78 93 93 83 84 63	LAEDAGLSELK

4136	M(+15.99)TGTAHVDLDL	8.9	80	594.7806	2	50.705	-2.3	83 81 84 83 71 71 84 91 88 88 56	M(+15.99)TGTAHVDLDL
3114	TLLTSNPY	6.4	80	908.472	1	38.371	-0.3	68 68 87 80 82 76 96 83	TLLTSNPY
1113	DDLQAEEDQVSK	9.7	80	688.8124	2	15.241	-0.1	60 68 68 79 96 98 96 91 71 88 94 50	DDLQAEEDQVSK
3248	GFTPPDVAGNVDYK	11.3	80	740.3593	2	39.991	-0.1	54 53 66 95 99 99 97 95 80 67 76 81 85 72	GFTPPDVAGNVDYK
1778	VM(+15.99)WI	3.2	80	564.2848	1	22.366	-0.4	50 90 90 90	VM(+15.99)WI
1608	SPYPPVVEEVGKK	10.5	80	714.8909	2	20.49	0.9	50 98 98 98 99 50 94 93 88 77 75 69 50	SPYPPVVEEVGKK
2390	YAAPPDVAGNVDYK	11.3	80	740.3585	2	29.667	-1.1	53 53 59 92 50 98 97 96 94 86 92 86 88 76	YAAPPDVAGNVDYK
1901	LELLPV	4.8	80	683.4332	1	23.784	-0.9	68 74 94 97 97 50	LELLPV
4133	MQLWPEV	5.6	80	902.4464	1	50.678	2.6	50 82 92 82 84 84 84	MQLWPEV
1347	CRKAGLST(+79.97)MRK	8.8	80	665.8276	2	17.723	-0.3	76 81 91 93 94 95 90 80 70 54 55	CRKAGLST(+79.97)MRK
2110	ASDKVEDFAGEA	9.6	80	619.78	2	26.277	-0.6	53 56 63 72 92 96 99 94 79 75 85 93	ASDKVEDFAGEA
4028	LKDASPSI	6.4	80	415.7353	2	49.408	1.8	88 87 91 88 88 58 58 80	LKDASPSI
2549	FGTSVGTDVGL	8.8	80	526.767	2	31.584	0.9	77 82 93 85 68 67 75 77 76 87 91	FGTSVGTDVGL
1316	VTDLSAV	5.6	80	704.3826	1	17.396	0.3	50 91 90 92 75 73 87	VTDLSAV
3102	MVMPELDV	6.4	80	933.4411	1	38.23	-1	50 95 95 95 79 83 90 50	MVMPELDV
4032	HWPW	3.2	80	625.2877	1	49.46	-0.8	50 90 90 90	HWPW
2661	LQEGVEDI	6.4	80	902.4465	1	32.959	0	85 76 79 79 85 90 95 50	LQEGVEDI
1131	ALLGNPSDEWCSSK	11.2	80	753.8493	2	15.424	1.3	59 74 92 97 93 97 98 96 93 66 78 74 50 50	ALLGNPSDEWCSSK
1678	MGET(+79.97)VVVTCL	8	80	1131.484	1	21.259	0.8	77 79 85 91 92 92 86 59 85 52	MGET(+79.97)VVVTCL
2040	MLLLPV	4.8	80	685.4317	1	25.44	0.1	76 76 88 94 94 50	MLLLPV
2619	TLEDGLASELK	8.8	80	588.312	2	32.45	1.1	86 88 94 91 73 63 71 91 78 80 62	TLEDGLASELK
1401	QDDVPELV	6.4	80	914.4464	1	18.304	-0.1	68 85 94 66 66 72 93 93	QDDVPELV
1475	DM(+15.99)TPDGAMEDYRSL	11.2	80	808.8316	2	19.093	-0.5	81 81 95 88 82 75 80 92 97 98 83 57 54 52	DM(+15.99)TPDGAMEDYRSL
2092	TLEDAVASELK	8.8	80	588.3109	2	26.063	-0.7	88 89 96 88 73 68 74 91 74 75 61	TLEDAVASELK
2118	AYLPML	4.8	80	707.3795	1	26.364	-0.2	84 84 93 74 81 61	AYLPML
3708	M(+15.99)AVGES(+79.97)K	5.6	80	409.162	2	45.494	0.7	92 86 73 74 71 81 80	M(+15.99)AVGES(+79.97)K
1748	EFLEQI	4.8	80	778.3976	1	22.016	-0.6	99 98 88 63 66 64	EFLEQI
4128	MDLTPF	4.8	80	723.3381	1	50.618	0	84 85 92 87 80 50	MDLTPF
2355	TLEDAAVSELK	8.8	80	588.3109	2	29.239	-0.7	86 88 95 84 81 72 73 91 72 74 59	TLEDAAVSELK
1550	ALDLL	4	80	544.3344	1	19.879	0.6	81 81 88 91 57	ALDLL
1229	SSALVDLVVQGA	9.6	80	1158.635	1	16.441	-1.7	86 88 88 93 92 50 50 90 73 60 91 93	SSALVDLVVQGA

2860	LQGEVEDI	6.4	80	902.4459	1	35.319	-0.7	79 73 81 81 86 89 96 50	LQGEVEDI
1631	AAFPPDVAGGGVDYK	12	80	732.3625	2	20.729	0.8	50 50 97 97 97 97 95 91 83 65 65 70 79 84 72	AAFPPDVAGGGVDYK
1334	NLEVTV	4.8	80	674.3724	1	17.586	0.7	50 97 92 92 96 50	NLEVTV
2228	MLGGM(+15.99)ALVPA	8	80	488.2535	2	27.689	-0.5	81 66 62 64 74 82 97 89 89 89	MLGGM(+15.99)ALVPA
1397	VAEQELVDASEGVR	11.2	80	751.3778	2	18.258	-0.6	54 54 58 73 93 98 98 98 97 96 92 74 76 51	VAEQELVDASEGVR
1253	SQLEDEQSLQQLK	10.4	80	773.391	2	16.7	-0.4	51 51 74 78 88 96 88 96 97 83 80 84 66	SQLEDEQSLQQLK
956	YETDALGA	6.4	80	839.3781	1	13.567	0	50 94 89 84 84 88 95 50	YETDALGA
1103	M(+15.99)ANLEEYSAF	8	80	1190.506	1	15.125	1.8	97 91 87 92 96 69 64 64 64 70	M(+15.99)ANLEEYSAF
1962	LSEGFPVPL	7.2	80	958.524	1	24.509	-0.4	76 76 76 93 98 98 98 50 50	LSEGFPVPL
3059	LQGEVEDI	6.4	80	902.4467	1	37.71	0.2	84 76 80 78 81 89 96 50	LQGEVEDI
861	KVQHELEEAEER	9.6	80	748.8706	2	12.508	0.1	74 83 72 98 99 99 50 50 50 96 96 86	KVQHELEEAEER
3844	GTFPDPVAGNVDYK	11.2	80	740.358	2	47.161	-1.8	55 55 75 98 98 96 93 92 93 72 78 72 72 63	GTFPDPVAGNVDYK
690	AMYGFTK	5.6	80	817.3932	1	10.515	2.5	80 79 79 85 85 86 62	AMYGFTK
1184	MTELPFVPQK	8	80	595.3173	2	15.978	-1.1	86 90 96 98 76 79 77 62 69 60	MTELPFVPQK
2254	MNSYVPLLPK	8	80	581.3199	2	28.003	-0.7	66 60 77 91 97 94 92 81 79 57	MNSYVPLLPK
1384	KMEM(+15.99)ENLDGEEK	9.6	80	734.819	2	18.117	0.9	66 66 81 86 93 88 89 82 70 73 86 72	KMEM(+15.99)ENLDGEEK
2384	YLPGVVTSAPPEK	10.4	80	679.3715	2	29.594	-0.2	87 87 95 96 94 94 69 68 79 84 59 65 54	YLPGVVTSAPPEK
2748	EFLDF	4	80	670.3094	1	33.968	1.7	99 99 99 50 50	EFLDF
1713	LLYPVPVEEVGQK	10.4	80	735.9135	2	21.634	-0.3	95 96 96 98 50 96 94 90 74 64 62 60 56	LLYPVPVEEVGQK
1198	CTVYDDM(+15.99)R	6.4	80	1018.399	1	16.12	1.9	92 92 92 84 84 90 50 50	CTVYDDM(+15.99)R
1647	LAEDAGLSEI	8	80	509.2592	2	20.912	1.3	55 54 67 87 78 86 96 90 94 85	LAEDAGLSEI
1374	ALESSDKPVDV	8.8	80	580.2957	2	18.009	-0.1	70 75 87 90 90 85 84 86 68 68 68	ALESSDKPVDV
3272	EFLDF	4	80	670.308	1	40.278	-0.4	99 99 99 50 50	EFLDF
1367	TLEDKLSKSEPK	9.6	80	687.8785	2	17.938	1.7	68 71 87 93 95 93 91 64 63 67 87 71	TLEDKLSKSEPK
3231	DANGSEVDGGEGVK	11.2	80	667.2967	2	39.786	-0.4	53 53 53 93 94 94 95 95 94 92 92 74 75 52	DANGSEVDGGEGVK
1820	FELDF	4	80	670.3092	1	22.847	1.5	99 99 99 50 50	FELDF
1499	NASVLPDANFLDNK	11.1	80	759.3834	2	19.329	0	66 70 81 94 98 76 67 76 68 90 90 86 74 73	NASVLPDANFLDNK
1130	EEGKAAGNEGSLK	10.4	80	645.3214	2	15.415	2	87 83 73 74 95 69 60 62 94 94 85 74 79	EEGKAAGNEGSLK
911	LDLAGR	4.8	80	322.6901	2	13.063	0.5	86 93 98 98 50 50	LDLAGR
1498	LDKLPDL	5.6	80	813.4716	1	19.32	0	86 86 86 90 90 50 67	LDKLPDL
3206	EFLDF	4	80	670.3081	1	39.486	-0.2	99 99 99 50 50	EFLDF

1715	FQVFFMLL	6.4	80	1044.561	1	21.653	2.2	95 94 94 97 98 52 53 50	FQVFFMLL
1317	LGGSLL	4.8	80	559.3452	1	17.403	0.4	50 81 84 76 87 97	LGGSLL
2508	AEDVVS(+79.97)LI	6.4	80	463.2165	2	31.09	-2.1	50 98 98 96 96 95 50 50	AEDVVS(+79.97)LI
1146	KNQPFGL	5.6	80	402.2236	2	15.572	-1.2	50 87 83 87 88 93 66	KNQPFGL
1070	KVAEGAELVDA	8.8	80	551.2935	2	14.791	1.1	64 67 80 87 62 59 65 92 98 98 98	KVAEGAELVDA
2085	FELDF	4	80	670.3077	1	25.98	-0.7	98 98 98 50 50	FELDF
2025	FLLPL	4	80	602.3911	1	25.268	-0.1	50 98 93 93 60	FLLPL
1274	MLFPEPLNK	7.2	80	544.7954	2	16.947	2.6	50 50 94 94 94 93 88 79 68	MLFPEPLNK
2243	FGTSTVGDVGL	8.7	80	526.7659	2	27.868	-1.3	77 81 90 91 63 63 68 72 76 92 95	FGTSTVGDVGL
2546	EFLDF	4	80	670.309	1	31.555	1.2	98 98 98 50 50	EFLDF
1600	VDYPPVVEEVGKK	10.3	79	729.8954	2	20.407	-0.2	50 98 98 99 99 50 90 86 76 74 78 80 50	VDYPPVVEEVGKK
3138	LFVPVCAHYPV	8.7	79	622.8299	2	38.655	2.4	50 95 95 93 81 81 82 76 76 89 50	LFVPVCAHYPV
1886	EFLDF	4	79	670.3094	1	23.62	1.7	98 98 98 50 50	EFLDF
3080	VFCGNGEKTEL	8.7	79	598.7852	2	37.97	1.3	96 96 95 93 85 82 75 69 63 66 50	VFCGNGEKTEL
522	KMGKEDY(+79.97)HGW	7.9	79	665.7697	2	8.305	2.8	76 77 83 77 78 89 90 76 93 50	KMGKEDY(+79.97)HGW
813	MVDVER	4.8	79	374.6865	2	11.968	-0.2	50 50 98 92 93 92	MVDVER
2462	LQGEVEDI	6.4	79	902.447	1	30.541	0.5	82 73 79 79 85 89 95 50	LQGEVEDI
4031	FVPKSGAAADAK	9.5	79	581.3184	2	49.45	2.9	95 95 88 76 71 69 69 76 83 79 71 74	FVPKSGAAADAK
1440	LQEQVDDLEGSLEQEKK	13.5	79	994.4972	2	18.722	2.6	62 59 60 61 95 98 98 98 98 97 95 91 89 55 67 56 64	LQEQVDDLEGSLEQEKK
1892	S(+79.97)GKNALTR	6.4	79	926.4445	1	23.69	-1.1	91 89 84 80 74 74 81 58	S(+79.97)GKNALTR
657	LQPDER	4.8	79	379.1953	2	10.106	-0.8	67 61 88 88 92 78	LQPDER
1197	LGSLDVGGNTY	8.7	79	548.2684	2	16.113	-1.9	86 86 90 95 99 96 94 63 53 53 51	LGSLDVGGNTY
2595	LQEGVEDI	6.4	79	902.446	1	32.158	-0.5	84 75 77 77 81 91 96 50	LQEGVEDI
2019	FELDMF	4.8	79	801.3492	1	25.198	0.7	93 93 80 78 79 50	FELDMF
3338	FELDF	4	79	670.308	1	41.062	-0.4	98 98 98 50 50	FELDF
1601	MGELLCGSA	7.1	79	880.3903	1	20.415	0	96 95 97 98 83 70 72 50 50	MGELLCGSA
4175	M(+15.99)TLKVSGGGCDL	9.5	79	598.7863	2	51.193	0.4	68 69 79 89 85 79 71 69 79 76 90 91	M(+15.99)TLKVSGGGCDL
1638	FNMLPGTKSPGWHW	11.1	79	829.399	2	20.806	-2.1	77 74 91 72 66 75 96 93 91 67 60 66 85 91	FNMLPGTKSPGWHW
3366	DGALSDALLA	7.9	79	473.2478	2	41.388	-0.3	66 66 72 82 88 86 86 90 77 75	DGALSDALLA
1847	MDLAPF	4.8	79	693.3271	1	23.151	-0.7	91 91 95 96 50 50	MDLAPF
1149	SPLGSPSDETM(+15.99)ANK	11.1	79	725.3298	2	15.607	-0.1	50 93 94 96 97 99 95 82 62 63 64 75 71 63	SPLGSPSDETM(+15.99)ANK

1965	MDLGVPF	5.6	79	778.3795	1	24.551	-1.1	91 90 89 89 93 50 50	MDLGVPF
3008	FELDF	4	79	670.3087	1	37.107	0.6	98 98 98 50 50	FELDF
2018	EFLDF	4	79	670.3084	1	25.186	0.3	98 98 98 50 50	EFLDF
2902	FVPMEKL	5.6	79	432.2377	2	35.828	-1.6	83 83 83 85 78 80 60	FVPMEKL
2812	FELDF	4	79	670.3081	1	34.735	-0.2	98 98 98 50 50	FELDF
4000	EFLDF	4	79	670.3088	1	49.079	0.8	98 98 98 50 50	EFLDF
1025	LLATDDGVK	7.1	79	466.2579	2	14.306	-1	96 97 95 93 88 68 54 54 65	LLATDDGVK
3537	EFLDF	4	79	670.3084	1	43.434	0.3	98 98 98 50 50	EFLDF
3074	EFLDF	4	79	670.3087	1	37.897	0.6	98 98 98 50 50	EFLDF
2942	EFLDF	4	79	670.3075	1	36.316	-1.1	98 98 98 50 50	EFLDF
2158	M(+15.99)TLPGGMI	6.3	79	835.4041	1	26.839	-1.3	80 80 87 82 81 71 74 76	M(+15.99)TLPGGMI
3147	TLEDGLASELK	8.7	79	588.3112	2	38.773	-0.2	85 87 96 94 73 63 71 90 73 74 60	TLEDGLASELK
3978	FVDKGENSAMV	8.7	79	598.7846	2	48.795	0.4	96 96 85 84 90 89 69 57 55 69 76	FVDKGENSAMV
2475	DLESEVDNEQR	8.7	79	667.2978	2	30.69	1.3	67 74 85 93 94 94 94 78 62 62 63	DLESEVDNEQR
2344	DLESEVDNEGAR	9.5	79	667.2963	2	29.098	-1	69 75 88 94 95 96 93 63 72 72 74 53	DLESEVDNEGAR
4132	EFLDF	4	79	670.3087	1	50.669	0.6	98 98 98 50 50	EFLDF
2877	FELDF	4	79	670.3079	1	35.525	-0.5	98 98 98 50 50	FELDF
2240	SADQVEDFKEA	8.7	79	619.7799	2	27.836	-0.7	70 72 85 74 94 97 97 96 66 58 56	SADQVEDFKEA
1238	SDLTEQL	5.5	79	805.3956	1	16.549	2.3	50 93 92 95 71 79 71	SDLTEQL
2166	LELLPAM(+15.99)GGL	7.9	79	515.2852	2	26.933	-1.8	54 68 96 91 71 71 77 82 87 89	LELLPAM(+15.99)GGL
2465	FGTSDEKVGL	7.9	79	526.7669	2	30.57	0.7	74 79 91 94 69 64 63 71 88 94	FGTSDEKVGL
4066	EFLDF	4	79	670.3087	1	49.877	0.7	98 98 98 50 50	EFLDF
2097	SPGLGLTEM(+15.99)I	7.9	79	517.2657	2	26.126	0.8	50 79 84 93 94 85 86 81 85 50	SPGLGLTEM(+15.99)I
2150	EFLDF	4	79	670.3082	1	26.751	0	98 98 98 50 50	EFLDF
3406	EM(+15.99)LYV	4	79	670.3117	1	41.859	0.1	98 98 98 50 50	EM(+15.99)LYV
2678	EFLDF	4	79	670.3087	1	33.166	0.7	98 98 98 50 50	EFLDF
1485	AGFEL	4	79	536.2719	1	19.199	0.8	50 50 98 98 98	AGFEL
2612	EFLDF	4	79	670.3087	1	32.368	0.7	98 98 98 50 50	EFLDF
1415	FTLTLPEDKMAKLNV	11.9	79	860.4713	2	18.459	0.2	86 85 90 90 77 74 87 93 87 77 74 67 61 66 64	FTLTLPEDKMAKLNV
2349	EFLDF	4	79	670.3077	1	29.161	-0.7	98 98 98 50 50	EFLDF
4224	Y(+79.97)QAPCYPSAQL	8.7	79	660.7691	2	51.791	-1.5	90 81 81 83 88 88 88 71 66 63 65	Y(+79.97)QAPCYPSAQL

3284	MLGGM(+15.99)ALVPA	7.9	79	488.2537	2	40.415	-0.1	85 84 80 64 53 59 98 87 87 87	MLGGM(+15.99)ALVPA
2894	DM(+15.99)LVSPAPLDL	8.7	79	593.8057	2	35.732	1.3	75 68 68 87 75 75 76 87 92 96 63	DM(+15.99)LVSPAPLDL
2517	MPKLVPYDAK	7.9	79	581.3196	2	31.203	-1.3	56 58 62 85 94 99 98 81 82 70	MPKLVPYDAK
3670	EFLDF	3.9	79	670.308	1	45.034	-0.4	97 97 97 50 50	EFLDF
1047	LDDQAEEDKNV	8.7	79	638.2885	2	14.547	0	50 65 72 80 97 97 95 91 71 76 70	LDDQAEEDKNV
2861	EVESEVDNEGAR	9.5	79	667.2967	2	35.328	-0.4	58 62 82 87 93 96 95 78 86 76 75 54	EVESEVDNEGAR
2102	S(+79.97)PMKTLDL	6.3	79	984.4491	1	26.187	2	50 89 82 83 91 86 92 55	S(+79.97)PMKTLDL
1072	VLADWK	4.7	79	366.2081	2	14.805	0.3	50 98 94 78 81 70	VLADWK
3471	EFLDF	3.9	79	670.3078	1	42.648	-0.6	97 97 97 50 50	EFLDF
2222	VFDKEGGGGTMV	9.5	79	598.7857	2	27.617	2.2	94 95 93 79 78 76 71 69 75 69 71 71	VFDKEGGGGTMV
1798	GLFSPLVGA	7.1	79	860.4879	1	22.594	0.4	68 70 84 91 50 88 83 84 87	GLFSPLVGA
2928	EVESEVDNEQR	8.7	79	667.2968	2	36.136	-0.3	61 68 91 95 95 95 94 68 62 65 68	EVESEVDNEQR
1917	QAGLLGTLEM(+15.99)L	8.7	79	581.3128	2	23.978	0	63 60 59 63 94 96 95 95 89 91 57	QAGLLGTLEM(+15.99)L
1295	YDPMPGAAL	7.1	79	934.433	1	17.161	-0.8	98 98 98 70 69 69 77 74 50	YDPMPGAAL
1355	CPDRNSSNF	7.1	79	1039.425	1	17.806	-0.8	50 88 89 91 87 94 85 72 50	CPDRNSSNF
1762	DVLASMGQL	7.1	79	933.4705	1	22.175	-0.5	50 96 96 96 92 82 66 70 56	DVLASMGQL
3232	GFTCVGWLGL	7.9	79	526.7661	2	39.796	1.4	73 77 90 84 83 71 73 84 91 56	GFTCVGWLGL
1952	EFLDF	3.9	79	670.3078	1	24.395	-0.6	97 97 97 50 50	EFLDF
2008	EADVVS(+79.97)LI	6.3	79	463.2166	2	25.065	-1.9	50 98 98 94 94 93 50 50	EADVVS(+79.97)LI
1004	EAGM(+15.99)EEEKEA	7.9	79	569.7325	2	14.083	1	61 66 79 88 50 99 97 85 86 72	EAGM(+15.99)EEEKEA
1442	CFEETLDHLMV	8.7	79	668.7985	2	18.751	-1.2	50 50 98 94 87 84 86 89 82 83 58	CFEETLDHLMV
3140	EFLDF	3.9	79	670.3082	1	38.688	0	97 97 97 50 50	EFLDF
1564	RRGEVDNNEGSLEEQK	12.6	79	930.4474	2	20.022	1.8	50 53 56 70 85 97 93 92 96 97 97 96 95 57 64 53	RRGEVDNNEGSLEEQK
1636	EMEVDLSGSADM(+15.99)AVSK	12.6	79	842.874	2	20.787	0.1	50 75 74 76 92 93 95 93 68 59 61 67 82 84 87 93	EMEVDLSGSADM(+15.99)AVSK
900	VQHELEEAEER	8.7	79	684.8228	2	12.936	-0.4	72 65 95 99 99 50 50 50 97 97 87	VQHELEEAEER
3736	FELDF	3.9	79	670.3083	1	45.839	0.2	97 97 97 50 50	FELDF
1385	LELLEMPK	6.3	79	486.7756	2	18.127	0.6	69 79 97 98 97 75 58 52	LELLEMPK
1373	LAEGHGHSELK	8.7	79	589.3005	2	18	-1.9	59 66 82 86 80 84 91 94 78 80 61	LAEGHGHSELK
2213	KNDVVEEVANK	8.7	79	622.8295	2	27.498	2.8	74 67 88 92 93 84 69 67 68 80 77	KNDVVEEVANK
3236	LAEDQLSELK	7.9	79	573.3065	2	39.847	0.9	67 69 88 80 69 86 95 82 83 63	LAEDQLSELK
1178	LLDPTVTGSLGA	9.4	79	572.3175	2	15.915	2	98 97 97 95 80 74 85 76 66 56 56 57	LLDPTVTGSLGA

1277	VVDTACTVLNMDYVW	11.8	79	864.9019	2	16.973	-0.4	59 61 61 79 91 65 62 80 87 85 83 87 79 96 96	VVDTACTVLNMDYVW
1065	KKLESNNVQVK	8.6	79	643.8758	2	14.739	1.3	50 93 91 82 82 72 68 86 81 79 74	KKLESNNVQVK
2270	M(+15.99)TLHDLTEETSSA	10.2	79	725.8199	2	28.204	-2.9	77 79 93 85 82 68 71 83 93 93 92 50 50	M(+15.99)TLHDLTEETSSA
4030	YLPPAFVFFTR	8.6	79	679.3716	2	49.44	4.2	83 83 94 50 85 86 74 75 73 85 69	YLPPAFVFFTR
1454	GELPDKGFLDNK	9.4	79	666.8444	2	18.881	1.6	55 55 90 95 82 68 66 71 81 95 95 84	GELPDKGFLDNK
3802	EFLDF	3.9	79	670.308	1	46.643	-0.3	97 97 97 50 50	EFLDF
1241	ASTEALDV	6.3	79	805.3956	1	16.57	2.3	50 96 96 94 85 76 77 50	ASTEALDV
2434	LELLAPM(+15.99)GGL	7.9	79	515.2861	2	30.199	0	50 63 97 94 75 68 72 83 89 90	LELLAPM(+15.99)GGL
1094	VM(+15.99)CGNWKLMV	7.9	79	598.7846	2	15.042	-0.4	50 50 95 94 85 90 88 83 95 50	VM(+15.99)CGNWKLMV
3213	TLEDALGSELK	8.6	79	588.3112	2	39.564	-0.2	94 94 97 91 72 60 64 82 72 75 58	TLEDALGSELK
1896	EFLDF	3.9	79	670.3086	1	23.729	0.5	97 97 97 50 50	EFLDF
1138	VANSADM(+15.99)LK	7.1	78	482.7429	2	15.496	1.7	66 65 80 94 95 97 74 74 57	VANSADM(+15.99)LK
1779	MMPLKDTPA	7.1	78	1003.493	1	22.375	-1.7	98 91 89 83 81 72 72 66 50	MMPLKDTPA
964	M(+15.99)TGAEVPW	6.3	78	906.4043	1	13.648	1.9	77 79 83 89 82 83 80 50	M(+15.99)TGAEVPW
2067	LQEGVEDI	6.3	78	902.4454	1	25.769	-1.3	81 66 73 75 90 91 96 50	LQEGVEDI
2145	WNGSEVDDTTPL	9.4	78	667.2971	2	26.69	-2.7	66 68 93 93 93 96 95 63 66 68 78 56	WNGSEVDDTTPL
3934	FELDF	3.9	78	670.3079	1	48.265	-0.5	97 97 97 50 50	FELDF
1786	ACKLRANGGEQLDPLDW	13.3	78	943.4651	2	22.454	0.3	62 72 84 92 85 62 59 78 95 92 65 87 92 81 71 84 61	ACKLRANGGEQLDPLDW
2003	LQGEVEDL	6.3	78	902.4475	1	25.003	1.1	87 78 81 78 78 77 93 50	LQGEVEDL
2079	DPALVELLK	7	78	997.5933	1	25.911	0.6	50 81 85 88 97 96 77 73 53	DPALVELLK
2045	M(+15.99)VLGPFV	5.5	78	778.4158	1	25.502	-1.2	88 91 90 89 86 50 50	M(+15.99)VLGPFV
2880	ELLLGM(+15.99)AAPV	7.8	78	515.2861	2	35.553	0	66 66 91 91 84 77 77 74 75 76	ELLLGM(+15.99)AAPV
3020	MLGGM(+15.99)ALVPA	7.8	78	488.2531	2	37.25	-1.4	78 74 69 64 66 86 97 81 81 81	MLGGM(+15.99)ALVPA
1331	SALEEAEGTLK	8.6	78	574.2958	2	17.547	0.1	52 56 75 95 50 96 94 92 79 80 86	SALEEAEGTLK
1427	YPKLPV	4.7	78	358.7206	2	18.588	-0.3	75 75 75 96 97 50	YPKLPV
1624	FGAEMNSSLDDALGEL	12.5	78	834.8758	2	20.658	1.3	67 74 86 94 93 87 94 94 91 92 92 62 53 52 61 51	FGAEMNSSLDDALGEL
844	LAEQDEEM(+15.99)EKLK	9.4	78	739.8551	2	12.314	-0.9	84 85 87 80 97 98 50 50 80 80 92 50	LAEQDEEM(+15.99)EKLK
2507	MVPAF	3.9	78	564.2854	1	31.082	0.6	95 82 82 79 50	MVPAF
1497	FDSARGPNSSSSA	10.2	78	641.7867	2	19.313	0.2	95 95 86 83 70 69 80 87 98 99 50 50 50	FDSARGPNSSSSA
2235	MPKLLCVAGV	7.8	78	515.7933	2	27.777	0.5	72 67 67 85 82 81 81 76 79 86	MPKLLCVAGV
1467	QDEVPLDVAA	7.8	78	1056.52	1	19.014	-1.2	63 81 88 94 76 67 73 73 73 89	QDEVPLDVAA

3468	M(+15.99)APSPQLMNPK	8.6	78	615.3041	2	42.605	-0.7	72 74 74 79 84 80 97 85 74 83 50	M(+15.99)APSPQLMNPK
2375	M(+15.99)LGALDDLSSACA	10.2	78	641.7859	2	29.478	-0.7	76 75 76 73 73 86 87 86 95 79 79 75 50	M(+15.99)LGALDDLSSACA
701	LEGWL	3.9	78	309.1696	2	10.649	4.2	95 95 77 67 54	LEGWL
650	RCGQFPENGS(+79.97)R	8.6	78	665.7698	2	10.025	-2.7	90 91 96 66 68 68 87 80 76 83 50	RCGQFPENGS(+79.97)R
2090	VM(+15.99)DKGSGVGTMV	9.4	78	598.7859	2	26.043	-0.2	96 81 88 71 75 67 81 81 81 70 70 71	VM(+15.99)DKGSGVGTMV
1761	DEDVLEL	5.5	78	832.3929	1	22.166	-0.7	50 79 79 87 93 97 58	DEDVLEL
2374	DDLEGSLEQEK	8.6	78	631.7913	2	29.467	0.6	75 81 85 94 92 89 81 79 58 62 58	DDLEGSLEQEK
980	AEDLTRQACV	7.8	78	553.2677	2	13.833	-2.3	50 96 96 95 65 65 71 79 82 77	AEDLTRQACV
1536	EAFSADQVEDFKEA	10.9	78	793.3524	2	19.719	-2.5	50 90 87 85 89 91 69 83 96 95 94 52 52 51	EAFSADQVEDFKEA
3016	LTEDGLASELK	8.6	78	588.3111	2	37.197	-0.4	79 80 96 87 76 64 74 90 74 75 59	LTEDGLASELK
4317	MPGLVMSQI	7	78	488.2539	2	53.009	0.4	87 92 92 96 74 69 61 63 62	MPGLVMSQI
1173	YAWKEGGAAELEGSLK	12.5	78	854.9328	2	15.861	2.6	65 65 59 78 71 88 82 86 93 92 95 93 77 70 61 64	YAWKEGGAAELEGSLK
2480	EFLDF	3.9	78	670.3082	1	30.754	-0.1	96 96 96 50 50	EFLDF
1179	FLPLDDGSPAEEDK	10.9	78	766.8587	2	15.922	-0.8	50 90 94 95 96 95 74 73 79 95 50 67 69 58	FLPLDDGSPAEEDK
1223	GSLEDGAI	6.2	78	761.3669	1	16.379	-0.9	62 65 85 97 94 85 82 50	GSLEDGAI
2334	VKEGAVSL	6.2	78	401.7369	2	28.977	-0.3	90 90 90 90 73 61 62 63	VKEGAVSL
1121	NLTEEM(+15.99)A	5.5	78	823.3502	1	15.316	-0.1	78 78 91 96 98 50 50	NLTEEM(+15.99)A
2740	FTLHPCEEEMSK	9.3	78	725.8217	2	33.889	1.4	68 69 88 94 50 89 89 89 86 72 78 57	FTLHPCEEEMSK
1929	LEKLPV	4.7	78	698.4445	1	24.12	-0.3	70 69 83 94 98 50	LEKLPV
790	CAALCSLPL	7	78	445.7263	2	11.7	-2.2	50 88 93 92 92 92 85 50 54	CAALCSLPL
975	M(+15.99)AEVVAGTA	7	78	864.4125	1	13.774	-0.7	80 79 68 74 91 85 83 87 50	M(+15.99)AEVVAGTA
2927	FDDAPKA	5.4	78	763.3655	1	36.127	4.5	50 93 84 83 82 77 72	FDDAPKA
1658	RCAVSEDSQAGVNVAMK	13.2	78	882.9197	2	21.037	-2.5	86 90 96 98 97 97 92 56 54 92 64 59 57 72 70 76 58	RCAVSEDSQAGVNVAMK
2189	LENLKCGASKV	8.6	78	581.3183	2	27.213	-0.2	79 78 74 83 83 67 60 68 83 85 89	LENLKCGASKV
1359	LTLTTNPY	6.2	78	922.4882	1	17.854	0.2	50 53 85 97 96 96 50 91	LTLTTNPY
766	EALVSGA	5.4	78	646.3403	1	11.421	-0.5	50 50 50 99 98 98 98	EALVSGA
2372	SADGAVEDFKEA	9.3	78	619.7805	2	29.448	0.3	54 55 67 68 75 91 98 97 97 85 72 69	SADGAVEDFKEA
3092	M(+15.99)VEVHLDLCL	7.8	78	594.2949	2	38.118	2.3	95 95 79 79 85 84 70 67 70 51	M(+15.99)VEVHLDLCL
774	FGAGEQCAGVEPGK	10.9	78	675.3156	2	11.508	6.2	70 71 73 78 90 80 83 73 81 93 86 77 76 50	FGAGEQCAGVEPGK
1517	ENLTVENQLLTR	9.3	78	715.3852	2	19.524	-1	58 57 60 66 93 92 78 79 88 93 93 71	ENLTVENQLLTR
1983	TLLCVSKKVTVV	9.3	78	645.3972	2	24.764	0.9	55 55 79 80 81 78 72 84 85 83 87 87	TLLCVSKKVTVV

2486	TLESATPSELK	8.6	78	588.3109	2	30.829	-0.7	88 89 95 79 61 59 70 91 76 80 62	TLESATPSELK
2028	LTESATPSELK	8.6	78	588.3113	2	25.295	-0.1	77 79 95 85 64 64 75 91 78 80 60	LTESATPSELK
1404	DATDGALDL	7	78	890.4109	1	18.33	0.8	77 78 89 85 74 72 78 88 53	DATDGALDL
1002	DGLSVGGASTA	8.5	78	934.4501	1	14.052	2.7	69 72 86 93 94 94 79 75 65 64 60	DGLSVGGASTA
2754	TLELGGESELK	8.5	78	588.312	2	34.039	1.1	87 87 93 74 62 60 69 91 80 83 63	TLELGGESELK
3312	EVESEVDNEQR	8.5	78	667.2985	2	40.744	2.3	62 64 82 87 91 95 95 85 63 63 63	EVESEVDNEQR
2511	LAEDQLSELK	7.8	78	573.3066	2	31.133	1.2	71 70 85 81 73 89 92 76 76 58	LAEDQLSELK
1343	AFPPDVGGAGVDYK	10.9	78	696.8428	2	17.673	-0.8	50 96 96 96 91 90 72 61 57 59 61 82 90 77	AFPPDVGGAGVDYK
2420	TM(+15.99)LAGEAPYEV	8.5	78	598.78	2	30.029	2.1	67 65 85 82 80 78 77 86 74 79 76	TM(+15.99)LAGEAPYEV
1890	EVEFPDL	5.4	78	848.4045	1	23.659	1.2	50 50 96 96 91 97 60	EVEFPDL
1583	TGFPPDVAGNVDYK	10.9	78	740.3594	2	20.225	0.1	50 50 58 96 96 98 96 91 81 69 79 76 76 66	TGFPPDVAGNVDYK
2016	NNESEVDLGDNK	9.3	78	667.2974	2	25.153	0.6	62 59 66 94 95 97 91 84 80 70 70 58	NNESEVDLGDNK
3971	LLDQEVTTPK	7.8	78	572.3167	2	48.709	0.6	98 98 96 80 74 59 59 63 77 67	LLDQEVTTPK
1528	QNKNENGSLEAER	10.1	78	744.857	2	19.643	2.1	54 56 58 86 95 71 64 63 94 98 95 91 76	QNKNENGSLEAER
1623	EQLSDLTEQI	7.8	78	588.2931	2	20.652	-0.1	55 52 71 92 94 95 97 69 75 69	EQLSDLTEQI
1742	FPMTEV	4.7	78	723.3381	1	21.951	-0.1	50 92 89 74 80 78	FPMTEV
1540	MDDLEL	4.7	78	735.3228	1	19.769	-0.2	73 90 94 93 50 61	MDDLEL
1919	LHWPW	3.9	78	369.6894	2	23.996	-1	50 50 95 95 95	LHWPW
4164	FDKDVAGSDGLYF	10.1	78	717.3324	2	51.054	-0.4	65 56 56 75 89 82 76 76 87 88 83 82 86	FDKDVAGSDGLYF
2558	MLGGM(+15.99)ALVPA	7.8	78	488.2534	2	31.701	-0.6	78 74 72 59 59 74 98 85 85 85	MLGGM(+15.99)ALVPA
2307	MGVKSMLTW	7	78	526.7673	2	28.657	0.5	90 90 92 75 63 61 65 88 69	MGVKSMLTW
3100	GFTSVGTDVGL	8.5	78	526.7667	2	38.212	0.3	79 83 93 82 54 54 56 80 80 92 95	GFTSVGTDVGL
1792	LLLPV	3.9	78	554.3911	1	22.525	-0.1	50 98 94 94 50	LLLPV
1602	M(+15.99)DDEVAKPL	7	77	517.2473	2	20.426	0.4	50 50 97 92 89 86 83 85 59	M(+15.99)DDEVAKPL
2217	EM(+15.99)LDDPTQLVY	8.5	77	670.3077	2	27.551	-0.3	82 84 83 89 83 76 60 59 87 96 50	EM(+15.99)LDDPTQLVY
4105	Y(+79.97)GGCLVDLGFPI	9.3	77	667.297	2	50.332	-2.3	52 80 89 83 83 93 95 86 82 81 50 50	Y(+79.97)GGCLVDLGFPI
2421	LTEDLQSELK	7.7	77	588.3113	2	30.041	0	79 80 96 80 70 59 87 75 80 64	LTEDLQSELK
2046	M(+15.99)SVQPGSPLLVYA	10.1	77	689.357	2	25.512	-1.1	90 90 78 59 63 64 77 72 60 83 88 88 88	M(+15.99)SVQPGSPLLVYA
4046	FEPSEL	4.6	77	721.34	1	49.626	-0.3	50 82 82 81 85 83	FEPSEL
2380	FGTSLSDGVGL	8.5	77	526.7671	2	29.541	1	78 81 92 89 88 55 58 62 66 87 91	FGTSLSDGVGL
1720	FLGGTEMGL	7	77	924.4477	1	21.713	-2	83 81 86 72 69 77 79 82 63	FLGGTEMGL

984	EADVRDQAAF	7.7	77	561.2653	2	13.864	1	50 87 84 83 87 74 61 94 98 50	EADVRDQAAF
791	DLKNQDPVK	7	77	528.7877	2	11.709	-0.1	81 81 81 83 78 92 96 50 50	DLKNQDPVK
2794	LQGEVEDI	6.2	77	902.4456	1	34.524	-1	77 66 76 76 83 91 96 50	LQGEVEDI
4152	SADQVEDFKEA	8.5	77	619.7805	2	50.909	0.2	59 64 84 70 85 96 95 95 73 63 61	SADQVEDFKEA
1160	QELSDLTEGA	7.7	77	1062.495	1	15.721	-0.3	56 59 84 96 91 87 83 74 77 60	QELSDLTEGA
2684	MDYAPLVGTMV	8.5	77	598.7867	2	33.234	-2.4	52 91 79 88 85 88 74 68 65 77 78	MDYAPLVGTMV
1656	FTLHEEAEECPF	9.3	77	726.3115	2	21.005	0.8	61 68 87 91 92 90 50 94 94 94 50 50	FTLHEEAEECPF
2675	DQGGSEVDNEGVK	10	77	667.2976	2	33.123	1	50 51 55 94 96 96 95 94 81 88 74 73 53	DQGGSEVDNEGVK
2181	LLDGAELSTPK	8.5	77	572.3167	2	27.121	0.5	97 97 96 78 74 86 70 62 59 68 56	LLDGAELSTPK
3314	FGTPPDVANGVDYK	10.8	77	740.3592	2	40.777	-0.2	58 65 66 95 98 97 95 92 64 63 67 73 77 65	FGTPPDVANGVDYK
1800	T(+79.97)PTLRGPWLTLGNER	11.6	77	895.9495	2	22.613	-1.8	50 64 73 94 84 78 70 75 95 86 95 88 68 73 59	T(+79.97)PTLRGPWLTLGNER
1838	M(+15.99)CENETLCQLPVW	10	77	791.3408	2	23.054	-0.2	50 98 93 85 92 94 93 82 62 73 65 55 55	M(+15.99)CENETLCQLPVW
2396	LQEGVEDL	6.2	77	902.4476	1	29.741	1.1	80 70 73 74 83 89 95 50	LQEGVEDL
1875	CASLRSRK	6.2	77	920.5084	1	23.485	-1.1	96 94 81 76 70 62 72 62	CASLRSRK
1078	M(+15.99)VNLPM(+15.99)V	5.4	77	835.4052	1	14.867	0	50 91 80 84 91 91 50	M(+15.99)VNLPM(+15.99)V
1240	NPLLEA	4.6	77	656.3633	1	16.562	3	50 86 92 93 89 50	NPLLEA
3095	MELDVESSNMEAVSK	11.6	77	834.8754	2	38.15	-1.2	64 63 85 90 88 89 94 75 53 53 65 79 81 84 88	MELDVESSNMEAVSK
1234	MPESEVPM(+15.99)NGA	8.5	77	1177.484	1	16.498	-1.9	50 96 93 90 91 95 89 61 55 74 50	MPESEVPM(+15.99)NGA
1768	M(+15.99)AGGADVALL	7.7	77	933.4715	1	22.243	0.6	87 87 89 87 82 82 85 54 54 59	M(+15.99)AGGADVALL
1718	LLLPV	3.9	77	554.3902	1	21.693	-1.8	50 98 92 92 50	LLLPV
2685	DVEDLKSELK	7.7	77	588.3121	2	33.245	1.2	92 92 87 64 62 71 91 73 74 59	DVEDLKSELK
2226	SANSTM(+15.99)CVLI	7.7	77	1054.491	1	27.657	0	91 90 85 92 95 50 67 67 79 50	SANSTM(+15.99)CVLI
1575	MGCLPQLLAA	7.7	77	1016.526	1	20.147	-1.2	71 74 85 84 76 57 72 78 78 93	MGCLPQLLAA
1976	LYGVLDL	5.4	77	792.4504	1	24.683	0.3	78 78 93 91 89 50 57	LYGVLDL
857	ESGNNNNDAELTA	10	77	674.7842	2	12.461	0	60 63 79 77 86 88 89 91 95 92 63 62 51	ESGNNNNDAELTA
1323	TLDDLQAEEDQVSK	10.8	77	795.8776	2	17.466	-0.8	54 54 64 88 89 78 95 95 94 79 63 79 90 50	TLDDLQAEEDQVSK
1893	DLLPVAAFPV	7.7	77	521.3028	2	23.7	0.5	80 80 92 83 76 76 81 65 65 65	DLLPVAAFPV
2252	FEPPVVEEVGKK	9.2	77	679.3724	2	27.983	1.2	96 96 96 50 50 90 88 76 73 75 77 50	FEPPVVEEVGKK
1019	TPGLMGDA	6.2	77	761.3483	1	14.241	-1.9	88 80 78 80 84 79 73 50	TPGLMGDA
917	FAQAEQGSGGELGWW	11.5	77	811.8677	2	13.129	3	79 90 81 96 91 81 83 80 81 83 78 61 60 55 50	FAQAEQGSGGELGWW
1340	VEVDDVKKV	6.9	77	515.7924	2	17.648	-0.2	50 74 74 80 94 91 84 90 50	VEVDDVKKV

2378	LAEDQLSELK	7.7	77	573.3063	2	29.522	0.6	74 73 89 67 57 84 96 81 82 61	LAEDQLSELK
777	TLLDNGA	5.4	77	703.3615	1	11.55	-0.8	69 69 91 94 81 81 50	TLLDNGA
1745	MLCFKPDV	6.2	77	476.7344	2	21.974	-1.5	82 79 81 50 93 88 89 50	MLCFKPDV
1054	LNSADMKL	6.2	77	446.2348	2	14.623	2.3	87 83 91 85 74 64 69 59	LNSADMKL
868	VEAAETQVGGK	8.5	77	544.7825	2	12.584	-0.6	53 53 57 94 92 78 59 72 91 94 97	VEAAETQVGGK
3695	MALACPVLGA	7.7	77	473.2478	2	45.338	-1.3	67 66 84 91 89 89 71 62 65 79	MALACPVLGA
1430	SALEEAEGTHEI	9.2	77	643.3004	2	18.625	2.4	51 51 74 95 50 99 98 98 98 78 62 62	SALEEAEGTHEI
2552	VFCGNGAWLMV	8.5	77	598.7848	2	31.625	2.8	95 95 89 88 90 83 68 63 69 50 50	VFCGNGAWLMV
3155	NEVDPELVA	6.9	77	985.4827	1	38.866	-1	65 69 79 83 50 89 84 84 84	NEVDPELVA
1985	LLDQESTLPK	7.7	77	572.317	2	24.784	1.2	96 96 95 70 70 61 64 74 80 57	LLDQESTLPK
612	M(+15.99)QGMAAPAAGS(+79.97)QF	10	77	681.7643	2	9.526	-0.3	68 63 70 66 65 79 81 85 90 90 84 66 86	M(+15.99)QGMAAPAAGS(+79.97)QF
2026	VFYDPPAGTMV	8.4	77	598.7851	2	25.276	-2.2	50 50 95 95 95 68 71 76 76 81 82	VFYDPPAGTMV
3814	MVAGM(+15.99)ALVPA	7.7	77	488.2527	2	46.787	-2.2	76 69 68 64 64 83 98 80 80 80	MVAGM(+15.99)ALVPA
1612	RCGSTVLADVSK	9.2	77	412.5518	3	20.535	-0.4	60 59 68 64 70 81 91 90 92 95 95 50	RCGSTVLADVSK
1649	M(+15.99)LCPAGPSLL	7.7	77	1017.511	1	20.926	0.2	93 93 96 88 72 66 62 59 82 51	M(+15.99)LCPAGPSLL
1932	EM(+15.99)LPT(+79.97)TSV	6.1	77	973.397	1	24.148	2.3	86 81 84 93 74 71 71 50	EM(+15.99)LPT(+79.97)TSV
3603	FELDF	3.8	77	670.3084	1	44.234	0.3	94 94 94 50 50	FELDF
797	MWGPKALDR	6.9	77	358.5243	3	11.781	2.1	64 63 63 64 81 94 93 93 71	MWGPKALDR
2255	EMLKDVESSACA	9.2	77	641.787	2	28.013	1	66 65 75 72 73 69 80 95 91 91 89 50	EMLKDVESSACA
2978	EFPPVVELDGKK	9.2	77	679.3721	2	36.746	0.6	96 96 96 97 50 88 80 71 66 62 64 50	EFPPVVELDGKK
3280	LTEDAAVSELK	8.4	77	588.3113	2	40.363	-0.1	76 79 95 87 70 64 65 77 76 84 64	LTEDAAVSELK
3322	MMLPGPEK	6.1	77	902.4461	1	40.872	-1.4	96 93 88 83 76 73 50 50	MMLPGPEK
840	NNLDAAVLL	6.9	77	314.8463	3	12.267	-1.2	50 85 83 79 82 78 66 75 87	NNLDAAVLL
2061	GTM(+15.99)PVLVAGGGVDQY	11.5	77	740.3596	2	25.7	-2	53 52 62 96 96 94 93 93 85 69 73 81 64 65 66	GTM(+15.99)PVLVAGGGVDQY
3198	FGPML	3.8	77	564.2845	1	39.383	-1	50 87 80 80 84	FGPML
2135	FPDYAPM(+15.99)V	6.1	77	955.4225	1	26.57	-0.5	94 94 91 91 81 54 54 50	FPDYAPM(+15.99)V
1866	M(+15.99)VQVPCADAPL	8.4	77	580.2769	2	23.375	-1.8	88 87 85 82 82 82 82 82 55 55 57	M(+15.99)VQVPCADAPL
1143	KCPEDEKSLGAKLQK	11.5	77	837.4474	2	15.549	-0.9	51 51 51 50 99 92 85 85 93 91 91 77 87 74 65	KCPEDEKSLGAKLQK
1998	FSAPDPVAGNVDYK	10.7	77	740.3585	2	24.942	-1.2	53 55 60 91 94 98 96 91 71 58 67 78 84 72	FSAPDPVAGNVDYK
2956	FLT(+79.97)GMAKVDNEK	9.2	77	716.8303	2	36.478	-0.7	50 85 82 79 74 70 74 89 85 72 85 68	FLT(+79.97)GMAKVDNEK
1058	LATDAMA	5.4	77	692.3278	1	14.67	-0.8	62 62 82 74 75 89 89	LATDAMA

2343	FRKGLAGADS(+79.97)K	8.4	77	615.3038	2	29.088	-2.7	50 50 99 97 94 87 78 62 62 84 74	FRKGLAGADS(+79.97)K
2366	ECNGAVSAPVEL	9.2	77	594.7805	2	29.376	-2.5	75 74 63 73 76 94 90 89 86 60 73 59	ECNGAVSAPVEL
3350	MLGGM(+15.99)ALVPA	7.7	77	488.2533	2	41.202	-0.9	74 73 73 65 66 84 99 75 75 75	MLGGM(+15.99)ALVPA
996	LAEKDEEM(+15.99)EGALK	9.9	77	739.8561	2	13.985	0.5	51 53 54 77 98 98 50 95 90 84 66 86 87	LAEKDEEM(+15.99)EGALK
1941	SSTTLDSLEAEHK	9.9	77	709.3435	2	24.263	-0.6	50 51 78 95 91 91 92 92 90 87 58 59 54	SSTTLDSLEAEHK
3081	FANYVPLLGPA	8.4	76	581.3184	2	37.981	-0.7	80 67 65 94 97 95 94 77 53 53 62	FANYVPLLGPA
1642	LAEDGALSEL	7.6	76	1017.511	1	20.856	0.8	57 57 77 92 81 77 81 80 83 75	LAEDGALSEL
1032	TPGLM(+15.99)GDA	6.1	76	777.344	1	14.38	-0.9	92 91 91 93 67 63 60 50	TPGLM(+15.99)GDA
4170	QGDGSEVDNEGVK	9.9	76	667.298	2	51.127	1.6	58 58 65 90 95 95 94 91 70 81 68 71 51	QGDGSEVDNEGVK
364	VVKGSK	4.6	76	309.2029	2	5.57	0.7	50 81 85 94 96 50	VVKGSK
814	EKVDGSQAGGTA	9.2	76	560.2676	2	11.976	0.3	85 85 79 81 69 63 61 88 82 81 88 50	EKVDGSQAGGTA
2949	TLEDAVASELK	8.4	76	588.3111	2	36.396	-0.4	86 87 95 90 77 59 63 83 69 70 57	TLEDAVASELK
2832	FEGVFSTLDL	7.6	76	564.2853	2	34.977	1.2	50 75 75 79 82 80 84 89 91 55	FEGVFSTLDL
3572	FEPPVVEEVGKK	9.2	76	679.3716	2	43.856	-0.1	96 96 96 50 50 93 90 81 73 67 69 50	FEPPVVEEVGKK
1287	LLNPESQTPGLMDK	10.7	76	771.8947	2	17.084	-0.6	84 83 68 75 85 93 79 95 81 72 74 60 60 54	LLNPESQTPGLMDK
2579	FGPML	3.8	76	564.2858	1	31.96	1.3	50 84 77 78 90	FGPML
914	TSVQDVSL	6.1	76	424.7214	2	13.103	-0.5	50 98 80 68 87 88 86 50	TSVQDVSL
2542	EVESEVDNEQR	8.4	76	667.2975	2	31.504	0.8	59 64 89 86 87 94 94 71 61 63 67	EVESEVDNEQR
2037	M(+15.99)VM(+15.99)SNKV	5.3	76	840.3959	1	25.408	0.6	92 91 85 87 76 50 50	M(+15.99)VM(+15.99)SNKV
3843	VVTLPGSLFDW	8.4	76	617.3294	2	47.149	0.2	50 68 70 84 84 85 76 77 80 80 80	VVTLPGSLFDW
1310	FSAEEI	4.6	76	695.325	1	17.333	0.6	83 83 92 96 50 50	FSAEEI
4097	TKCYVPVGVPV	8.4	76	581.3191	2	50.241	-2.2	50 50 51 93 98 50 87 87 86 90 90	TKCYVPVGVPV
3260	QNAWGALDGGLGA	9.9	76	615.3	2	40.134	1.6	61 61 82 85 86 89 95 87 71 60 61 71 75	QNAWGALDGGLGA
1938	LGAGEVEDL	6.9	76	902.4453	1	24.22	-1.4	75 62 67 83 83 85 83 94 50	LGAGEVEDL
1364	NSVLAPEDVLVA	9.2	76	613.8359	2	17.912	1.7	64 67 81 74 74 87 84 84 84 90 60 60	NSVLAPEDVLVA
4057	DLRLLAPAALPNHI	10.7	76	757.4458	2	49.763	-0.4	60 58 57 77 89 89 90 84 89 88 83 68 70 60	DLRLLAPAALPNHI
1170	CGDTADLEEGWLAL	10.7	76	746.8358	2	15.821	1.4	72 80 90 96 96 96 97 93 65 61 59 53 54 50	CGDTADLEEGWLAL
735	ASETEKELA	6.9	76	489.2426	2	11.061	-0.5	72 74 92 93 89 67 65 73 57	ASETEKELA
716	DFETSGA	5.3	76	726.2937	1	10.838	-0.5	50 50 99 96 93 93 50	DFETSGA
1889	NGLMVAELEELR	9.1	76	687.3583	2	23.649	0.2	51 50 52 94 98 98 97 97 50 80 80 61	NGLMVAELEELR
2042	EPATGSLQPLL	8.4	76	563.3117	2	25.471	1.1	50 96 95 95 92 86 86 60 55 68 50	EPATGSLQPLL

2134	EWLGLL	4.6	76	730.4133	1	26.56	-0.1	90 90 87 88 50 50	EWLGLL
1646	APHHGDVAGPCK	9.1	76	1188.554	1	20.904	-2.9	50 97 96 74 61 59 74 77 80 77 81 84	APHHGDVAGPCK
1607	CM(+15.99)QMGAVLVPTW	9.1	76	676.312	2	20.48	-3	71 71 62 55 57 91 94 97 50 91 93 77	CM(+15.99)QMGAVLVPTW
1826	YLDPY	3.8	76	670.3087	1	22.913	0.7	93 92 94 50 50	YLDPY
2572	AEDVGGSYK	6.9	76	463.2177	2	31.876	2.2	50 97 97 94 90 85 61 55 53	AEDVGGSYK
976	LNFAEDLQF	6.9	76	548.7725	2	13.782	6.1	69 63 74 93 96 93 63 66 63	LNFAEDLQF
1707	TSEVYDDLPGLWL	9.9	76	754.3688	2	21.573	-0.7	78 83 80 85 97 98 97 89 67 56 51 52 50	TSEVYDDLPGLWL
926	ERKM(+15.99)EEEQEA	7.6	76	647.7812	2	13.24	-2	50 50 65 71 74 99 96 79 94 79	ERKM(+15.99)EEEQEA
4127	M(+15.99)TLDHLTEECSR	9.1	76	725.8204	2	50.607	2.4	69 69 77 68 71 70 72 82 93 93 92 50	M(+15.99)TLDHLTEECSR
3501	LAEDQLSELK	7.6	76	573.3065	2	42.998	0.9	77 76 91 83 76 86 70 62 77 58	LAEDQLSELK
654	DFETSGA	5.3	76	726.2939	1	10.062	-0.2	50 50 98 96 92 92 50	DFETSGA
1466	VLCRLMVADW	7.6	76	603.3134	2	19.005	2.1	74 74 58 59 64 73 91 90 94 78	VLCRLMVADW
668	QPEEEVGA	6.1	76	858.3826	1	10.245	-1.6	64 68 79 50 94 82 84 84	QPEEEVGA
2710	MSQM(+15.99)DEVQRV	7.6	76	619.7804	2	33.547	2.5	67 67 65 97 98 96 73 61 68 62	MSQM(+15.99)DEVQRV
1881	TLLPVV	4.6	76	641.4229	1	23.557	-0.6	85 85 93 89 50 50	TLLPVV
3723	MKELVPF	5.3	76	432.2379	2	45.685	-1.2	76 63 63 78 86 82 82	MKELVPF
2883	LTESTAPSELK	8.4	76	588.3115	2	35.595	0.2	82 85 96 84 67 64 75 87 64 67 57	LTESTAPSELK
3214	VFDQVSNGTMV	8.4	76	598.7863	2	39.573	3.2	95 95 90 63 66 66 69 69 66 75 75	VFDQVSNGTMV
1196	AELGEQI	5.3	76	759.3864	1	16.106	-2.5	50 93 92 93 64 71 65	AELGEQI
1214	VLMLEDDLVA	7.6	76	559.2924	2	16.292	-3.1	50 65 69 85 90 90 68 82 77 77	VLMLEDDLVA
2004	FPLLGSTW	6.1	76	920.4921	1	25.012	4.8	50 92 90 65 64 67 86 89	FPLLGSTW
2193	FASPPDVAGNVDYK	10.6	76	740.3596	2	27.265	0.3	54 57 57 93 50 98 96 89 73 63 76 85 89 77	FASPPDVAGNVDYK
3282	VFDQVPTDEF	7.6	76	598.78	2	40.381	4.8	96 96 76 61 82 77 71 73 71 50	VFDQVPTDEF
1815	LEVVVAPDEV	7.6	76	1069.576	1	22.785	-1.3	84 84 87 89 69 62 68 65 73 73	LEVVVAPDEV
2439	SADKVEDM(+15.99)KEA	8.3	76	619.7805	2	30.263	-2.6	54 56 65 80 92 98 96 88 70 63 67	SADKVEDM(+15.99)KEA
2033	MT(+79.97)VLVEV	5.3	76	870.4067	1	25.358	2.8	70 70 50 97 95 95 50	MT(+79.97)VLVEV
3644	SSMPPDVAKAADYK	10.6	76	740.3595	2	44.723	-2.1	50 53 53 87 50 97 95 94 85 73 82 78 84 73	SSMPPDVAKAADYK
1190	NLQQEL	4.5	76	744.3871	1	16.043	-2	69 81 79 67 94 63	NLQQEL
2634	APKGSGDSEVDNEK	10.6	76	716.8317	2	32.627	0.8	50 58 62 89 88 82 83 73 75 92 86 68 82 66	APKGSGDSEVDNEK
1350	LYPPVVEEVGKQK	9.9	76	743.4197	2	17.749	0.8	78 78 96 98 50 94 94 93 83 59 52 53 50	LYPPVVEEVGKQK
2321	MALAMAPAVA	7.6	76	473.2491	2	28.823	1.3	85 85 92 83 74 73 67 61 61 72	MALAMAPAVA

3450	LM(+15.99)NVLEHVNDHVSF	10.6	76	835.404	2	42.385	0.3	60 60 72 80 84 92 91 76 69 73 87 70 70 70	LM(+15.99)NVLEHVNDHVSF
1704	MGELPNGV	6.1	76	816.392	1	21.534	0	96 95 96 98 51 52 52 63	MGELPNGV
618	DY(+79.97)MTCPDF	6.1	76	536.1649	2	9.606	2.4	50 82 83 62 74 76 88 88	DY(+79.97)MTCPDF
1358	TSLVDEPPGKLA	9.1	76	613.8353	2	17.847	0.6	73 72 94 92 92 92 91 66 59 55 57 59	TSLVDEPPGKLA
1056	CPLGGPCLASA	8.3	76	494.7339	2	14.641	1.7	50 81 74 77 77 60 96 96 65 65 86	CPLGGPCLASA
1581	LEKPMGLF	6.1	76	467.7567	2	20.21	-0.4	93 92 92 75 59 60 68 62	LEKPMGLF
2186	FEPGEEKAPLLK	9.1	76	679.3713	2	27.184	-0.5	95 95 92 78 75 86 86 72 64 55 54 50	FEPGEEKAPLLK
1443	WGLLPVYDK	6.8	76	545.8005	2	18.759	0.4	53 53 68 95 97 50 90 91 80	WGLLPVYDK
923	LPSCETGYPEK	8.3	76	612.2829	2	13.199	-2.2	50 50 85 85 85 85 76 77 81 83 70	LPSCETGYPEK
1016	LLDPEATGSLKK	9.1	76	424.5775	3	14.217	-1.9	78 81 81 88 93 91 88 72 55 55 69 50	LLDPEATGSLKK
1637	FSHGSGKF	6	76	866.4137	1	20.797	-2	91 91 91 73 73 66 64 53	FSHGSGKF
2442	LEETGSGSGTDPL	9.8	76	631.79	2	30.29	-1.5	50 97 95 94 95 94 55 60 65 69 72 81 51	LEETGSGSGTDPL
1116	LQLEA	3.8	76	573.3242	1	15.264	-0.1	50 86 95 95 50	LQLEA
2232	ELTEGSLEAGEGA	9.8	76	631.7911	2	27.733	0.2	62 64 78 85 90 88 91 90 78 71 64 64 50	ELTEGSLEAGEGA
1118	ELNNKDPLNDSVVK	10.6	76	792.915	2	15.292	0.1	54 53 53 76 91 91 81 79 72 80 88 88 94 50	ELNNKDPLNDSVVK
2500	APKGSGDSEVDNEK	10.6	76	716.8322	2	30.997	1.4	50 56 58 85 88 86 86 72 73 91 90 68 83 65	APKGSGDSEVDNEK
2072	LSDVNTNY	6	76	463.2163	2	25.832	-0.9	50 98 97 89 71 64 74 57	LSDVNTNY
1655	MTAVAHCKDNV	8.3	76	1188.553	1	20.995	2.4	87 86 80 82 93 95 74 56 54 58 59	MTAVAHCKDNV
686	EEQAEPDGNEEADK	10.6	76	780.8181	2	10.475	-0.5	65 65 59 92 98 92 90 65 61 70 84 74 74 61	EEQAEPDGNEEADK
1727	TLLLEGPPGVGGK	9.8	76	619.3611	2	21.784	0	61 61 84 98 96 86 82 72 63 64 69 69 70	TLLLEGPPGVGGK
1887	MPNAALLVMGPQVK	10.6	76	734.9052	2	23.628	1.1	97 97 93 98 98 97 67 57 57 74 53 52 53 57	MPNAALLVMGPQVK
1848	LWPPI	3.8	76	625.3705	1	23.16	-0.4	50 92 92 92 50	LWPPI
3522	STALPGEDL	6.8	76	902.4463	1	43.249	-0.3	50 85 81 83 73 78 85 90 50	STALPGEDL
710	FETGHR	4.5	75	746.356	1	10.768	-2.6	50 96 91 85 78 50	FETGHR
2306	ASDQVEDFKEA	8.3	75	619.7808	2	28.647	0.8	59 61 72 60 90 97 96 96 72 62 60	ASDQVEDFKEA
1907	MMALAGPAPTDL	9.1	75	594.2951	2	23.853	2.7	68 71 62 62 71 71 79 80 86 87 95 67	MMALAGPAPTDL
1835	VTLPF	3.8	75	576.3394	1	23.015	0.5	50 91 90 94 50	VTLPF
2055	LYPWTRSKGHL	8.3	75	679.3718	2	25.627	-0.9	93 92 93 87 86 71 82 61 56 53 50	LYPWTRSKGHL
2391	LLKGRAGAYHSV	9	75	424.5778	3	29.678	-2.3	67 70 70 70 72 78 82 87 84 84 85 50	LLKGRAGAYHSV
1438	LVVMGAHAHSR	8.3	75	589.3177	2	18.705	1.9	50 85 86 79 75 76 76 82 82 82 50	LVVMGAHAHSR
809	DGSKEDSAKGKDPVEK	12.1	75	845.4182	2	11.919	0.2	74 65 74 92 95 93 79 63 62 76 92 87 78 57 59 53	DGSKEDSAKGKDPVEK

1035	SLDRSEELDTA	8.3	75	618.2894	2	14.419	-2.7	50 96 89 63 55 55 87 92 92 94 50	SLDRSEELDTA
1378	MQEMENLGLEDK	9	75	718.8239	2	18.054	0.7	72 68 95 98 92 78 86 59 56 58 70 66	MQEMENLGLEDK
1659	MELDDLSSACA	8.3	75	1154.471	1	21.048	0	66 62 74 88 91 88 90 72 72 72 50	MELDDLSSACA
3455	MEMQDVEGELGA	9	75	654.7757	2	42.447	-0.4	85 80 82 68 81 81 60 63 83 71 71 74	MEMQDVEGELGA
2516	LYPWEKKHTR	7.5	75	679.373	2	31.194	1	81 81 96 89 80 80 70 58 63 50	LYPWEKKHTR
1674	DLLTPEI	5.3	75	800.4396	1	21.212	-0.5	70 70 94 94 95 50 50	DLLTPEI
718	ELEANATSAGA	8.3	75	1033.479	1	10.857	-0.6	50 93 92 81 56 61 85 83 83 89 50	ELEANATSAGA
2649	KLMPVPYDKA	7.5	75	581.3188	2	32.817	-2.6	54 53 57 64 95 99 98 84 74 71	KLMPVPYDKA
2368	Y(+79.97)MLPVLVA	6	75	985.4826	1	29.396	-0.2	50 81 75 78 50 94 85 85	Y(+79.97)MLPVLVA
3088	FGAGVAYMVA	7.5	75	985.483	1	38.065	1.9	74 77 82 81 76 66 65 70 78 78	FGAGVAYMVA
806	KMKEDSKAYGHGEPL	11.3	75	563.9482	3	11.89	2.2	60 58 60 72 79 86 86 88 62 60 65 86 82 84 95	KMKEDSKAYGHGEPL
3616	LLEDPGW	5.3	75	415.21	2	44.378	4.5	74 74 74 82 82 87 50	LLEDPGW
662	STSTSDAAALVV	9	75	561.2881	2	10.17	0.4	50 57 57 57 87 87 88 93 86 77 79 80	STSTSDAAALVV
3778	M(+15.99)SAPLVVAGNVDQY	10.5	75	740.3593	2	46.345	-2.4	62 55 58 90 94 93 87 85 74 68 83 66 66 66	M(+15.99)SAPLVVAGNVDQY
1680	TMSDSSGKLKPL	9	75	632.3342	2	21.275	-0.1	67 66 78 93 93 84 87 91 85 52 53 50	TMSDSSGKLKPL
2541	LEAGEGALDNLGA	9.8	75	615.3043	2	31.494	0.5	54 56 63 76 81 91 92 95 87 71 67 69 69	LEAGEGALDNLGA
2211	WGGGSTDVGCNAPL	10.5	75	667.2963	2	27.478	0.9	61 54 65 93 93 87 84 84 85 61 57 63 81 82	WGGGSTDVGCNAPL
1630	LSLEEEQKPFPK	9	75	722.8882	2	20.721	0.6	51 54 87 97 97 84 52 52 56 91 96 81	LSLEEEQKPFPK
1439	MAGLVPFPPVAGAA	10.5	75	649.355	2	18.715	4.3	66 70 79 96 93 88 88 88 64 52 52 63 67 79	MAGLVPFPPVAGAA
2030	MLNM(+15.99)ALVPA	6.8	75	488.2536	2	25.328	-0.3	76 65 54 65 65 97 83 83 83	MLNM(+15.99)ALVPA
2044	NNKLECVLTK	7.5	75	581.3189	2	25.493	0.8	69 74 74 90 80 69 68 84 89 50	NNKLECVLTK
855	QVETEQTELSK	8.3	75	646.3224	2	12.442	0	72 71 94 90 86 56 60 60 80 89 63	QVETEQTELSK
1596	MWAPAGEELEAEVKA	11.3	75	815.8935	2	20.363	1	52 52 52 66 67 72 80 95 97 97 97 92 71 72 58	MWAPAGEELEAEVKA
3653	MDPLFLK	5.3	75	432.238	2	44.827	-0.8	50 94 90 91 70 72 56	MDPLFLK
1774	SVLGSSLGPV	7.5	75	458.2606	2	22.312	-0.7	50 92 85 74 73 85 82 79 77 50	SVLGSSLGPV
2034	YTESLEV	5.3	75	840.3961	1	25.367	-2.8	50 89 84 86 73 74 67	YTESLEV
1790	TTPLW	3.8	75	617.3292	1	22.51	-0.3	76 76 76 95 50	TTPLW
2429	LSDVGNSYA	6.8	75	463.2169	2	30.137	0.5	50 98 98 96 96 61 57 61 55	LSDVGNSYA
1582	LELLVGTMPV	7.5	75	536.3093	2	20.217	-0.3	73 81 95 95 63 62 61 67 66 84	LELLVGTMPV
1157	DGQGSEVDNEGVK	9.8	75	667.2972	2	15.683	0.4	58 58 60 82 89 90 91 89 80 86 67 68 51	DGQGSEVDNEGVK
2087	FNVGGFVNKAPKK	9.8	75	703.4001	2	25.999	-1.3	51 51 51 87 81 75 83 77 90 90 90 92 50	FNVGGFVNKAPKK

3299	TSLEPGPVDA	7.5	75	985.4833	1	40.594	-0.4	57 64 82 96 61 61 62 88 88 88	TSLEPGPVDA
1376	QMSGQEGGTAVLAPSMK	12.8	75	846.4103	2	18.038	2.6	65 64 64 80 89 98 96 92 67 56 58 95 76 68 64 72 63	QMSGQEGGTAVLAPSMK
2154	M(+15.99)ENDVKSTAYLF	9	75	717.3325	2	26.788	-2.7	95 94 87 89 86 83 66 63 64 56 55 56	M(+15.99)ENDVKSTAYLF
664	DDNGAPHLA	6.8	75	455.2066	2	10.19	-0.2	50 99 97 95 92 89 50 50 50	DDNGAPHLA
621	TSKSTTNHA	6.8	75	473.7322	2	9.641	-1.9	63 65 85 89 82 82 67 78 60	TSKSTTNHA
3246	WPPVDFTLAVLSPNPY	12	75	908.4734	2	39.957	4.4	72 72 72 92 89 78 68 67 61 64 84 81 81 76 77 62	WPPVDFTLAVLSPNPY
4044	VFDKEGNGTMV	8.3	75	598.7854	2	49.606	1.7	95 93 82 71 61 62 66 82 69 70 70	VFDKEGNGTMV
2650	LKDSGTPL	6	75	415.7344	2	32.827	-0.3	89 87 81 72 66 74 77 50	LKDSGTPL
897	FRVVMECAEER	8.3	75	456.8845	3	12.911	-0.7	50 50 53 75 75 96 99 99 75 75 75	FRVVMECAEER
1200	AEERSDVYDL	7.5	75	598.7766	2	16.135	2.5	50 50 74 72 72 76 81 97 97 78	AEERSDVYDL
887	YLAGGANPAGGACGV	11.3	75	639.3021	2	12.796	2.2	68 70 75 70 75 82 78 88 90 75 66 66 70 71 73	YLAGGANPAGGACGV
1071	CHLTM(+15.99)VF	5.3	75	866.3893	1	14.798	-0.6	50 97 92 78 78 76 50	CHLTM(+15.99)VF
1222	ALNQASMPDYVW	9	75	697.8251	2	16.371	1.6	54 53 59 58 62 61 79 87 92 94 98 98	ALNQASMPDYVW
1787	LVARAKRPL	6.8	75	512.3439	2	22.465	2	74 72 64 70 72 79 89 90 63	LVARAKRPL
1730	LGVLDLA	5.3	75	700.4259	1	21.827	2.8	72 73 78 74 75 86 64	LGVLDLA
2170	LLKDPEATSGLKK	9.8	75	467.2769	3	26.986	0.6	60 69 67 72 77 95 88 78 71 75 80 88 50	LLKDPEATSGLKK
761	ELSGQETSA	6.8	75	921.4158	1	11.363	-0.2	84 61 58 60 62 72 86 92 95	ELSGQETSA
2984	YAAPPDVAGNVDYK	10.5	75	740.3598	2	36.822	0.7	51 51 55 89 50 97 95 94 76 63 81 82 86 73	YAAPPDVAGNVDYK
4109	VDEDLKSELK	7.5	75	588.3113	2	50.385	0	88 88 88 76 62 63 79 70 75 56	VDEDLKSELK
827	M(+15.99)GGNEDESNPK	8.2	75	597.2407	2	12.122	0.3	61 62 90 88 96 98 86 67 60 63 50	M(+15.99)GGNEDESNPK
2096	MLGM(+15.99)GALVPA	7.5	75	488.2538	2	26.115	0.3	80 78 71 52 52 64 93 85 85 85	MLGM(+15.99)GALVPA
1558	DLM(+15.99)TPDQMEDYRSL	10.5	75	865.3731	2	19.957	-1	66 67 81 94 74 74 71 89 94 97 77 53 54 51	DLM(+15.99)TPDQMEDYRSL
1230	ATAELVCEAGV	8.2	75	531.76	2	16.451	-0.8	54 72 79 95 93 75 73 68 65 72 73	ATAELVCEAGV
3071	DNAGSEVDGLDNK	9.7	75	667.2969	2	37.852	-0.1	57 60 71 93 92 93 96 92 73 58 59 61 63	DNAGSEVDGLDNK
1484	WGLLPVYDKA	7.5	75	581.3193	2	19.193	0.9	54 54 74 95 96 50 96 82 72 72	WGLLPVYDKA
1379	TSLVPAPDDA	7.5	75	985.4839	1	18.062	0.3	68 65 85 80 80 80 50 92 95 50	TSLVPAPDDA
3899	M(+15.99)TNMKYMGLCSR	9	75	725.8208	2	47.826	2.3	77 77 71 86 85 70 63 71 72 86 87 50	M(+15.99)TNMKYMGLCSR
3454	QDLDDPLVA	6.7	75	985.4837	1	42.437	0.1	65 86 88 86 55 55 72 81 81	QDLDDPLVA
2886	STLVEPDPGA	7.5	75	985.4846	1	35.625	0.9	68 68 85 82 82 87 77 71 74 50	STLVEPDPGA
1613	LNYPKTADPVSGPL	10.5	75	736.3925	2	20.543	-0.8	56 55 81 95 86 82 86 84 86 87 76 54 54 59	LNYPKTADPVSGPL
2655	TPRGRAGAYLPL	9	75	424.5786	3	32.889	-0.6	70 68 66 72 79 86 91 93 87 58 73 50	TPRGRAGAYLPL

3539	M(+15.99)TLHDEVMNTML	9	75	725.8204	2	43.453	-2.6	70 72 91 85 86 93 92 77 65 53 56 50	M(+15.99)TLHDEVMNTML
2565	QDLLDPDVA	6.7	75	985.4828	1	31.792	-0.9	60 72 83 80 65 66 85 80 80	QDLLDPDVA
1686	WTEPPLLDGGSK	9	75	650.3325	2	21.339	-0.1	52 95 89 99 65 79 92 90 72 57 51 50	WTEPPLLDGGSK
2198	LQEGVEDI	6	75	902.4457	1	27.327	-0.9	79 60 61 74 87 88 95 50	LQEGVEDI
728	SAETGSLEL	6.7	75	453.7245	2	10.981	0.5	74 78 93 95 66 59 65 86 51	SAETGSLEL
815	FENNVEEFQGPL	9	75	474.8882	3	11.985	-2.4	77 74 62 60 63 94 99 96 80 56 56 72	FENNVEEFQGPL
1112	QQNLESEVDNEK	9	75	716.8311	2	15.232	-0.1	54 53 53 67 89 78 79 95 96 73 85 68	QQNLESEVDNEK
1043	GS(+79.97)VLTAL	5.2	75	740.3609	1	14.501	2.6	75 75 75 90 78 77 50	GS(+79.97)VLTAL
2912	FEPGEEKAPLLK	9	75	679.3715	2	35.951	-0.2	97 97 95 87 81 78 77 68 57 52 52 50	FEPGEEKAPLLK
2285	MPGHALEGTAR	8.2	75	570.285	2	28.377	0.1	75 70 74 81 86 89 85 76 56 55 69	MPGHALEGTAR
3483	WVLACGVDL	6.7	75	488.2532	2	42.786	2.4	50 96 91 79 67 62 58 78 87	WVLACGVDL
2124	NLEVSLK	5.2	75	401.7368	2	26.434	-0.5	50 99 97 97 57 68 52	NLEVSLK
706	QPS(+79.97)RCNNKQL	7.5	75	634.2855	2	10.71	2	77 77 77 84 83 89 88 56 58 52	QPS(+79.97)RCNNKQL
2126	LLDLLAGATEQK	9	75	424.578	3	26.465	-0.7	87 74 75 85 79 75 81 86 72 59 59 59	LLDLLAGATEQK
3148	TM(+15.99)LQPAEYDL	7.5	75	598.78	2	38.783	2.1	60 59 73 74 84 84 50 94 94 71	TM(+15.99)LQPAEYDL
2007	EVHWPW	4.5	75	427.2032	2	25.056	-0.1	50 50 50 98 98 98	EVHWPW
3568	LLDSKKDEPV	7.5	75	572.3167	2	43.803	0.6	88 88 88 64 54 58 71 79 74 74	LLDSKKDEPV
1245	S(+79.97)QPLDGNGA	6.7	75	938.36	1	16.618	-1.6	90 74 89 91 80 74 66 52 50	S(+79.97)QPLDGNGA
2450	LYPPVVEEVGQK	8.9	75	679.3735	2	30.396	2.7	77 79 96 99 50 76 76 75 72 70 60 58	LYPPVVEEVGQK
2174	GTDKVEDM(+15.99)KEA	8.2	75	619.7812	2	27.04	-1.3	55 63 72 81 94 97 94 83 59 56 58	GTDKVEDM(+15.99)KEA
660	M(+15.99)PLCDV	4.5	75	693.2934	1	10.138	-1.8	72 72 72 76 76 76	M(+15.99)PLCDV
2972	DLDQVVSELK	7.5	75	573.306	2	36.678	0.1	59 87 93 57 58 59 93 84 86 65	DLDQVVSELK
2426	WVLAMAGDL	6.7	75	488.2531	2	30.104	2.3	50 98 96 78 66 59 59 72 87	WVLAMAGDL
1755	DFGMDL	4.5	75	697.2867	1	22.099	0.9	50 50 88 90 93 73	DFGMDL
3742	HRAEAGYS(+79.97)HLMV	8.9	74	725.8198	2	45.912	1.9	75 64 66 74 70 66 70 90 86 81 85 61	HRAEAGYS(+79.97)HLMV
1845	NSYESGVNTGNPL	9.7	74	676.3109	2	23.13	1.5	73 79 91 90 89 91 60 53 54 63 59 75 84	NSYESGVNTGNPL
4020	FAQSSGGCAGVSPA	10.4	74	619.7803	2	49.316	5.1	80 82 70 91 86 73 81 83 63 59 56 65 74 74	FAQSSGGCAGVSPA
2610	QVHCCNGSTNY	8.2	74	409.1619	3	32.334	-0.9	75 59 60 65 87 76 84 84 80 78 66	QVHCCNGSTNY
3167	GFTSAAETVGL	8.2	74	526.7663	2	39.01	-0.5	77 81 92 80 68 65 55 57 61 85 92	GFTSAAETVGL
2201	NLEVTVK	5.2	74	401.7363	2	27.355	-2	50 98 86 86 69 71 57	NLEVTVK
4194	DEGSDGGHEY	7.4	74	533.1901	2	51.425	-2.3	69 63 60 62 67 72 80 87 90 90	DEGSDGGHEY

4045	LTEDQLSELK	7.4	74	588.3114	2	49.616	0.1	80 83 96 67 54 56 67 84 86 65	LTEDQLSELK
3580	DALLW	3.7	74	617.3294	1	43.951	0.2	64 63 77 97 69	DALLW
682	VVRGAGESI	6.7	74	444.25	2	10.418	-1.9	50 62 61 68 92 91 94 97 50	VVRGAGESI
762	HGQPGHESA	6.7	74	919.3995	1	11.372	-2.3	92 91 77 79 83 50 71 50 71	HGQPGHESA
4039	WNGSTDVGGCGAPL	10.4	74	667.2971	2	49.543	2	77 72 90 85 81 86 86 92 82 54 56 54 60 60	WNGSTDVGGCGAPL
1156	EETLPHMMV	6.7	74	543.7513	2	15.675	-0.3	95 93 92 92 93 50 50 50 50	EETLPHMMV
2866	YPPVEEVGAGKV	8.9	74	622.8296	2	35.39	-0.1	96 96 94 91 89 78 61 56 57 59 54 55	YPPVEEVGAGKV
2946	MELDVESGAGEM(+15.99)AVSK	11.9	74	834.8764	2	36.352	0	59 59 79 84 77 83 93 76 66 66 71 70 76 70 73 79	MELDVESGAGEM(+15.99)AVSK
1096	ELLEMPK	5.2	74	430.2334	2	15.057	0.1	73 73 95 95 67 61 53	ELLEMPK
1228	LEPTSAATL	6.7	74	902.4814	1	16.432	-1.6	50 50 82 82 88 96 69 69 77	LEPTSAATL
1349	KGSVLPDSMGGLDNKK	11.9	74	823.4307	2	17.74	-2.1	61 66 71 89 99 97 88 60 58 63 76 81 85 62 68 56	KGSVLPDSMGGLDNKK
2289	VM(+15.99)CGNWKLMV	7.4	74	598.7858	2	28.432	1.5	50 50 91 91 83 90 78 69 85 50	VM(+15.99)CGNWKLMV
2992	LQGEVEDL	5.9	74	902.446	1	36.913	-0.5	67 60 66 69 89 92 97 50	LQGEVEDL
3863	LLAVMPAAGVCVK	9.6	74	424.5781	3	47.383	-1.2	94 94 69 66 65 65 69 84 78 71 67 73 65	LLAVMPAAGVCVK
1460	MALAPLAGMA	7.4	74	945.4896	1	18.942	-0.1	75 74 89 75 64 55 58 66 87 96	MALAPLAGMA
3506	YLPGEEVPTPKK	8.9	74	679.3718	2	43.061	0.2	84 85 93 75 72 72 74 72 64 67 78 50	YLPGEEVPTPKK
2164	VDLFLVRGLLLEY(+79.97)W	10.4	74	605.9865	3	26.912	0.3	70 70 83 79 83 82 81 63 63 84 83 67 57 67	VDLFLVRGLLLEY(+79.97)W
1306	WTPHLVDGLSAVCL	10.4	74	504.2637	3	17.284	2.8	78 72 75 50 76 72 75 79 89 80 78 68 68 70	WTPHLVDGLSAVCL
1781	FDLAPCSLGAASEA	10.4	74	676.3119	2	22.394	-2.4	50 76 74 74 93 91 78 74 71 66 73 71 74 67	FDLAPCSLGAASEA
3894	NKTTKCVVY(+79.97)K	7.4	74	632.3135	2	47.761	2.5	66 66 82 68 67 66 67 70 92 92	NKTTKCVVY(+79.97)K
1830	YPGLPSVETCTW	8.9	74	676.8131	2	22.952	-0.1	70 72 71 75 87 91 86 86 61 56 77 50	YPGLPSVETCTW
2608	LEAGEQLDNAGL	8.9	74	615.3047	2	32.313	1.2	71 71 75 74 78 80 96 94 69 56 57 64	LEAGEQLDNAGL
1127	ESDLVQVGA	6.7	74	917.4578	1	15.376	0.5	52 52 70 92 89 61 73 86 87	ESDLVQVGA
1332	CTVMPDVGF	6.7	74	968.4204	1	17.556	-1.2	91 91 91 95 95 50 50 50 50	CTVMPDVGF
1744	DFETSGALI	6.7	74	952.4617	1	21.964	-0.5	50 50 98 96 90 76 71 80 50	DFETSGALI
3224	QRGCTGGPALDL	8.9	74	594.2953	2	39.699	-0.2	62 61 64 70 70 74 89 77 78 89 93 56	QRGCTGGPALDL
821	VQHELEEA	5.9	74	954.4518	1	12.05	-0.8	84 84 90 90 90 50 50 50	VQHELEEA
1212	NKAPCR	4.4	74	688.3539	1	16.261	-2.8	78 80 89 94 50 50	NKAPCR
2000	VAFTPVACL	6.7	74	920.4921	1	24.975	1.2	60 60 88 50 84 85 77 79 79	VAFTPVACL
3018	FGPDHRSVA	6.7	74	985.4828	1	37.217	-2.2	50 90 84 87 50 50 84 84 84	FGPDHRSVA
773	EVTESVDGLK	7.4	74	538.7767	2	11.498	-0.8	67 70 94 91 84 60 56 55 81 78	EVTESVDGLK

1145	KNQWVI	4.4	74	394.226	2	15.566	-1.8	50 89 88 78 86 50	KNQWVI
2838	MVMEPLDV	5.9	74	933.4406	1	35.05	-1.6	50 90 90 90 63 71 84 50	MVMEPLDV
1292	CRLPGEDI	5.9	74	902.4413	1	17.14	1.4	63 65 81 75 77 87 90 50	CRLPGEDI
578	ASSGKEDENKT(+79.97)A	8.9	74	658.7703	2	9.09	-2.5	56 56 80 83 83 92 94 72 70 72 62 61	ASSGKEDENKT(+79.97)A
2264	LQEGVEDI	5.9	74	902.4459	1	28.13	-0.7	76 61 62 66 85 91 97 50	LQEGVEDI
3677	Y(+79.97)ET(+79.97)GSMYM(+15.99)Y	6.7	74	660.6821	2	45.114	-2.3	50 74 71 69 70 82 85 70 90	Y(+79.97)ET(+79.97)GSMYM(+15.99)Y
3651	VWEDLKS(+79.97)LLLQGHW	10.3	74	902.4467	2	44.804	1.8	50 70 73 71 79 83 65 66 87 89 81 76 88 50	VWEDLKS(+79.97)LLLQGHW
1329	GQTVPQVNNSVTGLAK	11.8	74	806.9366	2	17.527	0.5	51 51 59 91 92 79 93 80 80 85 81 55 54 67 72 84	GQTVPQVNNSVTGLAK
4118	FNAAT(+79.97)LPGTELCHSK	11.1	74	834.8759	2	50.49	-0.3	66 59 61 74 81 84 76 78 82 77 83 92 90 50 50	FNAAT(+79.97)LPGTELCHSK
2820	GTFPPDVA	5.9	74	803.3935	1	34.828	0.2	64 64 80 91 91 67 65 65	GTFPPDVA
2146	YPVAEEVVNPK	8.1	74	622.8293	2	26.7	-0.6	50 96 68 68 74 90 89 75 64 82 50	YPVAEEVVNPK
2759	WDGFALGPL	6.6	74	488.25	2	34.097	-0.7	74 72 78 85 90 90 61 61 50	WDGFALGPL
1937	LLPVLYPTLGLAALYYK	12.6	74	954.5634	2	24.209	-2.6	50 70 70 97 97 98 93 57 52 53 73 77 85 87 67 60 61	LLPVLYPTLGLAALYYK
3346	MPKLVPYDKA	7.4	74	581.3189	2	41.151	-2.5	60 56 60 80 93 98 96 71 60 59	MPKLVPYDKA
2283	FELDEGASPLDF	8.9	74	670.308	2	28.357	2.7	91 86 81 81 77 61 56 57 71 85 85 50	FELDEGASPLDF
2470	FSPEEI	4.4	74	721.3391	1	30.632	-1.7	50 97 97 97 50 50	FSPEEI
2478	YPPNGGCVTKHA	8.9	74	622.2968	2	30.721	-2.1	97 97 89 69 67 64 71 68 68 67 68 54	YPPNGGCVTKHA
3028	FLLTPS(+79.97)LFSEHA	8.9	74	721.3406	2	37.341	-1.6	73 73 65 61 64 50 93 88 86 86 91 50	FLLTPS(+79.97)LFSEHA
1991	QTNSPGTAPPRDL	9.6	74	677.34	2	24.858	-2.2	64 71 62 65 72 64 66 75 82 91 88 89 65	QTNSPGTAPPRDL
2648	LYPPVVEEVGQK	8.9	74	679.3716	2	32.807	0	79 80 96 99 50 74 75 73 73 63 62 54	LYPPVVEEVGQK
3498	MMVLELK	5.2	74	432.2403	2	42.956	0.6	50 50 96 93 81 82 62	MMVLELK
674	YPMCNV	4.4	74	726.2936	1	10.322	-1.8	50 86 87 86 80 50	YPMCNV
3569	MSQM(+15.99)DEVAGVR	8.1	74	619.7804	2	43.813	2.5	68 67 66 92 93 87 66 64 63 67 73	MSQM(+15.99)DEVAGVR
2159	FLAGNGCL	5.9	74	397.6967	2	26.849	-0.4	50 98 95 90 83 54 54 60	FLAGNGCL
712	GDSGQEDEFACR	8.8	74	657.2563	2	10.786	-0.7	56 68 81 93 85 96 98 50 50 70 74 58	GDSGQEDEFACR
2302	KPAGSGDSEVDNEK	10.3	74	716.8302	2	28.594	-1.3	50 56 63 85 90 80 81 67 66 86 90 69 80 64	KPAGSGDSEVDNEK
2721	LLDLLAGAVGDSK	9.6	74	424.5779	3	33.681	-1	66 66 71 79 75 73 84 86 86 78 59 60 69	LLDLLAGAVGDSK
2607	KDGGSEVDNEGNL	9.6	74	667.2976	2	32.303	1	52 52 57 89 94 95 96 94 77 82 56 58 51	KDGGSEVDNEGNL
4223	LKNNWR	4.4	74	415.7346	2	51.781	-1.5	78 77 85 84 65 50	LKNNWR
2826	MFNPSLVALRGLTSYF	11.8	74	908.4759	2	34.9	-0.9	70 70 66 75 92 92 72 73 86 85 81 70 66 58 58 59	MFNPSLVALRGLTSYF
3633	LLRRKPV	5.2	74	441.307	2	44.584	2.8	86 86 86 61 60 82 50	LLRRKPV

2169	KVGNAAPGCEGGK	9.6	74	594.2949	2	26.974	-0.9	65 67 74 73 84 71 67 75 71 70 71 77 83	KVGNAAPGCEGGK
953	MVVCHCAADLAMV	9.6	74	681.805	2	13.527	-0.7	76 77 61 63 61 65 68 70 64 67 92 94 92	MVVCHCAADLAMV
1456	NQLADM(+15.99)I	5.2	74	820.3877	1	18.895	1	69 74 91 88 90 50 50	NQLADM(+15.99)I
3927	FESLTYMMPVDI	8.8	74	723.3375	2	48.182	-1	70 70 70 85 71 65 85 75 89 97 50 50	FESLTYMMPVDI
826	LGDVKNNPI	6.6	74	485.2716	2	12.11	-0.3	50 50 52 70 73 84 93 96 90	LGDVKNNPI
1888	VHVKSDGVPNDPF	9.6	73	705.8553	2	23.638	1.6	50 50 50 92 91 88 88 86 63 60 62 82 86	VHVKSDGVPNDPF
3030	EMLDNLTDGELGM(+15.99)SK	11	73	834.8777	2	37.364	1.5	67 65 82 72 66 73 71 72 81 82 82 73 68 70 70	EMLDNLTDGELGM(+15.99)SK
1967	MPGGKYHW	5.9	73	488.2289	2	24.569	0	79 75 77 65 64 73 66 85	MPGGKYHW
2411	YPPVVESTPQK	8.1	73	622.8302	2	29.908	0.9	98 98 98 50 50 89 77 69 57 58 57	YPPVVESTPQK
2075	FLT(+79.97)GVHNPPQPF	8.8	73	717.3325	2	25.861	-2.5	50 89 85 82 77 83 78 81 69 59 64 60	FLT(+79.97)GVHNPPQPF
4130	KNAAHLPGLAPL	8.8	73	601.3555	2	50.635	-1	77 78 88 82 73 64 70 68 70 56 74 76	KNAAHLPGLAPL
971	FAAGAEGAEEEEEK	10.3	73	733.8171	2	13.726	-0.8	50 95 50 91 95 91 84 83 89 50 50 68 68 57	FAAGAEGAEEEEEK
1968	VAFPSLVGV	6.6	73	888.5175	1	24.58	-1.6	62 62 86 50 50 88 82 88 89	VAFPSLVGV
2536	FSPEEI	4.4	73	721.3398	1	31.435	-0.6	50 96 96 96 50 50	FSPEEI
3045	ASDQVEDFQTV	8.1	73	619.7806	2	37.545	0.5	54 56 70 66 90 97 95 95 58 63 58	ASDQVEDFQTV
2430	MALAALMGPA	7.3	73	473.248	2	30.146	-0.9	89 88 93 91 65 61 57 63 71 50	MALAALMGPA
1961	VM(+15.99)YPAEGAPVF	8.1	73	598.785	2	24.499	-2.3	50 50 93 79 77 73 72 77 78 80 73	VM(+15.99)YPAEGAPVF
2002	S(+79.97)PVLEV	4.4	73	723.3387	1	24.994	8.8	50 50 98 80 80 78	S(+79.97)PVLEV
1048	VEKNKDPLNDSV	8.8	73	679.3513	2	14.556	-0.3	59 56 59 82 79 79 83 80 64 67 81 85	VEKNKDPLNDSV
759	FHSAGGAWA	6.6	73	903.41	1	11.342	-0.9	57 59 60 90 95 70 73 76 76	FHSAGGAWA
749	AEMKEWLA	5.9	73	977.4788	1	11.222	2.8	50 80 79 82 83 66 82 61	AEMKEWLA
2448	TGFPPDVA	5.9	73	803.3926	1	30.363	-0.9	69 69 84 93 93 61 57 57	TGFPPDVA
1805	M(+15.99)MNPPLPF	5.9	73	962.4462	1	22.667	-1.3	88 87 78 88 91 50 50 50	M(+15.99)MNPPLPF
1772	ESLDYKPLML	7.3	73	604.8135	2	22.294	-2.6	62 62 92 96 70 60 78 74 79 57	ESLDYKPLML
526	NPHT(+79.97)GSCGVVPCA	9.5	73	661.2581	2	8.36	1.8	54 59 73 67 62 65 92 92 92 76 71 71 73	NPHT(+79.97)GSCGVVPCA
1020	MEAWKPAK	5.9	73	480.7526	2	14.249	0.9	50 98 93 88 77 56 65 56	MEAWKPAK
778	ELGEASDA	5.9	73	791.341	1	11.559	-0.8	74 74 88 69 67 72 89 50	ELGEASDA
2318	LYPPAFGAKHTR	8.8	73	679.3727	2	28.794	0.4	81 82 96 99 80 81 68 67 57 56 56 50	LYPPAFGAKHTR
708	M(+15.99)EYEVLQDAW	7.3	73	650.2808	2	10.733	-1.3	50 50 88 88 90 93 81 63 72 52	M(+15.99)EYEVLQDAW
3622	NM(+15.99)GGARAPGLEV	8.8	73	594.2952	2	44.45	-0.5	71 75 73 75 77 75 70 71 80 90 58 59	NM(+15.99)GGARAPGLEV
1242	YNAS(+79.97)SEGGGKK	8.1	73	1177.491	1	16.579	1.7	82 74 84 86 66 56 55 63 70 81 82	YNAS(+79.97)SEGGGKK

3424	FNCRDCLCLLNK	8.8	73	721.3405	2	42.073	-0.8	76 60 60 60 81 87 94 95 79 64 64 53	FNCRDCLCLLNK
3244	ASDGAVEDFKEA	8.8	73	619.7803	2	39.936	-0.1	56 58 69 69 72 86 94 92 92 69 60 58	ASDGAVEDFKEA
1960	KLVPGDPAYLPL	8.8	73	641.8738	2	24.489	0	73 70 80 88 75 69 63 58 65 81 93 57	KLVPGDPAYLPL
1829	T(+79.97)HPLVLLDDTW	8.1	73	695.3257	2	22.942	-0.6	84 84 50 50 62 89 88 85 83 76 50	T(+79.97)HPLVLLDDTW
3682	MPGLCKVDI	6.6	73	488.2537	2	45.18	-0.1	64 81 85 96 80 60 61 77 50	MPGLCKVDI
1660	TPGAVPTLV	6.6	73	854.4978	1	21.058	-0.4	82 84 82 71 77 77 65 65 50	TPGAVPTLV
867	NVQGQL	4.4	73	658.3516	1	12.575	-0.5	50 95 82 81 67 62	NVQGQL
2960	CPHKAYAGLDL	8	73	594.2968	2	36.532	-1	50 68 64 66 73 81 81 84 89 94 50	CPHKAYAGLDL
1799	FLEQGGSCKAFI	8.8	73	650.3242	2	22.603	0.8	81 64 63 56 79 84 66 72 72 92 93 50	FLEQGGSCKAFI
851	KAEPAPEPV	6.6	73	469.2528	2	12.394	-0.5	68 68 81 50 50 50 96 96 96	KAEPAPEPV
1412	DASEELNL	5.8	73	890.4094	1	18.431	-0.9	81 81 79 84 84 60 60 51	DASEELNL
846	EGANFTAPSEK	8	73	384.1848	3	12.335	2.1	55 58 67 64 77 80 82 83 78 78 76	EGANFTAPSEK
2031	LLPVLYPLATELYYK	11	73	898.5146	2	25.339	-1.3	50 71 71 98 98 99 93 70 54 55 69 82 59 60 60	LLPVLYPLATELYYK
1040	WVEPTESVDNEKR	9.5	73	530.2596	3	14.476	2.5	50 66 64 64 65 71 79 97 97 80 73 74 63	WVEPTESVDNEKR
1512	KKVGFDSVSTPERK	10.2	73	789.438	2	19.469	2.8	62 69 68 75 79 78 83 83 88 91 85 53 53 51	KKVGFDSVSTPERK
1625	QELSDLTEQI	7.3	73	1175.579	1	20.667	-0.5	53 55 71 94 89 84 81 64 70 64	QELSDLTEQI
2988	WLLFCPGVLW	7.3	73	617.3295	2	36.861	2.4	64 64 56 81 85 80 76 80 90 50	WLLFCPGVLW
732	KQVETEQTELK	8	73	666.8538	2	11.018	-0.1	76 70 92 95 64 63 56 67 70 83 62	KQVETEQTELK
1077	SKLEEDGASLGAAGLQKK	13.1	73	601.3273	3	14.858	1.2	56 57 72 79 70 67 61 67 90 95 92 92 88 82 73 55 58 50	SKLEEDGASLGAAGLQKK
3308	LYPGVMRAPPTR	8.8	73	679.3741	2	40.706	0	79 80 92 84 79 78 80 77 71 50 50 50	LYPGVMRAPPTR
1618	LTTVGPAPL	6.6	73	868.514	1	20.596	0.3	65 70 88 90 83 74 84 50 50	LTTVGPAPL
1563	QEKLFSGEGYGMEKEK	11.7	73	620.6341	3	20.014	1.9	50 51 51 80 89 91 95 93 69 62 72 93 91 60 60 53	QEKLFSGEGYGMEKEK
666	TEM(+15.99)YVQTK	5.8	73	508.2406	2	10.211	-2.5	72 72 72 75 75 65 80 67	TEM(+15.99)YVQTK
1104	DLKNQDLPNGSVVK	10.2	73	763.9122	2	15.136	-0.1	80 78 65 76 64 93 63 63 60 73 79 82 90 50	DLKNQDLPNGSVVK
1239	SSNKLLPV	5.8	73	429.259	2	16.556	2	50 50 85 77 79 95 95 50	SSNKLLPV
2652	QKANGMATGPGLLSPNFI	13.1	73	908.4726	2	32.845	-2.3	53 53 58 66 69 68 59 59 66 88 90 91 94 91 77 74 75 74	QKANGMATGPGLLSPNFI
2278	NNAGGCGVDNEKR	9.5	73	667.299	2	28.293	-0.5	72 67 56 55 55 81 93 95 95 67 70 72 63	NNAGGCGVDNEKR
2414	FELSAGETEM(+15.99)PL	8.8	73	670.3084	2	29.952	0.7	89 87 79 53 52 54 61 73 94 86 71 71	FELSAGETEM(+15.99)PL
2566	LELELGAVW	6.6	73	515.2859	2	31.802	3.1	53 70 96 87 83 74 62 64 63	LELELGAVW
3833	FGKYPVPEPK	7.3	73	581.3188	2	47.019	0.1	56 57 65 90 95 89 89 64 65 55	FGKYPVPEPK
2483	AQSGGS(+79.97)SK	5.8	73	401.16	2	30.783	-1.3	84 72 86 87 80 70 50 50	AQSGGS(+79.97)SK

1500	ACRTEVRPGGA	8	73	1116.558	1	19.338	0	66 69 65 66 67 94 81 71 75 94 50	ACRTEVRPGGA
1884	M(+15.99)GMVLASSSNGGK	9.5	73	627.795	2	23.586	0.9	57 58 64 84 80 77 82 87 82 68 64 69 70	M(+15.99)GMVLASSSNGGK
1325	LGDLSKDDL	6.6	73	975.4987	1	17.481	-0.6	86 82 72 84 91 62 62 62 50	LGDLSKDDL
3880	VSVLAM(+15.99)GPW	6.6	73	488.2528	2	47.596	1.5	63 63 71 97 75 70 77 87 50	VSVLAM(+15.99)GPW
4158	FPPDVRPPMHK	8	73	660.8481	2	50.979	0.6	88 88 88 80 80 72 51 72 80 50 50	FPPDVRPPMHK
1684	ESVLDMLK	5.8	73	467.7493	2	21.323	0	50 50 50 97 93 87 87 65	ESVLDMLK
2310	DATDGALDL	6.6	73	890.4113	1	28.689	1.2	75 74 76 65 64 70 83 90 54	DATDGALDL
3054	LDVSEAAVKV	7.3	73	515.7938	2	37.652	2.5	50 82 82 70 65 65 72 71 83 84	LDVSEAAVKV
2152	DDLEGSLESGQL	8.7	73	631.7907	2	26.769	-0.4	57 70 77 90 80 76 82 87 67 62 57 64	DDLEGSLESGQL
872	EQFEEEQEAK	7.3	73	633.7778	2	12.635	0	52 52 50 64 99 96 85 78 81 67	EQFEEEQEAK
2842	SADGAVEDFKEA	8.7	73	619.781	2	35.101	1.1	52 54 56 72 76 86 98 94 94 69 59 57	SADGAVEDFKEA
4176	DVEDKLESLK	7.3	73	588.3116	2	51.203	0.5	84 88 89 86 77 67 58 56 64 55	DVEDKLESLK
3873	S(+79.97)PNHGCDDF	6.6	73	536.1655	2	47.515	0.1	71 69 65 69 92 91 94 50 50	S(+79.97)PNHGCDDF
2882	M(+15.99)GQYPVLLPK	7.3	73	581.319	2	35.585	-2.3	62 52 52 93 97 50 91 83 84 60	M(+15.99)GQYPVLLPK
2787	LLKGRAGAYHSV	8.7	73	424.5782	3	34.443	-1.3	59 63 63 74 73 73 78 88 82 82 83 50	LLKGRAGAYHSV
2303	STLVPAPDDA	7.3	73	985.4826	1	28.605	-1.1	71 71 90 84 84 84 50 62 77 50	STLVPAPDDA
2052	LLDGSGLGPSPI	8.7	73	1125.616	1	25.584	0.8	89 90 90 89 76 74 71 67 72 50 50 50	LLDGSGLGPSPI
2094	QLLASEEML	6.6	73	1033.524	1	26.082	0.1	50 98 93 87 81 81 60 50 51	QLLASEEML
1268	EVLQVDKLK	6.6	73	357.8848	3	16.877	-0.9	53 55 57 59 94 95 93 96 50	EVLQVDKLK
4061	EPKGRAGATRTK	8.7	73	424.5782	3	49.815	1.7	77 76 70 73 74 76 84 85 80 72 50 50	EPKGRAGATRTK
4446	KVVGSK	4.4	73	309.203	2	55.017	1.1	50 90 82 82 80 50	KVVGSK
2616	GFTSGVSSTPI	8	73	526.7672	2	32.406	1.2	88 89 95 82 69 66 65 66 63 63 50	GFTSGVSSTPI
2262	WHFTTEQGPF	7.3	73	625.2875	2	28.096	3.3	50 86 81 80 77 75 60 81 84 50	WHFTTEQGPF
3317	FSVRPEGAQM(+15.99)FAADK	10.9	73	835.4038	2	40.809	0.1	88 88 88 81 82 85 76 73 71 68 63 65 51 51 51	FSVRPEGAQM(+15.99)FAADK
1697	MQNFGGHENF	7.3	73	1180.487	1	21.461	2.2	94 63 72 61 82 80 77 65 65 64	MQNFGGHENF
2697	FSVGAGGLHLDL	8.7	73	593.3174	2	33.388	1.1	79 75 70 56 57 69 65 67 87 91 94 57	FSVGAGGLHLDL
2624	WVLAMGADL	6.5	73	488.2532	2	32.513	2.4	50 98 95 76 63 56 56 72 83	WVLAMGADL
1911	MPNGGVY(+79.97)	5.1	73	409.1502	2	23.904	-2.2	97 93 73 71 60 62 50	MPNGGVY(+79.97)
3534	DPTGEQLDQVK	8	73	615.3038	2	43.391	-0.3	69 73 71 63 65 78 96 80 64 70 65	DPTGEQLDQVK
1377	DLDAGVELK	6.5	73	480.2561	2	18.046	0.6	50 81 73 65 65 65 83 95 74	DLDAGVELK
151	GYCCT(+79.97)GACNTF	8	73	610.1851	2	2.324	1	56 59 71 64 63 80 81 83 76 86 76	GYCCT(+79.97)GACNTF

725	DNDPDVGA	5.8	73	802.3214	1	10.935	0.1	50 91 97 98 50 63 64 65	DNDPDVGA
3558	Y(+79.97)VLLGRATELVLY(+79.97)	9.4	73	835.4048	2	43.677	1.3	50 58 75 71 55 58 70 94 95 85 69 75 86	Y(+79.97)VLLGRATELVLY(+79.97)
2724	TNVADPF	5.1	73	763.3648	1	33.71	3.6	72 67 83 89 73 61 61	TNVADPF
1402	KNKKSGAHA	6.5	73	470.7711	2	18.312	2.9	68 69 81 87 91 72 68 62 50	KNKKSGAHA
4110	VM(+15.99)DPLTNDLY	7.3	73	598.78	2	50.395	2.1	94 94 91 68 63 69 76 57 58 51	VM(+15.99)DPLTNDLY
3390	LQEGVEDL	5.8	73	902.4462	1	41.67	-0.4	68 62 65 69 81 88 94 50	LQEGVEDL
1992	LNEVTVK	5.1	73	401.737	2	24.869	-0.2	50 91 95 95 63 58 53	LNEVTVK
2388	ELGLDALFGGNK	8.7	73	617.3289	2	29.635	2.5	61 60 71 82 69 68 78 71 72 71 74 89	ELGLDALFGGNK
1695	MEMENLADEV	7.3	73	590.7471	2	21.447	0.7	90 90 95 87 72 62 60 55 59 51	MEMENLADEV
4062	M(+15.99)TDLHDVSGNMSK	9.4	73	725.8202	2	49.825	2.1	82 81 64 64 71 78 78 75 81 82 63 66 53	M(+15.99)TDLHDVSGNMSK
3084	GNGTAAAAMLGK	8.7	73	531.2728	2	38.01	-2.2	59 82 89 89 78 74 73 76 59 56 69 61	GNGTAAAAMLGK
801	AGTFALWS(+79.97)TK	7.3	73	581.2723	2	11.832	2.9	50 51 51 64 98 96 96 82 50 84	AGTFALWS(+79.97)TK
1000	MEKEEA	4.4	73	736.3198	1	14.031	2.2	94 94 95 50 50 50	MEKEEA
500	DKENGSAMV	6.5	73	475.7157	2	7.909	-0.6	54 54 78 81 77 72 71 81 81	DKENGSAMV
2846	LYPPVVELDANK	8.7	73	679.3727	2	35.156	1.5	80 81 97 99 50 79 72 69 64 61 59 54	LYPPVVELDANK
825	LNSMDA	4.4	73	650.2812	1	12.101	-0.2	83 78 90 80 50 50	LNSMDA
1012	VGAAEKELV	6.5	73	458.2608	2	14.17	-0.3	60 60 65 77 67 67 80 85 89	VGAAEKELV
3636	LLDKEVTTGPA	8	73	572.3163	2	44.616	0	94 94 93 77 75 56 55 56 66 77 50	LLDKEVTTGPA
577	M(+15.99)TTGNADPK	6.5	73	475.7151	2	9.081	-1.8	62 62 77 82 73 66 67 88 72	M(+15.99)TTGNADPK
3144	EEGANLTGFGVGL	9.4	73	632.3132	2	38.728	-1.8	92 86 77 69 66 69 72 73 76 60 58 69 70	EEGANLTGFGVGL
1426	YAPEELKCAA	7.3	73	547.763	2	18.58	0.2	50 50 50 50 96 95 95 79 72 84	YAPEELKCAA
4002	LQEGVEDL	5.8	73	902.4462	1	49.097	-0.3	75 59 62 64 84 89 93 50	LQEGVEDL
3135	M(+15.99)TLHDGNATEMSK	9.4	73	725.8199	2	38.626	1.7	73 76 93 91 90 72 57 58 65 85 61 64 51	M(+15.99)TLHDGNATEMSK
2528	LQEGVEDL	5.8	73	902.4467	1	31.343	0.2	74 62 73 76 76 77 88 50	LQEGVEDL
3790	EPSGLVSSELK	8	72	573.3055	2	46.496	-0.9	80 80 71 66 66 74 77 71 70 78 59	EPSGLVSSELK
1817	KGLMPNGMK	6.5	72	975.5134	1	22.804	2	83 85 79 81 71 61 66 73 50	KGLMPNGMK
640	EAEQF	3.6	72	623.2669	1	9.895	-0.3	50 94 91 76 50	EAEQF
1650	EMLDDLSSACA	8	72	1154.471	1	20.934	0.5	60 62 83 92 84 64 91 70 70 67 50	EMLDDLSSACA
2476	EPSGEQLGTALGA	9.4	72	615.3041	2	30.7	0.2	60 60 64 71 70 68 91 85 81 78 68 69 71	EPSGEQLGTALGA
833	YDSHEMVPLK	7.2	72	609.7956	2	12.19	1.4	50 50 85 85 86 77 77 71 81 57	YDSHEMVPLK
2573	VYGGNS(+79.97)MPL	6.5	72	509.208	2	31.885	-2.3	50 93 87 87 63 74 60 78 55	VYGGNS(+79.97)MPL

1551	WGLLVPYDKA	7.2	72	581.3192	2	19.885	0.6	55 54 60 88 50 99 98 80 68 68	WGLLVPYDKA
2069	FTYSDVMQNMSK	8.7	72	725.8196	2	25.788	-1.6	50 89 81 81 88 76 75 67 79 61 63 52	FTYSDVMQNMSK
1462	LSFHAPPR	5.8	72	462.756	2	18.957	-0.3	93 93 93 96 50 50 50 50	LSFHAPPR
2038	FELHAGRLLVL	8	72	634.3809	2	25.417	1.8	89 92 88 79 71 68 70 78 54 52 50	FELHAGRLLVL
2404	FSPEEL	4.3	72	721.3403	1	29.83	0.1	50 94 94 94 50 50	FSPEEL
3490	YYADTLTLDL	7.2	72	594.2953	2	42.867	0.4	76 78 72 58 57 55 81 88 95 60	YYADTLTLDL
475	GSCMPTPMANGA	8.7	72	568.7297	2	7.512	-1	50 50 62 59 60 85 92 93 92 84 85 50	GSCMPTPMANGA
3381	DLALSCAGKGLSV	9.4	72	617.3301	2	41.571	1.7	51 50 50 84 74 69 64 67 76 81 85 90 93	DLALSCAGKGLSV
1102	FNALGNSST(+79.97)TV	8	72	595.7567	2	15.116	-2.4	78 60 62 92 92 85 88 65 54 59 55	FNALGNSST(+79.97)TV
2582	LYPPVVEEVANK	8.7	72	679.3715	2	32.001	-0.3	79 78 96 97 50 75 76 73 70 54 63 51	LYPPVVEEVANK
2920	KNGLSEMVGLSV	8.7	72	617.329	2	36.044	0	53 61 68 86 69 66 74 65 68 79 80 93	KNGLSEMVGLSV
767	LLPKGDSA	5.8	72	400.7291	2	11.43	-0.3	50 96 82 81 75 70 70 50	LLPKGDSA
1505	LVMALAPCCI	7.2	72	1033.523	1	19.396	-1.1	50 79 76 76 91 97 99 50 50 50	LVMALAPCCI
3110	LYPGVLGDLGPEK	9.4	72	679.3713	2	38.333	-0.4	80 81 95 93 86 64 57 56 66 67 64 65 56	LYPGVLGDLGPEK
1846	KSNLDCPFDLNTL	9.4	72	740.3605	2	23.14	-0.7	51 51 51 61 83 87 97 97 92 78 66 66 53	KSNLDCPFDLNTL
1413	DNEVEPLV	5.8	72	914.4457	1	18.441	-0.9	94 88 84 71 64 72 50 50	DNEVEPLV
1271	KKPELEVGEKVMV	9.4	72	495.9484	3	16.907	-2.5	50 67 67 75 68 66 69 77 79 86 77 77 74	KKPELEVGEKVMV
596	LATDAA	4.3	72	561.2877	1	9.313	-0.3	69 65 67 66 72 92	LATDAA
2265	EDEALAGKVVK	7.9	72	579.8217	2	28.139	-0.2	50 94 93 93 80 57 63 73 86 50 50	EDEALAGKVVK
3911	GTFPPDVGNAVDYK	10.1	72	740.3588	2	47.98	-0.7	50 50 58 95 95 84 83 69 65 63 68 76 80 67	GTFPPDVGNAVDYK
1064	S(+79.97)KALPPV	5.1	72	791.4052	1	14.731	-1.4	50 94 89 84 84 50 50	S(+79.97)KALPPV
1341	SAVLPDKYGPDKNK	10.1	72	766.4091	2	17.655	-0.4	56 55 66 95 95 93 63 56 62 85 91 66 67 55	SAVLPDKYGPDKNK
3064	QMAMVTL	5.1	72	397.2001	2	37.771	-2.1	61 64 86 94 97 50 50	QMAMVTL
1062	LATDAM(+15.99)A	5.1	72	708.3237	1	14.702	0.7	64 67 87 91 92 50 50	LATDAM(+15.99)A
3233	ELLLM(+15.99)AQPV	6.5	72	515.286	2	39.806	-0.1	77 77 95 90 60 60 56 64 65	ELLLM(+15.99)AQPV
2802	FLPPMCVGGKPV	8.7	72	622.8301	2	34.616	-0.1	50 50 50 85 88 88 85 74 63 66 79 82	FLPPMCVGGKPV
2853	LLDLLAGAVGDSK	9.4	72	424.5783	3	35.235	0.1	73 73 65 61 76 81 82 84 84 69 59 59 64	LLDLLAGAVGDSK
886	EADSVAEMEQLK	8.7	72	450.5465	3	12.787	-0.1	85 80 61 57 56 69 81 95 93 61 68 54	EADSVAEMEQLK
2583	WGLLVPYDKA	7.2	72	581.319	2	32.011	0.3	56 56 72 89 50 99 98 73 62 62	WGLLVPYDKA
2088	KLLDEPATSKGLK	9.4	72	467.2769	3	26.01	0.6	57 57 77 76 78 91 87 80 64 58 60 69 77	KLLDEPATSKGLK
1694	MEELAELV	5.8	72	933.4599	1	21.44	0.2	50 50 88 86 72 67 79 81	MEELAELV

1532	MDDLEL	4.3	72	735.3213	1	19.692	-2.2	52 81 92 93 50 61	MDDLEL
2027	HELSAAHA	5.8	72	835.4042	1	25.286	-1.8	97 92 92 92 50 50 50 50	HELSAAHA
1856	WNPFMPALPNK	7.9	72	657.8383	2	23.261	2.4	66 62 69 76 98 94 84 62 64 63 50	WNPFMPALPNK
689	QEEAWSY(+79.97)FAGHR	8.6	72	780.8181	2	10.504	1.4	55 55 57 84 84 83 50 94 89 80 77 50	QEEAWSY(+79.97)FAGHR
1737	SFLPMLK	5	72	418.2409	2	21.896	-0.1	90 90 96 61 54 55 55	SFLPMLK
3480	CDKFSGEGPLW	7.9	72	619.7802	2	42.743	1.8	56 56 65 83 82 85 83 77 74 77 50	CDKFSGEGPLW
3592	MFFGLMKGLAM(+15.99)TY	9.4	72	763.365	2	44.095	-1.5	50 71 67 67 73 73 76 81 87 83 75 78 50	MFFGLMKGLAM(+15.99)TY
1752	LDLDLNKSAPA	7.9	72	578.8136	2	22.056	-0.7	79 84 90 89 56 55 57 61 81 85 50	LDLDLNKSAPA
4171	GFTSDVKEGL	7.2	72	526.767	2	51.139	0.8	61 67 77 90 76 67 66 73 79 60	GFTSDVKEGL
1722	DELGLAL	5	72	730.397	1	21.731	-1.5	50 94 89 75 67 76 50	DELGLAL
1407	THLTGWGHA	6.5	72	979.4727	1	18.369	-1.8	90 90 94 87 68 63 53 50 50	THLTGWGHA
1571	FSAPPDVAGNDV	8.6	72	594.7805	2	20.096	0.5	60 62 68 91 50 87 87 83 74 61 67 68	FSAPPDVAGNDV
1812	LALYPGHTVCALRK	10.1	72	771.4327	2	22.742	-2.5	50 60 92 96 95 84 76 75 61 60 68 64 66 53	LALYPGHTVCALRK
4070	QNEELLFENK	7.2	72	632.3135	2	49.916	-1.4	59 60 87 89 84 78 72 67 61 58	QNEELLFENK
2778	SADGAVEDFKEA	8.6	72	619.7808	2	34.327	0.7	51 53 54 65 72 89 98 96 96 65 62 57	SADGAVEDFKEA
2234	MAGGSPGRGGLEV	9.4	72	594.2954	2	27.767	-0.1	69 67 77 73 58 73 74 83 67 71 79 68 69	MAGGSPGRGGLEV
2554	LFAGCNGL	5.8	72	397.6958	2	31.646	-2.6	50 50 93 84 84 62 69 80	LFAGCNGL
3178	M(+15.99)AQM(+15.99)DEVQVR	7.2	72	619.7803	2	39.145	2.4	58 58 57 97 98 92 82 59 60 54	M(+15.99)AQM(+15.99)DEVQVR
2636	SADGAVEDFKEA	8.6	72	619.7811	2	32.661	1.3	55 56 61 68 73 85 98 95 95 61 56 54	SADGAVEDFKEA
1688	MMEEGGLDGEL	7.9	72	1180.486	1	21.369	-0.1	80 74 91 89 72 62 70 65 62 68 54	MMEEGGLDGEL
2423	Y(+79.97)LVLRGATELLVY(+79.97)	9.4	72	835.4036	2	30.06	-0.1	51 50 60 81 61 58 64 88 93 93 75 75 80	Y(+79.97)LVLRGATELLVY(+79.97)
1584	SAM(+15.99)HTAVAGPCK	8.6	72	1188.553	1	20.234	2.8	59 59 83 77 61 56 66 77 80 77 80 81	SAM(+15.99)HTAVAGPCK
656	QGRGNEDEDY	7.2	72	591.7364	2	10.097	-0.2	71 59 66 87 88 96 98 50 50 50	QGRGNEDEDY
3266	YPCLEV	4.3	72	723.3376	1	40.207	-0.8	68 68 68 74 74 74	YPCLEV
3413	WSKVEDM(+15.99)CPK	7.2	72	619.7811	2	41.938	0.5	50 50 98 98 98 98 50 71 50 50	WSKVEDM(+15.99)CPK
2050	LLDQSAGARGR	7.9	72	572.3167	2	25.564	3	96 96 95 66 62 63 67 65 64 59 50	LLDQSAGARGR
2277	DPTGEKLDNGLA	8.6	72	615.3053	2	28.283	2.1	66 69 70 75 79 91 96 93 61 52 51 52	DPTGEKLDNGLA
1883	LLTLPV	4.3	72	655.4392	1	23.577	0.6	54 55 74 97 98 50	LLTLPV
1109	YEGEQAEL	5.7	72	938.4102	1	15.193	0.1	76 71 67 69 62 79 85 61	YEGEQAEL
3003	M(+15.99)TLHDDVGSNMSK	9.3	72	725.8196	2	37.047	1.3	77 78 92 83 84 63 64 63 74 80 57 62 51	M(+15.99)TLHDDVGSNMSK
700	MFVLGVPV	5.7	72	431.2496	2	10.638	1.9	50 50 55 65 74 91 93 93	MFVLGVPV

658	QEHSRLSSGEK	7.9	72	629.3138	2	10.116	1.7	60 61 69 76 74 77 77 94 68 69 60	QEHSRLSSGEK
2805	TM(+15.99)LHDGNATEMSK	9.3	72	725.8206	2	34.658	2.6	70 73 92 87 84 75 61 59 63 86 61 64 51	TM(+15.99)LHDGNATEMSK
3780	VFDQSNVTGMV	7.9	72	598.7856	2	46.367	2.1	92 69 76 59 59 57 60 61 79 86 86	VFDQSNVTGMV
344	EDCNTY(+79.97)V	5	72	462.1459	2	5.306	-0.7	50 83 83 78 85 70 50	EDCNTY(+79.97)V
3770	LYPGVEGTLPSPK	9.3	72	679.3719	2	46.25	0.4	76 77 94 85 67 59 59 62 78 82 64 69 56	LYPGVEGTLPSPK
1895	DLGVTAPVI	6.5	72	884.5088	1	23.72	0.1	95 92 86 74 72 59 55 57 50	DLGVTAPVI
2300	LMCPASGPALDL	8.6	72	594.2952	2	28.575	2.8	53 53 68 78 68 67 75 73 78 90 94 59	LMCPASGPALDL
4241	GY(+79.97)GSCHCNCM(+15.99)Y	7.9	72	667.1772	2	52.003	-2.6	50 79 89 94 50 85 82 79 62 63 50	GY(+79.97)GSCHCNCM(+15.99)Y
1091	T(+79.97)LNPAM(+15.99)PCR	6.5	72	549.7257	2	15.005	-2.8	61 89 64 83 81 77 86 50 50	T(+79.97)LNPAM(+15.99)PCR
2157	VFDGSLGNGTMV	8.6	72	598.7853	2	26.83	1.6	97 96 92 67 59 61 73 71 70 55 56 56	VFDGSLGNGTMV
3015	VM(+15.99)CGNWKLMV	7.2	72	598.7852	2	37.186	0.5	50 50 93 90 68 74 74 72 91 50	VM(+15.99)CGNWKLMV
2871	M(+15.99)TLHDGNTAESMK	9.3	72	725.8205	2	35.453	2.5	75 77 92 86 83 75 62 56 57 87 61 62 51	M(+15.99)TLHDGNTAESMK
1767	EEDVVEI	5	72	832.3938	1	22.234	0.4	50 95 82 82 71 50 68	EEDVVEI
4099	MGVFGGVVTW	7.2	72	526.7668	2	50.26	2.8	92 92 95 74 78 62 60 57 50 50	MGVFGGVVTW
2534	YPCLDL	4.3	72	723.3378	1	31.416	-0.4	70 70 70 98 50 69	YPCLDL
4049	DSGNDLAGPLTVA	9.3	72	615.3035	2	49.669	-0.8	67 69 74 78 91 90 83 78 74 67 53 51 51	DSGNDLAGPLTVA
820	CNKKESEEQLSGA	9.3	72	711.8283	2	12.04	-2.4	65 62 90 90 82 85 93 84 61 57 51 51 52	CNKKESEEQLSGA
958	KLLDPEATGSLKK	9.3	72	467.2766	3	13.585	-0.2	59 58 61 69 74 96 95 91 66 60 64 81 50	KLLDPEATGSLKK
2224	YPAGVGCK	5.7	72	397.6964	2	27.638	-1.2	50 97 96 89 60 55 55 67	YPAGVGCK
1721	TLEDQLSEL	6.4	72	1047.519	1	21.722	-1.7	63 67 80 80 65 75 69 76 65	TLEDQLSEL
1410	YLETGAAFGTVLF	9.3	72	694.8603	2	18.399	2.6	52 64 58 83 82 83 64 65 73 75 87 89 50	YLETGAAFGTVLF
2502	LELLGPCLTA	7.2	72	515.2861	2	31.019	0	51 66 95 90 81 83 85 52 52 55	LELLGPCLTA
3242	LYPPVVEEVANK	8.6	72	679.3715	2	39.918	-0.2	74 76 95 98 50 80 80 67 58 56 63 53	LYPPVVEEVANK
2874	AYVPRMVHMFANSF	10	72	835.4041	2	35.482	1.8	76 76 76 75 73 70 71 95 78 62 65 58 62 59	AYVPRMVHMFANSF
2864	SEPGEAGLDNLK	8.6	72	615.304	2	35.37	-0.1	51 57 67 79 82 87 87 91 88 56 56 52	SEPGEAGLDNLK
1954	LVSLEGVYPGLVW	9.3	72	716.3971	2	24.413	-0.9	50 50 93 83 64 64 86 77 68 70 84 86 50	LVSLEGVYPGLVW
776	LAEEAESA	5.7	72	819.3725	1	11.541	-0.6	50 50 50 50 95 88 88 97	LAEEAESA
1652	AFVPAMGEVATGMYEVGL	12.9	72	921.4432	2	20.963	-1.2	50 55 58 95 96 87 83 82 87 84 60 60 81 88 53 53 53 53	AFVPAMGEVATGMYEVGL
3239	SS(+79.97)NSLEGPTEGVGLNK	11.4	72	834.8776	2	39.874	0.2	63 65 62 80 78 82 73 75 82 83 71 63 66 67 70 55	SS(+79.97)NSLEGPTEGVGLNK
1862	FPAVATKPPV	7.2	72	513.8035	2	23.332	1.4	50 84 78 76 75 67 66 72 91 50	FPAVATKPPV
1380	NQLSES(+79.97)LCLLNK	8.6	72	721.3405	2	18.07	-1.4	55 54 60 61 74 88 92 96 81 68 69 55	NQLSES(+79.97)LCLLNK

2339	LSDVNGASY	6.4	71	463.2166	2	29.038	-0.3	50 97 94 92 69 70 56 56 55	LSDVNGASY
1916	LDNALTDAGLLPAAVK	11.4	71	791.4462	2	23.967	0.5	69 69 86 92 73 66 73 64 62 72 94 78 63 57 58 61	LDNALTDAGLLPAAVK
1139	QAKDAGNTVAGLLSK	10.7	71	736.9083	2	15.503	1.8	52 59 58 87 69 68 62 60 57 65 79 82 95 96 76	QAKDAGNTVAGLLSK
2580	GLVLDAAV	5.7	71	757.4451	1	31.968	-0.3	67 64 70 79 72 80 86 50	GLVLDAAV
1538	MLQFPPAA	5.7	71	874.451	1	19.751	2.2	50 96 86 83 76 76 50 50	MLQFPPAA
2296	WANCLVRLGLCAGMLPV	12.1	71	605.9866	3	28.518	1.3	66 56 54 58 71 70 73 62 68 93 95 86 75 73 76 82 50	WANCLVRLGLCAGMLPV
538	FFVNY(+79.97)	3.6	71	385.1524	2	8.55	2.5	75 75 66 72 66	FFVNY(+79.97)
4108	YAAPPDVANGVDYK	10	71	740.3594	2	50.375	0.2	51 51 55 89 50 98 96 94 62 63 71 71 76 66	YAAPPDVANGVDYK
681	RKHGSSACM(+15.99)EAWGDFF	11.4	71	615.6008	3	10.407	1.9	50 60 53 64 63 67 67 74 99 96 93 89 80 66 63 50	RKHGSSACM(+15.99)EAWGDFF
1480	TMTNVDAMALAGHMK	10.7	71	795.8776	2	19.148	2.7	74 76 89 86 94 85 67 62 62 68 83 60 56 53 50	TMTNVDAMALAGHMK
3263	NSVLFCAGAAELKCSPV	12.1	71	570.2842	3	40.164	-0.9	63 65 68 50 50 76 74 72 87 92 87 86 63 62 61 75 75	NSVLFCAGAAELKCSPV
863	CLTANLNDANY(+79.97)A	8.6	71	681.7737	2	12.527	0.5	69 70 83 76 74 94 78 75 73 54 54 51	CLTANLNDANY(+79.97)A
2570	TGDKVEDM(+15.99)KEA	7.9	71	619.7812	2	31.854	-1.4	59 58 63 66 89 98 97 89 54 53 53	TGDKVEDM(+15.99)KEA
2216	S(+79.97)PPVAYLDL	6.4	71	1054.492	1	27.541	5.6	70 70 67 68 59 67 88 94 55	S(+79.97)PPVAYLDL
3392	LLDPEKAVTTGK	8.6	71	424.5784	3	41.701	0.2	87 75 74 72 61 61 78 77 66 62 62 77	LLDPEKAVTTGK
3587	VM(+15.99)YCGHKLMV	7.1	71	598.7864	2	44.034	2.7	50 50 83 81 77 73 78 83 84 50	VM(+15.99)YCGHKLMV
726	RPSVCVNVPY(+79.97)	7.1	71	607.2753	2	10.947	-0.1	50 50 70 73 71 75 78 95 96 50	RPSVCVNVPY(+79.97)
4326	SPT(+79.97)SVS(+79.97)W	5	71	462.15	2	53.129	-2.2	50 50 81 81 78 79 78	SPT(+79.97)SVS(+79.97)W
2490	STALPLGV	5.7	71	757.4448	1	30.871	-0.7	50 92 91 82 67 65 70 50	STALPLGV
1900	YNVLM(+15.99)DM(+15.99)KL	6.4	71	1158.552	1	23.774	-1.5	81 72 83 85 88 74 52 54 51	YNVLM(+15.99)DM(+15.99)KL
1925	LYKAAGGRS(+79.97)VKK	8.6	71	679.3718	2	24.066	1	50 79 67 89 74 65 71 83 75 70 75 53	LYKAAGGRS(+79.97)VKK
3044	YLPGEEVVGVAPK	9.3	71	679.3723	2	37.535	0.9	88 88 92 65 62 87 90 78 64 52 51 52 53	YLPGEEVVGVAPK
1716	MLYPPVVEEVGQK	9.3	71	744.8923	2	21.662	0.5	54 89 75 98 99 50 86 76 62 60 56 62 54	MLYPPVVEEVGQK
972	HGT(+79.97)LLGASA	6.4	71	906.4069	1	13.736	-1.2	78 78 82 84 63 66 67 70 50	HGT(+79.97)LLGASA
1818	FDAPPGGCPLMCPI	10	71	709.3212	2	22.814	2.7	50 69 63 64 58 63 77 81 79 80 81 86 91 50	FDAPPGGCPLMCPI
909	LQTVKDEEMEQLKR	10	71	582.9743	3	13.041	1.7	53 51 54 53 57 77 87 93 95 92 65 80 73 63	LQTVKDEEMEQLKR
3440	LYPGVMRKHEK	7.8	71	679.3721	2	42.271	-2.9	73 74 92 85 74 73 80 54 53 62 59	LYPGVMRKHEK
2830	TMEPEVGVLGLCMKLPV	12.1	71	605.9869	3	34.954	2.5	67 70 71 69 59 58 57 61 66 64 70 92 86 83 84 96 50	TMEPEVGVLGLCMKLPV
1689	YNPPAGPCTVKLV	9.3	71	679.8618	2	21.381	2	66 63 87 80 71 64 67 74 88 90 60 59 51	YNPPAGPCTVKLV
4144	WVLAAMGDL	6.4	71	488.2531	2	50.812	2.3	50 98 96 82 64 62 63 70 52	WVLAAMGDL
1769	WVEPPAAGFDGPLK	10	71	742.3834	2	22.253	1	50 98 98 99 55 75 79 79 61 58 57 57 56 67	WVEPPAAGFDGPLK

2997	ELLTVCLDPNK	7.8	71	622.8306	2	36.974	-1.3	62 62 91 92 83 68 67 63 67 73 50	ELLTVCLDPNK
2122	FQGYPPGALLV	7.8	71	581.3188	2	26.415	0.1	56 56 59 88 88 87 90 87 59 54 54	FQGYPPGALLV
2703	TAGGPAFGGGW	7.8	71	489.2269	2	33.463	-0.9	67 65 71 83 80 74 73 66 62 63 72	TAGGPAFGGGW
1595	AELGEQLDNL	7.1	71	1101.542	1	20.355	-0.4	71 73 88 70 69 61 77 70 71 58	AELGEQLDNL
2162	DGLLTATGDI	7.1	71	488.2531	2	26.89	-0.4	66 65 88 95 87 63 56 60 77 50	DGLLTATGDI
3796	LLAPEGWVMKK	7.8	71	424.578	3	46.57	1.3	93 93 81 68 54 53 54 84 74 74 50	LLAPEGWVMKK
1126	S(+79.97)PPEAGMGLRVR	8.5	71	450.552	3	15.369	1.4	91 91 91 57 57 57 66 83 83 64 59 50	S(+79.97)PPEAGMGLRVR
2082	NNDVMVDMGGGPK	9.3	71	667.2972	2	25.939	-0.3	66 66 73 77 96 96 83 63 62 64 62 62 50	NNDVMVDMGGGPK
2367	SPLGSGAEMVDENK	10	71	717.3332	2	29.386	1	50 73 80 90 94 79 65 62 65 80 70 62 64 56	SPLGSGAEMVDENK
2208	LSDVAGGGSY	7.1	71	463.2166	2	27.437	-0.1	50 97 97 88 80 72 56 58 60 50	LSDVAGGGSY
848	HCATCVPVPCPTPY	10	71	496.5546	3	12.367	0.9	50 79 72 60 60 79 85 82 82 82 81 73 57 50	HCATCVPVPCPTPY
1030	EEDLLALGSTKK	8.5	71	652.3588	2	14.36	0	50 91 88 86 70 69 59 59 60 81 84 50	EEDLLALGSTKK
834	MQPVEM(+15.99)PGAVK	7.8	71	601.7986	2	12.2	-0.6	70 63 86 90 91 88 67 55 54 56 59	MQPVEM(+15.99)PGAVK
830	KVEDCLGCELK	7.8	71	618.8008	2	12.164	-1.5	84 84 84 72 68 57 57 57 71 83 61	KVEDCLGCELK
837	LDDAV	3.6	71	532.2607	1	12.241	-1	70 79 76 79 50	LDDAV
2489	NM(+15.99)HGLEQAGELVNNK	10.7	71	835.403	2	30.859	1.4	58 58 58 71 79 81 65 74 87 91 82 74 64 64 54	NM(+15.99)HGLEQAGELVNNK
3975	FSAPPDVAGNVDYK	10	71	740.3592	2	48.763	-0.2	56 57 59 95 50 98 95 92 60 53 54 68 82 69	FSAPPDVAGNVDYK
1491	KDLLDPL	5	71	407.2395	2	19.257	0.1	57 57 65 94 96 50 76	KDLLDPL
2106	LTVDSNLF	5.7	71	908.4718	1	26.229	-0.6	50 50 90 82 76 67 79 70	LTVDSNLF
1479	MVRCSLLGGNLTQDLPV	12.1	71	908.4755	2	19.14	-1	81 53 57 68 97 98 88 85 90 70 53 53 54 70 68 65 50	MVRCSLLGGNLTQDLPV
1445	ELKTALLLAMGAM(+15.99)HLVFF	12.8	71	674.3717	3	18.774	2.2	54 54 61 72 79 88 61 66 64 72 72 77 84 89 89 63 63 63	ELKTALLLAMGAM(+15.99)HLVFF
1572	AMDKELDMEDYERA	10	71	858.3648	2	20.106	-1.6	77 52 51 51 70 80 94 93 83 83 72 62 61 59	AMDKELDMEDYERA
592	GPT(+79.97)NPYTSSWPV	8.5	71	693.2935	2	9.259	1.8	68 71 65 64 71 76 88 94 73 73 56 50	GPT(+79.97)NPYTSSWPV
1620	TTAEHLPPGSLF	8.5	71	635.3275	2	20.613	0.2	52 71 73 92 94 94 52 52 68 66 67 65	TTAEHLPPGSLF
2705	LSM(+15.99)TPKCS(+79.97)AAAEGDL	10.7	71	795.3345	2	33.483	1.9	68 68 68 90 86 86 86 83 72 65 58 58 57 64 50	LSM(+15.99)TPKCS(+79.97)AAAEGDL
1101	M(+15.99)EAPPHL	5	71	405.6942	2	15.108	-0.2	98 98 98 50 50 50 50	M(+15.99)EAPPHL
3108	YLPPVTMALPEK	8.5	71	679.8725	2	38.3	-0.7	90 88 96 50 67 62 60 63 63 73 74 62	YLPPVTMALPEK
1754	LMPDVFLPLDPL	8.5	71	685.3766	2	22.087	1.7	51 50 52 55 54 54 92 89 91 94 96 69	LMPDVFLPLDPL
1205	LGSLTLPS(+79.97)V	6.4	71	483.7496	2	16.188	1.2	64 63 68 76 84 85 94 50 50	LGSLTLPS(+79.97)V
1018	ELQTKDLELK	7.1	71	406.23	3	14.232	-2.5	61 54 51 56 56 92 96 86 87 68	ELQTKDLELK
2958	STALPLGV	5.7	71	757.445	1	36.5	-0.5	50 92 90 85 69 61 67 50	STALPLGV

2200	RSGAHSV	5	71	357.1879	2	27.344	-0.4	73 67 74 72 75 83 50	RSGAHSV
2770	WPFLEELHMVATETY	10.7	71	933.4427	2	34.233	0.1	50 50 85 78 78 78 79 82 85 75 70 71 67 59 50	WPFLEELHMVATETY
916	LEGGAEL	5	71	688.3506	1	13.121	-0.7	56 55 65 76 70 78 94	LEGGAEL
3146	WGLLVPYDKA	7.1	71	581.3187	2	38.763	-0.2	52 52 60 89 50 99 98 77 65 65	WGLLVPYDKA
4069	NTVADPF	5	71	763.3648	1	49.907	3.6	64 71 77 81 71 65 65	NTVADPF
1210	FLPVVEEAPPF	7.8	71	622.8321	2	16.243	0.6	50 50 50 50 96 96 98 50 78 78 78	FLPVVEEAPPF
3131	GTFPPGDL	5.7	71	803.3924	1	38.575	-1.2	78 78 89 90 68 55 56 50	GTFPPGDL
1133	WAAGPSATANLGGK	9.9	71	650.835	2	15.442	-1.3	65 74 79 79 78 77 76 73 66 54 54 63 65 85	WAAGPSATANLGGK
3137	YHGSEVSGCGAGPL	9.9	71	667.2963	2	38.645	0.8	59 59 91 88 73 73 76 85 70 56 54 54 73 77	YHGSEVSGCGAGPL
2054	LLPVLYPTSPLLYYK	10.6	71	890.5169	2	25.616	-1.6	50 81 81 99 97 85 70 50 50 50 67 82 71 62 62	LLPVLYPTSPLLYYK
1503	VPVAKRTGKK	7.1	71	542.3548	2	19.375	2.5	50 98 91 68 61 62 71 71 83 50	VPVAKRTGKK
2673	LEAGEQLDNLGA	8.5	71	615.3046	2	33.101	1	54 57 66 78 80 78 94 80 70 61 62 64	LEAGEQLDNLGA
2630	NPWGKMGGLEV	7.8	71	594.2959	2	32.585	-2.8	78 85 83 81 83 52 57 59 77 59 60	NPWGKMGGLEV
1368	TTLKGPGPNPCR	8.5	71	620.8253	2	17.947	-2.7	72 79 66 62 61 69 70 71 78 82 85 50	TTLKGPGPNPCR
3194	ELAGEQLGDGLGA	9.2	71	615.3033	2	39.343	-1.1	57 58 68 72 73 72 94 86 79 71 61 61 64	ELAGEQLGDGLGA
1300	ESPTFSNKAL	7.1	71	547.2803	2	17.218	0.8	60 63 83 75 64 64 76 78 80 61	ESPTFSNKAL
905	ETM(+15.99)PV	3.5	71	592.2638	1	12.991	-1.4	84 84 84 50 50	ETM(+15.99)PV
3718	LQEGVEDL	5.7	71	902.4468	1	45.622	0.3	64 60 62 63 75 92 96 50	LQEGVEDL
4094	MELPVMDV	5.7	71	933.4413	1	50.198	-0.7	80 70 70 81 81 81 50 50	MELPVMDV
1806	GLLWKLPV	5.7	71	463.2971	2	22.676	-0.1	73 73 79 50 79 67 92 50	GLLWKLPV
1851	EGETVVYVDA	7.1	71	1081.505	1	23.199	0.1	50 94 90 90 76 64 64 58 59 59	EGETVVYVDA
3618	MGGQDLAGAAPNK	9.2	71	615.3	2	44.397	-1.2	67 57 57 55 63 94 92 88 86 81 62 62 50	MGGQDLAGAAPNK
1382	LYPGEEQALLPK	8.5	71	679.3723	2	18.1	0.9	79 80 91 75 71 88 64 63 62 60 60 52	LYPGEEQALLPK
1097	NNLGLTSEV	6.4	71	473.7455	2	15.065	-0.3	50 67 65 74 71 77 88 91 50	NNLGLTSEV
4270	YGYTMPGY	5.7	71	476.1983	2	52.381	-2.4	50 67 77 82 80 79 78 50	YGYTMPGY
3174	YPALAAETDGEM(+15.99)AVSGA	12	71	834.8758	2	39.091	1.3	83 80 65 58 76 82 79 72 70 72 82 66 63 61 61 61 63	YPALAAETDGEM(+15.99)AVSGA
1832	KTNGDSAPW	6.4	71	488.2293	2	22.984	-1.8	54 54 62 71 76 82 86 97 50	KTNGDSAPW
3332	S(+79.97)PVLEV	4.2	71	723.3374	1	40.991	6.9	50 50 98 75 75 73	S(+79.97)PVLEV
3287	FLAVEEVANGPV	8.5	71	622.8306	2	40.444	1.6	50 97 72 71 73 89 88 56 53 53 70 72	FLAVEEVANGPV
875	MM(+15.99)AGGPPV	5.7	71	775.3463	1	12.661	-1.9	50 97 96 95 62 62 50 50	MM(+15.99)AGGPPV
1163	YPPVVEEVGGAKK	9.2	71	458.2538	3	15.745	-0.1	91 91 91 50 65 71 88 77 68 57 57 58 50	YPPVVEEVGGAKK

1073	MPECEAVVAAKK	8.5	71	425.8858	3	14.813	-0.4	50 50 94 86 85 80 81 83 70 64 52 50	MPECEAVVAAKK
2147	LEAGEQLDNLGA	8.5	71	615.3035	2	26.71	-0.8	70 70 71 62 65 71 94 84 72 61 61 63	LEAGEQLDNLGA
3557	HWLGLAEM(+15.99)NY	7.1	71	625.2882	2	43.665	1.7	50 81 78 77 80 74 67 64 65 67	HWLGLAEM(+15.99)NY
860	KNLHELEEAEER	8.5	71	499.583	3	12.5	0.5	51 51 51 83 94 98 50 50 50 92 92 80	KNLHELEEAEER
3360	KNGLLSFGLPR	7.8	71	601.3555	2	41.313	-1	78 73 78 78 80 70 70 70 62 63 51	KNGLLSFGLPR
1910	LYGVLDLA	5.7	71	863.4855	1	23.895	-2	56 56 70 89 80 71 80 60	LYGVLDLA
3678	TFLHS(+79.97)LVSS(+79.97)ATK	8.5	71	725.8208	2	45.126	-2.4	66 65 89 88 50 50 88 79 63 63 79 62	TFLHS(+79.97)LVSS(+79.97)ATK
4219	CDQVSDWPV	6.4	71	524.7249	2	51.728	2.1	74 74 71 85 86 92 50 50 50	CDQVSDWPV
3077	QPAGSATSEVDNEK	9.9	71	716.8314	2	37.925	0.4	58 56 59 80 84 74 69 61 62 86 86 65 79 63	QPAGSATSEVDNEK
2620	VM(+15.99)YAPEGALMV	7.8	71	598.7864	2	32.459	-3	50 50 91 80 71 71 70 78 80 81 50	VM(+15.99)YAPEGALMV
2013	YLTVRLLFCKMV	8.5	71	495.9488	3	25.122	-0.1	80 81 63 62 60 80 85 76 61 63 70 60	YLTVRLLFCKMV
1036	FSEGANQDA	6.4	71	938.3823	1	14.427	-2.8	50 84 82 72 69 61 64 78 72	FSEGANQDA
927	EPALLPR	4.9	71	398.2398	2	13.249	0.2	50 99 98 93 50 51 50	EPALLPR
2925	LQGEVEDI	5.7	71	902.4467	1	36.109	0.1	61 55 63 65 84 88 95 50	LQGEVEDI
2798	LEAGEGALDNGAL	9.2	71	615.3047	2	34.575	1.2	56 59 69 71 76 88 92 94 87 66 52 51 52	LEAGEGALDNGAL
1726	LTDDLEDEL	6.4	71	1062.484	1	21.776	0.2	66 66 86 83 80 79 69 50 51	LTDDLEDEL
2548	ELLGASDVKVGA	8.5	71	579.8222	2	31.573	0.6	64 64 84 75 64 66 73 85 88 64 57 58	ELLGASDVKVGA
2891	RREGLDNDAVLSPNFI	11.3	71	908.4731	2	35.687	2.4	50 61 54 58 61 63 69 75 71 76 95 95 87 69 73 66	RREGLDNDAVLSPNFI
1971	DLTCGSKVTR	7.1	71	540.2797	2	24.62	0.6	90 84 62 61 64 68 81 66 67 57	DLTCGSKVTR
2140	M(+15.99)TLHDGAGSAEMSK	9.9	71	725.8203	2	26.629	2.2	73 76 91 87 85 72 61 59 55 57 75 65 70 55	M(+15.99)TLHDGAGSAEMSK
2051	LTLLVFGKI	6.4	71	502.3312	2	25.574	0.2	52 66 94 98 50 70 63 70 67	LTLLVFGKI
2064	LDGFMMRLEV	7.1	71	605.8002	2	25.728	-2.2	58 58 65 64 64 88 87 67 76 72	LDGFMMRLEV
1858	DLELPLL	4.9	71	812.4765	1	23.281	0.2	50 95 95 97 52 52 50	DLELPLL
2560	WTGNGALAPGGSGPHKLPV	13.4	71	605.9874	3	31.724	-1.3	73 65 62 62 70 79 72 59 62 68 74 63 66 75 82 79 81 91 50	WTGNGALAPGGSGPHKLPV
2981	KNTEGSSGLENK	8.5	71	632.3133	2	36.777	1.5	57 54 64 79 95 95 54 56 56 79 78 74	KNTEGSSGLENK
1696	FPTMV	3.5	71	594.2961	1	21.455	0.8	50 83 82 85 50	FPTMV
1252	SQVADM(+15.99)I	4.9	70	779.3601	1	16.693	-0.3	64 59 71 97 99 50 50	SQVADM(+15.99)I
1182	LKVPLHNDHA	7	70	572.3175	2	15.948	0.7	60 60 75 50 71 73 69 95 98 50	LKVPLHNDHA
1977	LEGLMW	4.2	70	748.3701	1	24.693	0.4	51 51 53 93 95 76	LEGLMW
1083	RCEGDLGGPY	7	70	533.7335	2	14.923	-2.3	50 50 73 74 83 92 77 74 76 50	RCEGDLGGPY
1162	WAPCDLTEK	6.3	70	531.7511	2	15.738	2.4	50 50 50 77 79 80 86 86 72	WAPCDLTEK

3063	GMANDLGAAANPK	9.2	70	615.3	2	37.76	-1.2	64 68 70 77 87 89 78 70 60 59 56 80 50	GMANDLGAAANPK
1834	ASVLPDGQFL	7	70	1046.552	1	23.006	-0.1	56 56 73 94 73 69 74 63 78 63	ASVLPDGQFL
2015	ELLGTDGVAGVK	8.4	70	579.8223	2	25.143	0.7	64 64 88 81 74 63 65 70 80 59 66 64	ELLGTDGVAGVK
924	GQTVPQAAA	6.3	70	842.4371	1	13.209	0.5	53 52 61 89 91 69 84 82 50	GQTVPQAAA
2916	LVGLDI	4.2	70	629.3866	1	35.992	-0.4	50 50 91 88 90 50	LVGLDI
3767	FANYVPLPQI	7	70	581.3183	2	46.207	-0.8	85 72 64 85 96 50 68 59 60 60	FANYVPLPQI
3822	LMMGSGPGPLDL	8.4	70	594.2939	2	46.882	0.7	54 54 74 68 70 50 50 81 89 94 96 59	LMMGSGPGPLDL
3888	WVVLLPV	4.9	70	413.2658	2	47.689	1.3	62 62 62 90 82 82 50	WVVLLPV
2964	GTCDVPVL	5.6	70	803.3948	1	36.576	-2.4	68 72 84 92 93 50 50 50	GTCDVPVL
1122	MTVEDEENPVSK	8.4	70	689.314	2	15.324	0.3	56 56 63 87 95 91 85 62 71 72 50 50	MTVEDEENPVSK
1836	AYMPL	3.5	70	594.2953	1	23.024	-0.4	83 83 83 50 50	AYMPL
1629	MTRLTNGASSNMEAW	10.5	70	834.8774	2	20.713	0.4	61 62 74 76 60 58 68 75 92 83 65 76 66 69 61	MTRLTNGASSNMEAW
2259	LLDLLAGATEQK	8.4	70	424.5782	3	28.066	-0.2	62 62 64 68 74 75 86 88 78 61 61 61	LLDLLAGATEQK
3918	TM(+15.99)CESNGHGCT(+79.97)S(+79.97)L	9.1	70	758.22	2	48.064	-1.5	50 50 75 75 74 74 83 83 88 88 66 50 51	TM(+15.99)CESNGHGCT(+79.97)S(+79.97)L
1458	RTKYLLAPCAMF	8.4	70	707.3714	2	18.91	-1.7	65 68 72 85 68 81 80 90 56 54 61 57	RTKYLLAPCAMF
3887	S(+79.97)PKPSVKHDI	7	70	594.2957	2	47.677	1.7	50 55 73 82 85 50 81 81 91 50	S(+79.97)PKPSVKHDI
3507	QGCEYAF	4.9	70	409.1618	2	43.072	-2.6	64 69 78 89 89 50 50	QGCEYAF
2760	Y(+79.97)GSKGSVAGNPMGLK	10.5	70	773.36	2	34.109	-0.2	55 54 58 88 84 73 63 63 86 86 78 68 65 70 56	Y(+79.97)GSKGSVAGNPMGLK
3111	AENSVEDFKEA	7.7	70	619.78	2	38.344	-0.5	65 54 54 56 87 98 93 93 59 55 54	AENSVEDFKEA
3960	VQAGEAY(+79.97)	4.9	70	409.16	2	48.571	0	79 75 80 75 64 65 50	VQAGEAY(+79.97)
4169	LLDGAGTGVDLL	8.4	70	572.3164	2	51.117	0.1	96 97 96 80 63 54 60 70 68 52 50 50	LLDGAGTGVDLL
2781	M(+15.99)GGGT(+79.97)HV	4.9	70	377.6337	2	34.37	1.5	65 63 72 75 77 86 50	M(+15.99)GGGT(+79.97)HV
2919	LMPPEKAVMKK	7.7	70	424.5782	3	36.034	-1.2	92 91 94 59 52 52 73 74 66 63 50	LMPPEKAVMKK
1370	LKQDPEDVLV	7	70	578.3163	2	17.978	0	59 56 58 91 96 79 79 79 50 50	LKQDPEDVLV
4087	FAQM(+15.99)GSAGGGDPK	9.1	70	619.7806	2	50.121	5.5	85 87 81 96 71 60 65 69 59 52 53 58 69	FAQM(+15.99)GSAGGGDPK
2822	WVANTGGSLKFPW	9.1	70	488.2538	3	34.861	-0.7	81 62 59 59 57 56 61 75 90 72 67 79 88	WVANTGGSLKFPW
1606	HPSNEEANATA	7.7	70	1140.488	1	20.47	-2.9	50 92 91 77 80 63 51 51 58 77 78	HPSNEEANATA
1366	HLPQSHETL	6.3	70	1061.536	1	17.928	-1	50 93 89 72 74 74 73 50 52	HLPQSHETL
783	TALSVGQSSGVGK	9.1	70	397.5504	3	11.618	-0.5	58 60 80 91 88 75 58 78 76 70 55 55 62	TALSVGQSSGVGK
3227	EEGGGALFLNEK	8.4	70	632.3132	2	39.733	-1.8	81 82 71 65 66 71 83 72 73 57 61 54	EEGGGALFLNEK
1208	MPTPM(+15.99)V	4.2	70	691.3174	1	16.228	2.9	90 89 89 50 50 50	MPTPM(+15.99)V

2105	LEFDFI	4.2	70	783.3916	1	26.219	-0.9	89 89 89 50 50 50	LEFDFI
3720	GRKKPV	4.2	70	342.73	2	45.643	1.9	50 50 91 88 88 50	GRKKPV
2828	MDELGGGPAGRK	8.4	70	594.2957	2	34.934	0.3	75 79 90 70 65 63 68 60 61 75 81 50	MDELGGGPAGRK
3562	LTEPCCVGLLK	7.7	70	588.3116	2	43.732	-0.2	83 82 97 50 82 69 68 79 55 52 50	LTEPCCVGLLK
3294	FSPEEL	4.2	70	721.3409	1	40.527	0.9	50 89 89 89 50 50	FSPEEL
2962	FSEPEL	4.2	70	721.3413	1	36.553	1.4	50 88 88 92 50 50	FSEPEL
1066	AAFLW	3.5	70	304.1664	2	14.748	2.8	50 50 83 83 83	AAFLW
3897	MALAARANGA	7	70	473.25	2	47.804	-0.7	73 72 86 90 84 61 61 60 60 50	MALAARANGA
2937	TM(+15.99)LHDGQSAEMSK	9.1	70	725.8196	2	36.253	1.3	69 72 89 83 80 61 55 55 58 89 67 74 53	TM(+15.99)LHDGQSAEMSK
4323	S(+79.97)T(+79.97)CTDCRSDDA	7.7	70	667.1766	2	53.083	-1.1	50 66 63 69 75 91 90 80 81 50 50	S(+79.97)T(+79.97)CTDCRSDDA
1469	SLNEGLLEA	6.3	70	945.488	1	19.031	-0.8	93 80 69 71 71 70 58 61 52	SLNEGLLEA
3699	LVCPLPK	4.9	70	385.2346	2	45.392	-2.8	77 76 76 50 69 83 56	LVCPLPK
2954	ATLLADSGDL	7	70	488.2532	2	36.459	-0.2	61 60 72 93 69 61 55 55 81 87	ATLLADSGDL
1864	QNVPTVGAVMKK	8.4	70	424.5786	3	23.353	5.6	60 58 66 88 63 64 75 86 82 74 69 50	QNVPTVGAVMKK
2837	QM(+15.99)NDVGWAGVPDK	9.1	70	716.831	2	35.04	1.5	61 65 77 96 96 76 54 58 61 69 61 75 56	QM(+15.99)NDVGWAGVPDK
1166	EESLGEALKTV	7.7	70	588.3107	2	15.784	-1.1	87 83 78 61 61 71 79 77 57 57 54	EESLGEALKTV
2304	LELLSMPGGL	7	70	515.2857	2	28.614	-0.7	50 64 93 79 72 69 67 75 77 50	LELLSMPGGL
3072	ELLTVGMAEGPK	8.4	70	622.83	2	37.862	-2.2	65 65 87 87 79 79 77 72 58 56 59 50	ELLTVGMAEGPK
624	DCGM(+15.99)AEYK	5.6	70	932.3469	1	9.687	-2.1	50 50 64 89 89 75 78 63	DCGM(+15.99)AEYK
4122	GTFDPPVA	5.6	70	803.3924	1	50.545	-1.2	70 70 84 85 85 59 52 52	GTFDPPVA
2567	CRKGVGACGDTGGAGGA	11.9	70	718.8223	2	31.811	0.3	83 82 92 89 65 58 56 62 70 73 72 68 65 65 63 68 50	CRKGVGACGDTGGAGGA
4242	YTM(+15.99)GVGPDDY(+79.97)	7	70	607.2079	2	52.015	-2.7	50 60 58 81 78 80 77 77 85 50	YTM(+15.99)GVGPDDY(+79.97)
1084	HPATSHEA	5.6	70	849.3849	1	14.933	-0.1	50 88 79 75 82 82 50 50	HPATSHEA
2687	LNGAMAGAVQVK	8.4	70	579.82	2	33.266	2.5	60 57 60 61 69 68 67 82 91 75 74 70	LNGAMAGAVQVK
3128	DPTGEQLDNLK	7.7	70	615.3039	2	38.545	-0.2	53 61 62 79 80 81 96 72 64 64 53	DPTGEQLDNLK
3704	YLPRWTSHAVK	7.7	70	679.3715	2	45.456	-1.3	81 79 86 81 69 73 76 65 52 52 51	YLPRWTSHAVK
944	LQDLVDK	4.9	70	415.7349	2	13.442	1	50 91 97 98 50 50 50	LQDLVDK
3288	VQLEL	3.5	70	601.3555	1	40.454	-0.1	69 67 80 81 50	VQLEL
4146	LYHGVVLVKMPMV	9.1	70	495.9477	3	50.834	-2.2	50 54 52 65 76 76 83 83 81 65 64 73 79	LYHGVVLVKMPMV
2369	LELLSGMAPV	7	70	515.2859	2	29.406	-0.2	54 72 97 82 68 67 62 59 67 67	LELLSGMAPV
1749	TM(+15.99)LSSTA	4.9	70	726.3345	1	22.024	0.8	50 95 95 97 50 50 50	TM(+15.99)LSSTA

3900	NLSDKLSQNK	7	70	573.8085	2	47.837	-1.3	54 55 59 89 82 84 91 58 64 56	NLSDKLSQNK
1324	M(+15.99)PGGFALGPL	7	70	488.2533	2	17.475	2.6	50 51 55 87 85 90 93 66 67 50	M(+15.99)PGGFALGPL
2789	TPTLDAFGLLW	7.7	70	617.3298	2	34.464	0.9	53 53 53 81 68 65 74 79 85 90 60	TPTLDAFGLLW
3399	M(+15.99)TLDHQGTGEMSK	9.1	70	725.8199	2	41.778	1.8	67 69 84 75 78 75 73 56 61 89 58 66 50	M(+15.99)TLDHQGTGEMSK
1580	LYPGETVGAGVVPV	9.8	70	679.3715	2	20.202	-0.3	75 77 93 65 60 60 66 68 82 68 68 60 64 64	LYPGETVGAGVVPV
1348	LLPNEKSTGPML	8.4	70	650.3524	2	17.731	-0.2	50 95 84 68 60 56 65 90 85 59 57 64	LLPNEKSTGPML
3118	WLLFMGPALW	7	70	617.3293	2	38.424	2.1	56 56 56 67 68 75 80 79 88 69	WLLFMGPALW
2597	NKGLGLAYLPR	7.7	70	601.3557	2	32.175	-0.8	75 78 80 77 64 59 66 69 68 73 54	NKGLGLAYLPR
2829	FSPEEI	4.2	70	721.3406	1	34.945	0.4	50 89 89 89 50 50	FSPEEI
3968	LYPGEQKGGPRR	8.4	70	679.3713	2	48.679	1.4	81 81 94 76 57 52 52 63 73 75 78 50	LYPGEQKGGPRR
2663	LEVLAFPTRR	7	70	601.3554	2	32.977	-1.2	92 90 71 64 56 50 75 72 73 50	LEVLAFPTRR
4177	NMQVPVKSQK	7	70	579.822	2	51.214	5.9	72 77 77 95 98 50 55 56 54 60	NMQVPVKSQK
1979	EFLDFV	4.2	70	769.3764	1	24.711	-0.3	89 89 89 50 50 50	EFLDFV
3302	DECAPY(+79.97)	4.2	70	389.1115	2	40.637	-0.5	50 89 89 89 50 50	DECAPY(+79.97)
2602	FSPEEI	4.2	70	721.3406	1	32.24	0.5	50 89 89 89 50 50	FSPEEI
2614	EDEVLAGAKVK	7.7	70	579.8226	2	32.386	1.3	50 82 77 82 74 73 55 59 65 84 61	EDEVLAGAKVK
1338	HMGGEQPEHDLLKK	9.8	70	540.2711	3	17.619	-1.1	51 56 62 65 64 60 77 78 96 92 92 68 57 51	HMGGEQPEHDLLKK
1823	FLYPGGVPGLSGDLL	10.5	70	752.9068	2	22.871	1.1	50 97 96 91 84 70 69 76 64 56 56 56 51 61 62	FLYPGGVPGLSGDLL
3051	LLDLLAGAVGSDK	9.1	70	424.5781	3	37.62	-0.6	66 66 71 77 72 71 89 92 79 59 51 52 55	LLDLLAGAVGSDK
1926	NCGKAMPLGGPAGR	9.8	70	664.8333	2	24.076	2.4	58 56 61 72 92 76 67 67 76 68 66 67 68 77	NCGKAMPLGGPAGR
545	YGANEET(+79.97)GGEQK	8.4	70	681.7637	2	8.638	-0.5	56 62 72 66 73 81 82 76 74 63 63 63	YGANEET(+79.97)GGEQK
2523	EPDLLKATSGKL	8.4	70	424.5786	3	31.279	0.6	50 83 70 66 73 76 87 88 67 55 56 59	EPDLLKATSGKL
3870	ELLENSVQVK	7	70	579.8214	2	47.472	-0.8	52 52 79 73 65 67 71 81 78 73	ELLENSVQVK
1878	GMLGAGGSGYLPF	9.1	70	613.7972	2	23.514	-0.1	53 57 68 61 59 66 66 65 77 83 97 98 50	GMLGAGGSGYLPF
591	T(+79.97)ACDLMGQADV	7.7	70	602.2243	2	9.247	-0.6	61 63 73 76 76 78 86 76 59 60 55	T(+79.97)ACDLMGQADV
647	DPESSLV	4.9	70	746.3556	1	9.979	-1.4	50 97 94 94 50 50 50	DPESSLV
2294	MPGLAM(+15.99)GAVL	7	70	488.2536	2	28.496	-0.3	56 70 77 93 82 73 66 61 54 59	MPGLAM(+15.99)GAVL
3479	DVEDLSLSGLK	7.7	70	588.3115	2	42.734	0.3	87 89 87 87 57 50 50 54 53 72 76	DVEDLSLSGLK
1365	FMMKAVPV	5.6	70	922.4891	1	17.919	0.3	50 98 93 75 57 57 72 50	FMMKAVPV
3183	LLDPSLGAVATSK	9	70	424.5777	3	39.21	-1.4	75 78 78 86 59 62 81 89 68 56 52 52 63	LLDPSLGAVATSK
2459	TNVDAPF	4.9	70	763.3663	1	30.499	5.5	73 64 81 83 83 50 50	TNVDAPF

938	EPCAAGVGAGEPPEGAWAVT(+79.97)F	14.6	70	1048.443	2	13.371	-2.4	50 57 58 69 60 59 65 72 70 64 67 73 96 95 92 93 81 58 55 58 58	EPCAAGVGAGEPPEGAWAVT(+79.97)F
1635	TMGNAVTHAACL	8.3	70	594.7803	2	20.777	2.8	67 60 60 58 89 95 89 68 69 55 55 63	TMGNAVTHAACL
2315	SAFSTYK	4.9	70	803.3936	1	28.75	0.2	59 63 74 91 80 56 60	SAFSTYK
2080	LEPGDLLLK	6.3	70	499.3002	2	25.921	0.4	50 50 72 75 86 89 73 73 54	LEPGDLLLK
579	MVVFQCDEQF	7	70	623.2664	2	9.1	-1.8	59 59 68 95 61 65 65 92 76 50	MVVFQCDEQF
530	EDFTGPGPF	6.3	70	483.714	2	8.441	0.4	50 50 86 83 83 73 61 65 71	EDFTGPGPF
4067	M(+15.99)VTQVGTGHNK	7.6	70	594.2958	2	49.886	0.5	80 80 77 65 66 70 69 72 70 61 50	M(+15.99)VTQVGTGHNK
3356	WAVNGWGGLDL	7.6	70	594.2958	2	41.273	0	69 64 59 60 77 79 66 71 84 64 66	WAVNGWGGLDL
2909	SGNLTGLSSGENK	9	70	632.3129	2	35.908	0.7	51 51 52 64 76 68 67 72 88 87 77 78 65	SGNLTGLSSGENK
1270	NSAKPPGPVTEAM(+15.99)F	9.7	69	731.3564	2	16.895	0.9	61 62 72 87 88 78 65 52 90 72 68 58 59 55	NSAKPPGPVTEAM(+15.99)F
1989	LQDLVDK	4.9	69	415.7346	2	24.837	0.2	50 89 97 97 50 50 50	LQDLVDK
2908	GTDAGVEDFKEA	8.3	69	619.7798	2	35.898	-0.8	51 56 60 61 72 83 98 93 93 55 54 52	GTDAGVEDFKEA
1626	GLYPPVVELDGGAK	9.7	69	707.8823	2	20.676	-0.1	62 72 84 97 99 50 95 71 54 54 53 52 53 70	GLYPPVVELDGGAK
2354	VM(+15.99)CPMLGSLMV	7.6	69	598.78	2	29.228	-1.5	50 50 84 81 80 67 64 64 82 89 50	VM(+15.99)CPMLGSLMV
945	QLDLVDK	4.9	69	830.4626	1	13.448	1	50 93 93 97 50 50 50	QLDLVDK
1924	LQDLVDK	4.9	69	415.7345	2	24.056	-0.1	50 90 95 98 50 50 50	LQDLVDK
2093	RSSMVTI	4.9	69	397.2157	2	26.073	0.5	50 81 81 81 89 50 50	RSSMVTI
3336	LEAGEGALDNLGA	9	69	615.3043	2	41.028	0.4	52 54 61 71 74 82 87 94 75 66 59 60 62	LEAGEGALDNLGA
1005	VTGM(+15.99)EEEAGEA	7.6	69	1138.458	1	14.091	0.8	51 52 61 79 50 50 84 77 76 82 95	VTGM(+15.99)EEEAGEA
2499	QDDVPELVA	6.2	69	985.4835	1	30.988	-0.2	68 82 91 54 54 60 71 71 70	QDDVPELVA
1569	AFPGDNLPGVDYK	9	69	696.8431	2	20.078	-0.4	50 50 90 79 69 55 57 65 69 80 78 83 72	AFPGDNLPGVDYK
2345	QNLAGAMVQVK	7.6	69	579.82	2	29.108	2.5	57 54 79 80 60 67 70 89 66 70 65	QNLAGAMVQVK
3158	M(+15.99)VTAPSPQRNA	7.6	69	594.2955	2	38.91	0	64 67 67 74 74 79 72 59 75 68 59	M(+15.99)VTAPSPQRNA
1870	QFELDF	4.2	69	798.3674	1	23.426	0.7	50 88 88 88 50 50	QFELDF
1936	QNGLSVASTLML	8.3	69	617.329	2	24.198	-0.1	57 59 72 80 80 78 73 68 73 64 70 53	QNGLSVASTLML
4298	Y(+79.97)NNCAQA	4.9	69	432.14	2	52.752	-3	52 62 59 77 79 68 85	Y(+79.97)NNCAQA
734	QVKHELEEA	6.2	69	541.7773	2	11.051	-0.2	66 78 77 83 83 83 50 50 50	QVKHELEEA
2922	FLLNMLGLAPL	7.6	69	601.3553	2	36.066	1.6	50 80 71 68 70 81 83 70 58 58 69	FLLNMLGLAPL
2068	FSPEEI	4.2	69	721.3396	1	25.778	-0.9	50 88 88 88 50 50	FSPEEI
2280	FLNRPYCATLLVHVVY(+79.97)	11.1	69	663.3325	3	28.313	-1.7	84 81 53 54 56 58 68 72 84 90 92 88 50 57 57 57	FLNRPYCATLLVHVVY(+79.97)
1853	VNGGAGTSTSQPV	9	69	587.7889	2	23.217	0.6	70 59 68 65 59 57 56 56 76 81 66 92 92	VNGGAGTSTSQPV

1782	NLFGPGPALSQGY(+79.97)A	9.7	69	736.3326	2	22.404	-2.4	63 68 72 82 52 69 74 77 80 81 73 66 55 50	NLFGPGPALSQGY(+79.97)A
2435	LYPPASASGGGRLL	9.7	69	679.8729	2	30.209	-3.1	78 78 95 92 88 60 55 61 71 64 58 56 57 50	LYPPASASGGGRLL
1574	LEELEEELEAERA	9	69	780.3749	2	20.138	-0.5	50 50 50 50 50 50 50 99 98 98 89 90 72	LEELEEELEAERA
1920	LTTGPGHGAAASSY	9.7	69	645.3091	2	24.005	-0.9	73 76 83 74 65 66 73 77 81 77 56 57 55 50	LTTGPGHGAAASSY
1307	WLTGPVNSGTAPHR	9.7	69	498.2595	3	17.293	-1.1	66 86 58 69 68 73 55 55 69 87 91 86 50 50	WLTGPVNSGTAPHR
4033	RSPPTTAHW	6.2	69	526.767	2	49.468	-0.5	50 50 50 80 80 87 86 85 50	RSPPTTAHW
3184	LEGLDAFAVLW	7.6	69	617.3287	2	39.221	-1	52 52 57 83 73 73 82 70 70 95 50	LEGLDAFAVLW
2066	MFPTEV	4.2	69	723.3372	1	25.76	-1.4	50 50 50 88 88 88	MFPTEV
1662	FGTENDVKGLF	7.6	69	613.8062	2	21.077	-0.1	72 74 81 86 77 55 55 55 73 75 56	FGTENDVKGLF
2589	LMPYAGAKVPPK	8.3	69	424.5782	3	32.085	1.7	87 86 93 86 85 68 62 56 54 50 50 50	LMPYAGAKVPPK
1398	YGMVSSGFVA	6.9	69	1017.472	1	18.267	0.9	67 73 69 69 69 69 71 68 67 67	YGMVSSGFVA
3240	LETPGLK	4.8	69	757.4452	1	39.886	-0.2	77 76 62 63 70 83 50	LETPGLK
1860	LQDLVDK	4.8	69	415.7345	2	23.301	-0.1	50 88 96 97 50 50 50	LQDLVDK
1276	SEVEVQV	4.8	69	789.3982	1	16.964	-0.9	50 50 50 50 93 94 93	SEVEVQV
1668	NQMTGGHQTHTLM(+15.99)L	9.7	69	792.8646	2	21.145	-2.4	61 61 66 75 72 76 86 69 65 64 74 68 72 54	NQMTGGHQTHTLM(+15.99)L
3460	LLGVVAYVGHML	8.3	69	424.5785	3	42.509	2.4	95 93 69 63 61 63 78 75 60 55 61 53	LLGVVAYVGHML
3357	FSPEEI	4.2	69	721.3392	1	41.285	-1.4	50 87 87 87 50 50	FSPEEI
1511	LPNVPLAEKLPL	8.3	69	652.4026	2	19.459	-0.2	71 71 63 82 76 76 67 56 56 73 82 52	LPNVPLAEKLPL
3329	T(+79.97)GCSPGK	4.8	69	365.1364	2	40.949	2.4	66 65 76 50 71 71 82	T(+79.97)GCSPGK
2249	LEVKPEATSKGLK	9	69	467.2769	3	27.94	0.5	84 74 74 60 56 57 89 86 83 68 55 54 53	LEVKPEATSKGLK
738	KAENGVNATSA	7.6	69	531.2648	2	11.09	0.2	51 51 52 64 66 69 64 79 86 86 89	KAENGVNATSA
3551	FVKPPPYDKA	6.9	69	581.3187	2	43.594	-0.2	50 50 64 73 83 83 88 73 61 61	FVKPPPYDKA
2664	LESAPLK	4.8	69	757.4448	1	32.989	-0.7	80 77 69 64 60 74 57	LESAPLK
1539	T(+79.97)DGCQPSLGGPHPR	9.7	69	751.3171	2	19.758	1.2	67 67 71 73 61 79 81 81 77 71 68 65 50 50	T(+79.97)DGCQPSLGGPHPR
1785	LPVLHKEVVPPAGRPW	11.1	69	599.0166	3	22.444	-1.2	50 50 50 82 72 70 74 76 91 96 92 77 62 55 52 50	LPVLHKEVVPPAGRPW
586	QPGSTKPL	5.5	69	414.2342	2	9.184	-1.3	64 67 78 68 66 68 81 57	QPGSTKPL
772	TEAPLNPK	5.5	69	869.4719	1	11.489	-0.8	77 76 88 77 78 54 50 50	TEAPLNPK
3831	TM(+15.99)LHDCFHRQF	7.6	69	725.8198	2	46.997	-2.2	71 73 90 88 89 55 55 55 62 56 62	TM(+15.99)LHDCFHRQF
3575	FACGSDFA	5.5	69	409.1621	2	43.886	-1.9	50 63 63 70 84 84 84 50	FACGSDFA
184	T(+79.97)WNTPA	4.1	69	385.15	2	2.768	1.4	50 93 84 84 50 50	T(+79.97)WNTPA
2492	WVLAQMDL	5.5	69	488.2532	2	30.903	2.4	50 99 97 64 52 52 76 59	WVLAQMDL

671	EEKFPT(+79.97)NQPFAPA	9	69	778.3463	2	10.275	1.6	73 71 71 57 69 82 71 56 70 66 74 66 65	EEKFPT(+79.97)NQPFAPA
1942	DLLLGAVL	5.5	69	813.5079	1	24.274	-0.2	80 80 96 59 57 52 52 74	DLLLGAVL
2598	QADNGHGA	5.5	69	385.1646	2	32.187	-0.6	63 72 66 73 82 72 72 50	QADNGHGA
3065	Y(+79.97)CGEALFAETLWVK	9.7	69	570.5939	3	37.781	1.6	50 68 65 66 75 69 68 86 90 87 83 51 52 51	Y(+79.97)CGEALFAETLWVK
2253	LQDLVDK	4.8	69	415.7348	2	27.993	0.7	50 86 96 98 50 50 50	LQDLVDK
2999	TSAAMGKK	5.5	69	397.2159	2	36.994	1.1	50 50 93 86 84 86 50 50	TSAAMGKK
4230	M(+15.99)DPTYY(+79.97)	4.1	69	443.14	2	51.865	-1	50 62 66 79 82 72	M(+15.99)DPTYY(+79.97)
3928	LLRWPAQPYK	6.9	69	424.5793	3	48.194	-1.8	84 86 78 54 58 69 65 65 70 56	LLRWPAQPYK
589	S(+79.97)NNDGPA	4.8	69	377.6229	2	9.228	-2.4	72 64 67 80 73 74 50	S(+79.97)NNDGPA
1008	CRWDLVPQLST(+79.97)K	8.3	69	763.3662	2	14.122	1.2	54 54 51 67 70 80 80 78 80 75 76 58	CRWDLVPQLST(+79.97)K
771	SPPSNDL	4.8	69	729.3408	1	11.48	-0.7	50 50 87 85 64 82 61	SPPSNDL
1394	CHLLSFM(+15.99)L	5.5	69	979.4726	1	18.233	-1.4	50 95 95 82 73 51 52 50	CHLLSFM(+15.99)L
2207	VVKGSK	4.1	69	309.2033	2	27.427	2.2	50 72 76 80 82 50	VVKGSK
723	LEEAGEEHAA	6.9	69	528.2344	2	10.917	-2.3	50 50 97 94 76 64 77 77 50 50	LEEAGEEHAA
2121	LQDLVDK	4.8	69	415.7342	2	26.406	-0.7	50 87 94 98 50 50 50	LQDLVDK
2520	DYNPSLLGGGVMQRLPV	11.7	69	908.4757	2	31.234	1.1	57 52 52 53 82 96 86 84 84 71 76 77 61 54 61 67 50	DYNPSLLGGGVMQRLPV
3120	LELLEWGGL	6.2	69	515.2859	2	38.446	3.1	54 66 95 90 54 77 59 63 57	LELLEWGGL
3069	M(+15.99)TLDHGNATEMSK	9	69	725.8201	2	37.833	2	69 71 87 78 75 77 60 56 58 88 59 60 50	M(+15.99)TLDHGNATEMSK
3984	LKDPTELK	5.5	69	472.2753	2	48.867	-2.7	68 68 85 86 81 54 54 51	LKDPTELK
1578	TLDVGKMGGLTCAATEVVPA	13.8	69	644.9966	3	20.172	-0.9	79 75 67 65 55 53 55 63 58 62 84 61 58 55 60 85 87 82 82 82	TLDVGKMGGLTCAATEVVPA
4068	LQGEVEDL	5.5	69	902.447	1	49.897	0.5	54 52 65 66 80 85 96 50	LQGEVEDL
2892	SAFPPNTARNDYK	9	69	740.8611	2	35.698	-2	50 50 64 95 73 66 76 87 75 65 64 65 59	SAFPPNTARNDYK
1732	SSLPLAGL	5.5	69	757.4467	1	21.84	1.7	50 50 75 73 77 83 89 50	SSLPLAGL
1181	KKPTTLW	4.8	69	437.264	2	15.939	1.7	50 60 57 59 85 94 74	KKPTTLW
3748	VSVLAM(+15.99)GPW	6.2	69	488.2532	2	45.982	2.4	59 59 72 99 78 61 62 76 50	VSVLAM(+15.99)GPW
994	RCNVHWAVAKS(+79.97)K	8.3	69	493.573	3	13.969	-2.9	62 57 57 60 69 93 88 80 70 64 64 58	RCNVHWAVAKS(+79.97)K
2120	LYHVLSCAPPEK	8.3	69	678.8541	2	26.395	2.2	51 72 65 94 70 76 76 93 50 59 59 55	LYHVLSCAPPEK
1330	EDELAAGVVK	6.9	69	1030.541	1	17.538	-0.2	50 79 82 82 83 59 58 58 82 50	EDELAAGVVK
4193	LLDPRPNRYK	6.9	69	424.5784	3	51.415	-0.9	78 82 78 74 68 69 64 64 54 53	LLDPRPNRYK
2187	LQDLVDK	4.8	69	415.7339	2	27.195	-1.5	50 86 95 97 50 50 50	LQDLVDK
2451	KPMLVPYDAK	6.9	69	581.3206	2	30.406	0.3	53 54 53 59 50 99 97 77 77 65	KPMLVPYDAK

2609	YPPVVTDGLGQV	8.3	69	622.83	2	32.324	0.5	98 98 98 50 50 83 80 55 52 54 51 52	YPPVVTDGLGQV
1520	LEELEEELEAER	8.3	69	744.8567	2	19.562	-0.1	50 50 50 50 50 50 50 99 98 96 95 82	LEELEEELEAER
2206	FSPEEL	4.1	69	721.3408	1	27.418	0.8	50 87 87 87 50 50	FSPEEL
2256	LLNPVMGGTVGEL	8.9	69	650.3536	2	28.023	1.8	74 74 61 66 67 79 79 82 73 62 54 58 60	LLNPVMGGTVGEL
1482	LADLGL	4.1	69	601.3551	1	19.166	-0.7	55 54 69 88 94 50	LADLGL
1434	FEPVLGGRAGKGW	8.9	69	687.3704	2	18.659	0.9	93 93 93 72 61 69 60 57 58 60 58 61 52	FEPVLGGRAGKGW
3249	LLDLLAGATQEK	8.3	69	424.578	3	40.002	-0.6	66 67 63 62 78 82 89 88 69 51 53 51	LLDLLAGATQEK
1193	KLLVYLGCVGS(+79.97)PK	8.9	69	486.259	3	16.067	-0.7	53 53 63 61 82 76 76 82 80 83 79 50 50	KLLVYLGCVGS(+79.97)PK
992	LAEQDEEMEKLK	8.3	69	488.2415	3	13.955	0.4	55 57 66 56 66 78 50 96 82 78 85 50	LAEQDEEMEKLK
2351	WVHTCTHAETLHEF	9.6	69	570.928	3	29.182	0.1	50 50 81 69 59 56 57 89 93 83 71 66 67 66	WVHTCTHAETLHEF
629	TYASTCSCAVHKA	8.9	69	671.3	2	9.755	0.2	55 57 63 55 53 50 96 94 90 90 75 50 58	TYASTCSCAVHKA
3014	WGLLVPYDKA	6.9	69	581.3188	2	37.176	0	54 53 59 88 50 98 96 68 58 57	WGLLVPYDKA
1997	TNVAMEV	4.8	69	763.3642	1	24.933	-1.7	66 60 78 86 67 60 60	TNVAMEV
2568	M(+15.99)MPVPETL	5.5	69	933.4412	1	31.822	-0.9	50 92 92 73 69 67 50 52	M(+15.99)MPVPETL
670	LATDAM(+15.99)A	4.8	69	708.3221	1	10.266	-1.6	66 66 82 80 83 50 50	LATDAM(+15.99)A
1304	ASMGQLNV	5.5	69	819.4036	1	17.269	0.9	50 85 84 68 57 64 70 69	ASMGQLNV
1872	LTWEPPLLDNSVPK	9.6	69	804.9359	2	23.444	0.8	50 50 66 79 93 62 69 80 80 60 66 67 75 58	LTWEPPLLDNSVPK
2024	WPEGMFGPPGY	7.6	69	619.2695	2	25.258	-2.3	50 79 61 60 63 62 68 92 89 75 50	WPEGMFGPPGY
1710	FKAGHQFPI	6.2	69	522.7847	2	21.597	-0.2	60 55 58 67 78 76 76 95 50	FKAGHQFPI
1260	LKVSLVPLLDY	7.6	69	630.3834	2	16.781	-1.1	57 57 75 50 50 50 90 95 86 81 58	LKVSLVPLLDY
2854	WLLCLVGMLW	6.9	69	617.3293	2	35.245	-0.7	63 63 57 80 78 64 64 64 85 63	WLLCLVGMLW
1691	MPASGSKDKA	6.9	69	496.2476	2	21.4	0.3	59 74 69 74 63 62 65 72 77 66	MPASGSKDKA
1988	FEPPAVGAGTVTVL	9.6	69	679.3715	2	24.827	-0.2	97 97 97 68 65 63 72 69 59 58 55 51 52 50	FEPPAVGAGTVTVL
1211	DRPGGGGFQEK	7.6	69	1147.552	1	16.252	2.2	82 65 63 66 55 57 82 87 68 63 63	DRPGGGGFQEK
4015	YLTATAKVLYLMV	8.9	69	495.9495	3	49.254	-3	76 76 79 70 74 73 68 68 84 53 59 53 53	YLTATAKVLYLMV
3869	LPVKLKRVRVL	7.6	69	660.9625	2	47.461	-1.8	50 50 92 87 86 86 77 73 50 50 50	LPVKLKRVRVL
3647	DYHVS(+79.97)M(+15.99)T(+79.97)SWW	6.9	69	496.4729	3	44.753	-46.8	73 81 67 86 50 78 78 53 58 58	DYHVS(+79.97)M(+15.99)T(+79.97)SWW
3176	FEPGEEKAPLLK	8.2	69	679.3711	2	39.126	-0.8	95 94 91 75 61 62 62 66 61 50 50 50	FEPGEEKAPLLK
3966	KNVPVER	4.8	69	421.25	2	48.646	4.4	50 76 83 84 61 62 61	KNVPVER
4275	LS(+79.97)FCAY(+79.97)LY(+79.97)	5.5	69	610.1829	2	52.44	0.1	50 72 72 72 62 74 62 81	LS(+79.97)FCAY(+79.97)LY(+79.97)
1814	YPGCGAPANGM(+15.99)GNTK	10.3	69	727.3126	2	22.774	-1.3	75 78 69 59 63 73 70 68 65 73 75 65 63 67 61	YPGCGAPANGM(+15.99)GNTK

1090	SELEEELK	5.5	69	488.7453	2	14.997	0	70 70 96 50 50 76 76 58	SELEEELK
741	TQTDCASV	5.5	69	824.3441	1	11.133	-1.7	74 73 63 59 63 81 81 50	TQTDCASV
166	DAAPGGW	4.8	69	337.15	2	2.536	-1.8	52 52 64 80 88 92 50	DAAPGGW
3179	KS(+79.97)PPSLVADNDLVPRK	11	69	908.4715	2	39.155	-0.4	54 59 62 78 50 87 67 67 81 80 93 93 66 51 51 52	KS(+79.97)PPSLVADNDLVPRK
2985	LLDPLSGATEKK	8.2	69	424.5786	3	36.833	0.6	73 76 68 66 60 65 80 91 72 56 58 52	LLDPLSGATEKK
1042	YLPDGSPPA	6.2	69	916.4417	1	14.492	0.7	50 92 86 82 80 74 50 50 50	YLPDGSPPA
3725	RAWSLMGQLSPS(+79.97)I	8.9	69	763.365	2	45.706	-0.4	50 69 61 71 71 76 78 76 91 92 50 50 50	RAWSLMGQLSPS(+79.97)I
1894	LPVLYPSVLDLKFY	9.6	69	833.9749	2	23.709	-1.8	50 50 50 99 99 99 50 86 85 69 65 50 50 50	LPVLYPSVLDLKFY
1406	ELPDGQVL	5.5	69	870.4559	1	18.36	-0.8	50 90 63 61 62 56 75 87	ELPDGQVL
2291	HESGHGLV	5.5	69	835.4033	1	28.453	-2.8	50 94 94 88 60 54 54 50	HESGHGLV
3588	FLAGNCGL	5.5	69	397.6969	2	44.044	0.2	50 96 81 74 69 52 53 68	FLAGNCGL
3006	DVCMPALVTL	6.9	69	531.2732	2	37.074	2	80 76 66 58 56 63 73 71 80 57	DVCMPALVTL
4074	LEGLVASM(+15.99)VLW	7.5	69	617.3292	2	49.967	-3	51 51 56 83 71 68 71 77 78 92 50	LEGLVASM(+15.99)VLW
2424	TSALPLGV	5.5	69	757.4452	1	30.071	-0.2	50 50 91 83 74 70 76 50	TSALPLGV
3048	RLGYSLAVDFVMANLF	11	69	908.4747	2	37.575	-2.3	52 51 52 67 84 92 58 58 71 75 69 67 67 73 77 75	RLGYSLAVDFVMANLF
1868	MMTLEV	4.1	69	723.3396	1	23.408	-2.7	64 66 70 63 76 69	MMTLEV
3197	LEELEGSNLENEL	8.9	68	744.8568	2	39.373	0.1	50 50 50 93 91 73 68 68 92 80 57 60 51	LEELEGSNLENEL
1698	ERLLEDLS(+79.97)LPDSGCF	10.3	68	887.3915	2	21.471	-0.3	53 53 64 87 88 84 72 72 76 67 68 69 56 56 57	ERLLEDLS(+79.97)LPDSGCF
936	QLPCGASGAHPAEQLK	11	68	803.9052	2	13.34	1.7	61 64 58 62 82 81 75 77 83 84 50 74 73 54 57 52	QLPCGASGAHPAEQLK
2241	VHRSDVFDVALSDSRL	10.9	68	908.4725	2	27.846	1.7	50 50 66 65 66 78 79 77 67 66 83 86 80 60 62 52	VHRSDVFDVALSDSRL
3466	KGMTCTGVKPGEL	8.9	68	660.838	2	42.582	2.9	50 51 55 69 72 71 71 76 75 64 60 79 90	KGMTCTGVKPGEL
804	YPPAGPA	4.8	68	672.3347	1	11.859	-0.6	90 90 75 58 56 58 50	YPPAGPA
1758	WLLASAHPSHF	7.5	68	633.3248	2	22.127	-0.1	50 50 68 77 73 81 86 50 71 71 71	WLLASAHPSHF
2330	LQGEVEDI	5.5	68	902.4454	1	28.941	-1.2	62 57 60 60 76 85 93 50	LQGEVEDI
970	LKLFPPCTAADKK	8.9	68	477.9394	3	13.718	0.8	51 53 55 69 87 84 70 64 62 63 68 86 69	LKLFPPCTAADKK
3744	FSPEEI	4.1	68	721.34	1	45.931	-0.3	50 86 86 86 50 50	FSPEEI
2835	LQDLVDK	4.8	68	415.7341	2	35.022	-1	50 85 95 95 50 50 50	LQDLVDK
568	HQPAS(+79.97)AY(+79.97)	4.8	68	467.149	2	8.966	0.5	62 61 65 72 74 74 68	HQPAS(+79.97)AY(+79.97)
2432	NNCLAGGPGGSLK	8.9	68	594.2951	2	30.178	-0.6	80 70 70 69 63 56 55 54 71 84 70 66 75	NNCLAGGPGGSLK
511	M(+15.99)EGQENM(+15.99)YGTR	7.5	68	674.27	2	8.146	1.7	50 87 84 69 79 58 65 57 69 72 56	M(+15.99)EGQENM(+15.99)YGTR
355	T(+79.97)GAGNNR	4.8	68	385.1531	2	5.448	0.2	53 53 67 79 81 91 50	T(+79.97)GAGNNR

1542	KEEDQLL	4.8	68	437.729	2	19.784	-0.9	50 50 90 80 69 86 50	KEEDQLL
4007	S(+79.97)GHGDCV	4.8	68	377.6149	2	49.16	-0.1	50 80 81 78 68 58 61	S(+79.97)GHGDCV
4096	YLPWRTHKEK	6.8	68	679.3719	2	50.23	-0.6	87 86 96 69 67 59 57 52 53 52	YLPWRTHKEK
2325	TPRGRAGSFPLL	8.2	68	424.5785	3	28.876	-0.8	53 61 61 64 71 82 85 80 81 75 50 51	TPRGRAGSFPLL
2381	TGSAKPGDA	6.1	68	803.3917	1	29.551	2.9	66 67 79 72 69 71 68 67 50	TGSAKPGDA
4247	SSS(+79.97)AGCDA	5.5	68	389.11	2	52.078	0.9	50 87 82 67 66 71 69 50	SSS(+79.97)AGCDA
1455	NQLADPF	4.8	68	804.3931	1	18.888	5.6	58 55 78 62 61 80 80	NQLADPF
304	T(+79.97)EAGR	3.4	68	307.12	2	4.648	-2.2	50 80 78 81 50	T(+79.97)EAGR
3713	FPAPMPFKLW	6.8	68	617.3289	2	45.557	1.3	50 50 84 83 90 50 66 66 79 61	FPAPMPFKLW
2408	LEAGEQLDGGLGA	8.9	68	615.3049	2	29.879	1.5	53 54 60 70 71 75 92 80 65 62 64 66 69	LEAGEQLDGGLGA
2930	DPTGEAGLDNLK	8.2	68	615.3038	2	36.169	-0.4	58 61 56 59 62 76 79 91 83 66 67 55	DPTGEAGLDNLK
1842	ACCPGPF	4.8	68	347.6371	2	23.09	-2.4	50 50 50 50 91 91 91	ACCPGPF
1935	QVFLPV	4.1	68	702.4183	1	24.189	-0.3	82 82 93 50 50 50	QVFLPV
1254	TNVADML	4.8	68	763.3654	1	16.709	-0.2	67 64 80 75 64 69 55	TNVADML
3374	YLPPVVELGDGAK	8.9	68	679.3719	2	41.489	0.4	88 87 96 50 50 76 74 71 68 57 51 51 63	YLPPVVELGDGAK
451	MPACNSF	4.8	68	385.1534	2	7.177	-1.5	50 50 87 82 72 83 50	MPACNSF
3940	T(+79.97)PGS(+79.97)LNGCY	6.1	68	536.1656	2	48.333	-1.3	84 85 68 66 63 62 66 66 50	T(+79.97)PGS(+79.97)LNGCY
1955	LDMGFDI	4.8	68	810.3692	1	24.425	-1.2	71 71 86 95 50 50 50	LDMGFDI
1451	LLTLGGELAT(+79.97)A	7.5	68	569.793	2	18.841	2.9	53 53 62 73 71 73 77 79 76 77 50	LLTLGGELAT(+79.97)A
3532	HLLKGCSLCMEHA	8.9	68	721.3401	2	43.368	-1.3	51 51 61 62 64 73 93 91 92 93 50 50 50	HLLKGCSLCMEHA
688	M(+15.99)EGAM(+15.99)TNF	5.5	68	932.3486	1	10.495	-0.2	50 88 75 63 62 67 67 71	M(+15.99)EGAM(+15.99)TNF
2519	LQDLVDK	4.8	68	415.7349	2	31.225	1	50 83 95 96 50 50 50	LQDLVDK
2338	FSPEEL	4.1	68	721.3395	1	29.029	-1.1	50 85 85 85 50 50	FSPEEL
2457	LLKNVAYKHW	6.8	68	424.5789	3	30.481	-2.9	81 64 57 56 63 61 65 74 74 81	LLKNVAYKHW
2586	NQKTPMDGLEAER	8.9	68	744.8561	2	32.041	-4.1	53 51 52 55 55 57 71 81 91 93 81 79 62	NQKTPMDGLEAER
1544	KVTEEMAVGLCETYKHR	11.6	68	665.3309	3	19.813	-2.6	56 57 66 75 71 66 66 60 65 80 86 92 86 69 55 50 50	KVTEEMAVGLCETYKHR
2192	LMPYAGAVPPKK	8.2	68	424.5784	3	27.255	2.2	58 59 82 79 77 71 71 78 79 54 54 50	LMPYAGAVPPKK
3766	FLQPTVS(+79.97)TFPHTSK	9.5	68	835.4041	2	46.196	1.4	60 55 54 74 75 84 82 83 68 54 59 60 89 50	FLQPTVS(+79.97)TFPHTSK
3053	WLLGYDTLGPV	7.5	68	617.3288	2	37.64	-0.8	63 63 57 64 64 77 88 77 57 58 77	WLLGYDTLGPV
3201	M(+15.99)TLHDQTNEMSK	8.2	68	725.8203	2	39.424	2.2	74 76 82 66 65 61 57 57 82 65 73 53	M(+15.99)TLHDQTNEMSK
3456	LVACGMPALA	6.8	68	473.2481	2	42.457	-0.6	91 70 64 65 73 63 61 63 63 65	LVACGMPALA

2184	M(+15.99)DLGSNSPDAAPL	8.9	68	652.2967	2	27.151	2.1	62 60 58 53 52 59 85 74 64 66 72 86 87	M(+15.99)DLGSNSPDAAPL
1431	LEALYPEAYGVLPL	9.5	68	516.6163	3	18.633	-0.7	80 58 55 51 56 56 74 76 86 86 89 79 50 51	LEALYPEAYGVLPL
3323	TNVADML	4.8	68	763.3652	1	40.881	-0.4	73 69 83 66 62 67 53	TNVADML
1478	WEYAHGPATLLSTRTL	10.9	68	605.986	3	19.132	2.7	74 56 56 58 57 54 56 75 75 87 95 80 67 58 79 57	WEYAHGPATLLSTRTL
1176	YEKKAGDAAELEKAW	10.2	68	854.9328	2	15.884	2.6	50 53 51 78 70 69 65 68 79 81 93 90 58 59 50	YEKKAGDAAELEKAW
3186	QMEDGMASPTLEK	8.9	68	718.823	2	39.242	-0.6	67 71 80 73 71 70 75 78 72 56 54 59 54	QMEDGMASPTLEK
1302	QVCESADVNQQPSPK	10.2	68	815.3782	2	17.237	-2.7	65 71 53 52 53 78 95 96 83 79 58 58 57 62 54	QVCESADVNQQPSPK
625	SAEEI	3.4	68	548.2562	1	9.698	-0.1	75 75 88 50 50	SAEEI
3824	VSGKVK	4.1	68	309.2032	2	46.917	1.6	81 73 72 66 63 50	VSGKVK
1044	ASLDNGCRAL	6.8	68	510.2507	2	14.508	0.2	50 50 97 96 83 63 56 61 67 54	ASLDNGCRAL
1493	GWLLPVYDKA	6.8	68	581.3191	2	19.271	0.5	54 53 64 69 91 50 94 73 64 64	GWLLPVYDKA
2639	M(+15.99)LDPPMTL	5.4	68	933.4429	1	32.691	0.9	50 79 76 81 62 62 72 58	M(+15.99)LDPPMTL
2591	ELGLADVAFLW	7.5	68	617.3297	2	32.104	0.7	54 54 59 84 57 55 57 57 75 96 96	ELGLADVAFLW
2658	LVSLDMTVGLW	7.5	68	617.3294	2	32.917	-2.6	50 50 50 85 79 66 65 66 73 90 69	LVSLDMTVGLW
2996	FQGS(+79.97)KLDNLK	6.8	68	615.3	2	36.963	0.2	57 56 65 79 96 85 81 53 53 51	FQGS(+79.97)KLDNLK
3549	SVVLAGM(+15.99)PW	6.1	68	488.2532	2	43.573	2.4	52 52 60 94 61 52 54 88 94	SVVLAGM(+15.99)PW
4165	NSGLESTTGWVI	8.2	68	632.3134	2	51.064	-1.5	51 54 58 86 84 76 71 73 73 85 50 50	NSGLESTTGWVI
785	TYTYLF	4.1	68	807.3909	1	11.637	-1.7	50 50 80 62 74 89	TYTYLF
1206	NPPQPASEGGGQPGK	10.2	68	710.8445	2	16.197	0.2	59 88 93 75 69 61 60 72 78 67 62 54 61 63 50	NPPQPASEGGGQPGK
1685	TSNNGAGPGGNW	8.2	68	566.2457	2	21.33	2.5	66 65 60 65 71 69 73 76 80 65 64 55	TSNNGAGPGGNW
2268	MPQAEPCTADVSK	8.8	68	688.8118	2	28.171	-1.5	72 64 55 67 78 73 58 53 55 78 84 90 50	MPQAEPCTADVSK
2933	FLVPVESDNPK	7.5	68	622.8295	2	36.201	-0.3	50 50 50 95 94 81 79 71 59 64 50	FLVPVESDNPK
1508	NHHGSLAQSSNYPATGR	11.6	68	599.6184	3	19.436	-0.8	63 63 53 52 52 58 61 60 94 97 88 85 86 73 52 52 60	NHHGSLAQSSNYPATGR
893	GQTVAPGNNV	6.8	68	956.4781	1	12.862	-1.5	58 55 82 90 76 74 82 53 53 54	GQTVAPGNNV
748	SSCYPVHL	5.4	68	905.4203	1	11.213	2	50 93 81 81 85 50 50 50	SSCYPVHL
1288	GLPPGGMLCL	6.8	68	479.2482	2	17.092	-0.4	67 60 60 79 79 78 65 64 71 52	GLPPGGMLCL
2397	QASGSS(+79.97)GK	5.4	68	401.1599	2	29.75	-1.7	70 78 82 91 50 68 50 50	QASGSS(+79.97)GK
2322	LLKDPEATSGLKK	8.8	68	467.2765	3	28.832	-0.3	62 66 64 61 66 93 91 83 56 53 54 78 50	LLKDPEATSGLKK
4142	SNPSPGHPGAAGGAAGLKK	12.9	68	558.629	3	50.778	0.3	74 69 78 74 53 54 59 69 66 65 74 76 82 82 71 63 61 61 51	SNPSPGHPGAAGGAAGLKK
1256	LRSAQFCGRDLSVGY	10.2	68	836.4166	2	16.739	-0.7	53 54 57 60 60 81 71 68 75 79 90 79 65 65 55	LRSAQFCGRDLSVGY
2386	FPKPVPYDKA	6.8	68	581.3184	2	29.614	-0.7	50 51 51 75 50 99 98 75 63 63	FPKPVPYDKA

2584	LQDLVDK	4.8	68	415.7342	2	32.021	-0.9	50 83 94 95 50 50 50	LQDLVDK
780	DDYVDA	4.1	68	697.267	1	11.577	-0.6	50 50 50 85 85 85	DDYVDA
399	S(+79.97)S(+79.97)DGAT(+79.97)GF	5.4	68	491.1042	2	6.267	-2.7	50 50 89 87 79 67 63 54	S(+79.97)S(+79.97)DGAT(+79.97)GF
3315	LDALGEFGLLW	7.5	68	617.3292	2	40.787	-0.1	51 50 51 78 77 78 66 61 73 93 63	LDALGEFGLLW
2272	FSPEEL	4.1	68	721.3392	1	28.223	-1.5	50 85 85 85 50 50	FSPEEL
546	TM(+15.99)NNTCT(+79.97)GK	6.1	68	533.1906	2	8.65	0	74 71 51 52 61 77 71 77 73	TM(+15.99)NNTCT(+79.97)GK
3225	FSPEEI	4.1	68	721.34	1	39.71	-0.4	50 85 85 85 50 50	FSPEEI
2686	MCGSCSM(+15.99)AK	6.1	68	467.1676	2	33.255	-2	76 74 82 50 50 80 60 78 55	MCGSCSM(+15.99)AK
1808	DALLVGQM(+15.99)I	6.1	68	975.5154	1	22.707	-2.6	56 56 85 84 65 65 55 83 55	DALLVGQM(+15.99)I
1494	QLDLAVATTL	6.8	68	522.8007	2	19.278	0.6	58 59 64 72 80 70 66 71 84 50	QLDLAVATTL
2484	TQTQCCEAAELEGSLK	10.8	68	570.9278	3	30.794	1	55 53 56 56 67 70 72 74 94 95 87 76 69 52 51 52	TQTQCCEAAELEGSLK
1106	LDEAENI	4.7	68	803.3776	1	15.167	-0.7	50 50 50 95 93 84 50	LDEAENI
4093	LQDLVDK	4.7	68	415.7347	2	50.187	0.4	50 84 92 95 50 50 50	LQDLVDK
3333	TM(+15.99)LHDAGTENMSK	8.8	68	725.8196	2	41	1.3	67 70 89 93 90 74 60 56 56 57 55 57 50	TM(+15.99)LHDAGTENMSK
2220	FDS(+79.97)GS(+79.97)MMFDQY(+79.97)	7.5	68	523.1134	3	27.583	-44.8	50 73 71 64 67 78 50 83 69 69 68	FDS(+79.97)GS(+79.97)MMFDQY(+79.97)
2412	ELLDGTGVQVK	7.5	68	579.823	2	29.918	2	56 56 79 61 54 54 64 87 77 78 73	ELLDGTGVQVK
2452	LQDLVDK	4.7	68	415.7351	2	30.416	1.4	50 84 91 96 50 50 50	LQDLVDK
1948	LLPVLKTVNKLALYHDA	11.5	68	636.7135	3	24.343	-2.9	50 92 92 75 72 64 59 58 58 81 70 71 86 63 51 52 50	LLPVLKTVNKLALYHDA
2382	CQNNGLVNLAVLSPNFL	11.5	68	908.4739	2	29.56	-0.9	56 56 56 65 66 66 64 55 62 62 61 87 91 80 71 74 71	CQNNGLVNLAVLSPNFL
2100	VLLGTTGPAAKVEMV	10.2	68	495.9494	3	26.154	-0.4	50 53 57 72 73 54 51 53 58 83 87 82 79 80 77	VLLGTTGPAAKVEMV
870	RCGASLKGPRGGCTY	10.2	68	509.2507	3	12.603	0.8	77 79 71 54 53 64 67 68 77 93 86 55 53 57 53	RCGASLKGPRGGCTY
2182	KRGSKK	4.1	68	352.233	2	27.131	2	50 79 74 73 77 50	KRGSKK
4228	HVSCGV	4.1	68	301.1409	2	51.847	-2.7	50 50 50 84 84 84	HVSCGV
3615	ATLLAM(+15.99)GPW	6.1	68	488.2521	2	44.368	0.1	50 50 61 94 77 70 71 82 50	ATLLAM(+15.99)GPW
2314	QAAMKLGPFPVK	8.1	68	429.5822	3	28.74	2.4	65 57 57 54 54 54 68 77 90 90 91 50	QAAMKLGPFPVK
1486	RREELTGNGLLSEWR	10.2	68	908.4769	2	19.205	0.3	50 55 51 66 73 63 61 66 70 70 97 95 69 67 54	RREELTGNGLLSEWR
2060	EPDLLAGSTLKK	8.1	68	424.5784	3	25.69	0.1	50 85 82 83 86 83 69 57 54 54 53 50	EPDLLAGSTLKK
1235	FPPVYSVNSTCTGM(+15.99)HA	10.8	68	576.2586	3	16.507	2.9	62 62 62 83 65 64 65 73 63 64 81 77 74 65 66 50	FPPVYSVNSTCTGM(+15.99)HA
3600	RSAGESTTVNEI	8.1	68	632.3124	2	44.192	-0.1	55 58 68 75 81 78 74 71 66 60 61 60	RSAGESTTVNEI
683	YCFEAKEKS(+79.97)SLEAPY	10.1	68	922.8983	2	10.429	4.4	69 69 57 74 60 60 88 95 67 58 58 61 65 69 57	YCFEAKEKS(+79.97)SLEAPY
2813	YLKHVGVERWAK	8.1	68	495.9482	3	34.747	-1.6	51 69 56 81 79 83 77 69 68 56 58 58	YLKHVGVERWAK

1356	VACALLDMKV	6.8	68	531.7878	2	17.816	-0.2	56 56 55 70 86 66 63 68 84 67	VACALLDMKV
987	YSTDLKGFTLR	7.4	68	434.2335	3	13.903	-2.9	50 52 57 76 84 81 79 78 64 63 53	YSTDLKGFTLR
1764	VDCALDGLK	6.1	68	467.2387	2	22.195	-0.8	73 73 59 58 58 77 67 69 69	VDCALDGLK
3681	CHRGPFI	4.7	68	415.211	2	45.169	1.2	83 85 74 70 58 50 50	CHRGPFI
3290	MPQNGGSRLEV	7.4	68	594.2957	2	40.486	0.3	88 85 58 61 64 68 69 70 57 59 58	MPQNGGSRLEV
1738	SLTLVPA	4.7	68	700.4239	1	21.904	-0.1	50 94 60 60 69 69 69	SLTLVPA
3363	SNGLELYPNEK	7.4	68	632.3134	2	41.358	-1.5	56 55 58 85 91 81 63 75 57 63 53	SNGLELYPNEK
2292	FNMFNKTGCLGLVV	9.5	68	771.8945	2	28.462	0.6	82 77 91 73 61 70 88 66 61 57 54 51 53 53	FNMFNKTGCLGLVV
942	M(+15.99)AQMMGPPMA	6.8	68	1080.433	1	13.411	-1.9	65 65 64 86 78 66 67 78 50 50	M(+15.99)AQMMGPPMA
1683	MGEVVT(+79.97)VTCL	6.8	68	1131.484	1	21.315	1.1	69 70 83 90 50 75 65 53 65 50	MGEVVT(+79.97)VTCL
1314	QKMAKDGKELR	7.4	68	435.242	3	17.365	-2.7	54 53 59 68 63 63 84 88 74 75 57	QKMAKDGKELR
2361	TLLEHGLFAGSCAVLVW	11.5	68	605.9863	3	29.31	-1	52 52 70 72 59 55 56 63 84 81 83 88 82 72 70 50 50	TLLEHGLFAGSCAVLVW
1299	DSLSVGALLAGA	8.1	68	537.2957	2	17.208	0.5	50 50 50 69 62 58 61 80 83 74 76 91	DSLSVGALLAGA
669	EASGPI	4	67	573.2878	1	10.255	-0.1	86 83 83 50 50 50	EASGPI
2225	HESGVGHL	5.4	67	835.4035	1	27.647	-2.6	50 88 84 76 69 64 50 54	HESGVGHL
3141	M(+15.99)EALLLGHKKVCK	8.8	67	495.9484	3	38.697	1.8	74 72 62 61 69 68 62 65 84 75 61 60 56	M(+15.99)EALLLGHKKVCK
4256	DY(+79.97)LSCGDA	5.4	67	462.1465	2	52.195	0.6	50 78 87 74 67 58 71 50	DY(+79.97)LSCGDA
2058	QVEVTVK	4.7	67	401.7372	2	25.658	0.5	50 50 92 92 67 61 56	QVEVTVK
3503	MDYGTNTAVPK	7.4	67	598.7853	2	43.019	1.6	50 85 67 58 52 52 76 75 72 75 75	MDYGTNTAVPK
614	WSCNCCAAHA	6.7	67	533.1899	2	9.55	2.6	76 51 51 52 82 76 75 68 66 70	WSCNCCAAHA
921	FEEDEDGEPTLV	8.1	67	690.2948	2	13.18	-1.9	50 50 50 97 89 78 78 81 71 53 54 51	FEEDEDGEPTLV
1673	HSLGGLLVGVHI	8.1	67	601.3553	2	21.202	-1.4	50 84 83 82 73 72 73 57 58 71 50 50	HSLGGLLVGVHI
2385	LQDLVDK	4.7	67	415.7344	2	29.604	-0.3	50 81 93 94 50 50 50	LQDLVDK
2656	M(+15.99)DSVPKA	4.7	67	763.3652	1	32.899	-0.3	50 89 89 89 50 50 50	M(+15.99)DSVPKA
2544	M(+15.99)LPVVSSAGPGTL	8.8	67	622.8301	2	31.522	-2	50 50 50 97 94 87 64 57 56 66 72 75 50	M(+15.99)LPVVSSAGPGTL
2884	VFYAPGDPTMV	7.4	67	598.7856	2	35.605	-1.4	50 50 94 74 72 64 64 64 71 72 61	VFYAPGDPTMV
993	LSDDGTVEI	6.1	67	474.7301	2	13.962	0.9	50 50 95 78 71 70 59 71 57	LSDDGTVEI
3212	M(+15.99)NAYPVLLPK	6.7	67	581.319	2	39.554	-2.3	67 60 64 93 50 50 94 68 68 54	M(+15.99)NAYPVLLPK
1690	NQQLLMGAARGA	8.1	67	615.3241	2	21.39	-0.7	59 59 59 64 86 72 68 73 76 62 62 64	NQQLLMGAARGA
567	CSGHDGAHGAERVVV	10.1	67	747.35	2	8.955	0.9	50 50 61 61 64 74 71 73 82 86 90 90 52 50 50	CSGHDGAHGAERVVV
1282	RAAAAAGGGGGSEA	9.4	67	551.7665	2	17.027	2	53 65 74 74 74 77 80 88 51 51 61 66 73 50	RAAAAAGGGGGSEA

1547	LRKNGKVS(+79.97)TPPAMSSA	10.8	67	862.4318	2	19.839	0.1	50 52 58 74 74 66 67 67 89 94 74 66 66 60 58 54	LRKNGKVS(+79.97)TPPAMSSA
722	ELEHEAEER	6.1	67	381.1753	3	10.907	-0.5	50 53 53 53 92 50 84 84 84	ELEHEAEER
1452	STLEPF	4	67	693.3456	1	18.85	0.4	50 85 83 83 50 50	STLEPF
1964	KNSMPAATGMMPGQK	10.1	67	774.8712	2	24.54	1.3	66 62 68 59 59 74 79 76 74 80 81 60 56 56 53	KNSMPAATGMMPGQK
3090	NKLGGVPVHAPL	8.1	67	601.3548	2	38.083	-2.2	60 59 69 73 78 73 50 85 85 58 61 51	NKLGGVPVHAPL
2980	VCT(+79.97)GAPNAAAELEGSKL	11.4	67	570.9287	3	36.766	-3	66 70 88 68 58 56 55 56 68 87 88 85 75 63 52 50 50	VCT(+79.97)GAPNAAAELEGSKL
2831	TLLMVCCVAELETQR	10.1	67	570.2847	3	34.966	-2	52 54 56 53 56 62 75 79 93 97 95 76 51 52 50	TLLMVCCVAELETQR
1098	FAKT(+79.97)GNAEGPQA	8.1	67	635.775	2	15.073	-2.8	81 85 92 60 58 58 75 73 60 56 56 50	FAKT(+79.97)GNAEGPQA
884	NYQGALPAM(+15.99)NGSA	8.7	67	655.2964	2	12.767	1.1	51 73 60 91 86 83 77 64 56 52 53 73 50	NYQGALPAM(+15.99)NGSA
1389	DDAVTPPTVA	6.7	67	493.2457	2	18.173	0.6	60 68 67 93 50 50 50 82 74 74	DDAVTPPTVA
1172	TLPFTTGGAAGF	8.1	67	570.2908	2	15.853	1	50 50 50 53 78 85 69 65 71 75 76 81	TLPFTTGGAAGF
4212	RELCERGL	5.4	67	488.2543	2	51.643	-2.8	87 86 96 50 58 53 53 50	RELCERGL
2212	LEAGEQLDNLGA	8.1	67	615.3037	2	27.488	-0.5	51 53 53 63 67 82 97 91 68 58 59 61	LEAGEQLDNLGA
1053	LVLENPSGGPT(+79.97)AR	8.7	67	464.2293	3	14.614	0.5	50 51 63 76 65 75 78 78 89 86 53 53 51	LVLENPSGGPT(+79.97)AR
1326	GDLALAGSDDL	7.4	67	523.7533	2	17.49	-0.6	51 54 60 86 87 75 72 71 79 50 50	GDLALAGSDDL
3700	LAEGLADSELK	7.4	67	573.3065	2	45.403	0.9	68 72 82 65 57 62 69 65 62 74 58	LAEGLADSELK
2231	EQALNGESVDNEK	8.7	67	716.8311	2	27.722	0	56 55 60 62 63 65 59 69 90 89 64 76 59	EQALNGESVDNEK
1940	T(+79.97)KYAVPVLYPNRVGLLGKK	12.8	67	732.7473	3	24.252	-1.3	53 55 51 53 55 67 76 89 95 96 58 59 81 90 81 55 53 53 50	T(+79.97)KYAVPVLYPNRVGLLGKK
4157	LQDLVDK	4.7	67	415.7345	2	50.969	-0.1	50 80 93 94 50 50 50	LQDLVDK
756	AGNAVLT(+79.97)MA	6	67	927.4025	1	11.301	2.2	80 69 65 88 89 55 55 50 50	AGNAVLT(+79.97)MA
3168	M(+15.99)LMPPDTL	5.4	67	933.4404	1	39.02	-1.7	50 67 65 74 70 70 81 58	M(+15.99)LMPPDTL
3525	VVLGPGFPVGKMA	8.7	67	424.5778	3	43.29	0.8	50 74 60 58 56 67 81 81 82 77 65 57 57	VVLGPGFPVGKMA
1714	MWGKGKPEEI	6.7	67	587.8013	2	21.643	2.5	56 55 70 73 79 72 75 87 50 50	MWGKGKPEEI
3444	NKLGGLTTRNK	7.4	67	601.3554	2	42.309	2	65 63 74 71 70 76 79 59 58 64 56	NKLGGLTTRNK
1876	AVFSPLV	4.7	67	732.4284	1	23.495	-0.8	63 67 90 96 50 50 50	AVFSPLV
2640	WHVKGGGNPGFLL	8.7	67	461.2509	3	32.701	0.5	50 50 63 61 69 67 81 84 86 69 63 71 52	WHVKGGGNPGFLL
4134	NTVADML	4.7	67	763.3655	1	50.688	0.1	65 78 80 65 59 67 53	NTVADML
2780	LYPRGTEKHTR	7.4	67	679.3716	2	34.36	1.9	82 81 94 74 52 52 66 63 62 55 50	LYPRGTEKHTR
915	WADSTNEESANAKTV	10.1	67	541.5811	3	13.111	-0.2	59 55 52 53 56 56 78 91 82 74 67 88 73 57 58	WADSTNEESANAKTV
1215	ALCMVI	4	67	649.3431	1	16.3	2.9	50 50 83 83 83 50	ALCMVI
4378	NPHHVCGKPK	6.7	67	558.79	2	53.895	-0.4	54 57 68 69 83 81 70 66 68 50	NPHHVCGKPK

2309	MFNPSLVALGVGAAESPR	12.1	67	908.4745	2	28.678	-0.1	65 65 61 74 84 88 60 62 63 62 73 84 82 57 53 53 63 50	MFNPSLVALGVGAAESPR
928	RREQLMEM(+15.99)ELQK	8	67	536.2718	3	13.256	-1.9	50 57 63 54 79 81 93 80 89 51 52 50	RREQLMEM(+15.99)ELQK
2498	LDMLPYNHGK	6.7	67	594.2958	2	30.977	-2.9	57 59 63 72 74 82 72 66 70 50	LDMLPYNHGK
4184	NLEKVTV	4.7	67	401.7365	2	51.302	-1.4	50 95 78 73 60 60 50	NLEKVTV
3447	LEGLGEFGLLW	7.4	67	617.3291	2	42.354	-0.3	53 53 63 73 69 69 70 64 72 87 58	LEGLGEFGLLW
2564	M(+15.99)QPPAMVGLDL	7.4	67	594.2955	2	31.781	3.4	53 52 52 60 66 76 67 72 88 96 50	M(+15.99)QPPAMVGLDL
3161	TSALPLGV	5.4	67	757.4448	1	38.94	-0.7	50 50 92 83 71 65 72 50	TSALPLGV
4196	LLDLLKATEVER	8	67	467.2773	3	51.448	1.4	60 61 54 52 69 76 88 84 81 57 58 57	LLDLLKATEVER
2057	MMAMHKKTAPLGDRVF	10.7	67	611.6506	3	25.646	2.2	51 52 53 60 64 81 81 78 76 74 71 73 73 63 64 50	MMAMHKKTAPLGDRVF
1262	VQLENI	4	67	715.3984	1	16.813	0	57 55 92 94 50 50	VQLENI
2706	KY(+79.97)YPGLLHLMAAM(+15.99)YV	10	67	933.4421	2	33.495	2.2	66 63 55 62 74 78 88 92 86 66 60 52 52 53 50	KY(+79.97)YPGLLHLMAAM(+15.99)YV
606	WAPEEEVLEEEPCR	9.4	67	858.3821	2	9.451	-0.6	50 52 53 68 85 65 67 84 88 93 50 75 50 50	WAPEEEVLEEEPCR
3998	TM(+15.99)LDKGHSAECDK	8.7	67	725.8201	2	49.045	2	68 68 74 65 64 66 64 75 76 80 53 60 52	TM(+15.99)LDKGHSAECDK
1809	AVFSPLV	4.7	67	732.4296	1	22.716	0.7	61 67 90 97 50 50 50	AVFSPLV
2494	FLTLTCGFVGSCAKKQL	11.4	67	605.9865	3	30.925	-2.5	57 56 57 69 66 66 69 75 71 70 72 93 86 71 50 50 50	FLTLTCGFVGSCAKKQL
2453	LAENLDSSSLGAQLQK	10.7	67	558.6299	3	30.425	2.8	60 60 58 57 64 67 67 56 83 81 83 83 58 67 63 56	LAENLDSSSLGAQLQK
2128	SQVADML	4.7	67	763.3649	1	26.486	-0.8	66 62 76 82 63 65 51	SQVADML
1161	RTKANGREKV	6.7	67	386.8957	3	15.73	2.1	50 50 52 53 61 63 70 90 80 95	RTKANGREKV
3634	MNSYPVPKLL	6.7	67	581.3189	2	44.595	-2.5	72 68 87 95 50 50 61 63 66 52	MNSYPVPKLL
2501	KNKKET(+79.97)GVTMHHRRW	10	67	663.3328	3	31.008	2	54 54 60 61 61 55 62 62 74 84 90 73 73 60 73	KNKKET(+79.97)GVTMHHRRW
1286	VVVPGALLGSHKHA	9.4	67	462.273	3	17.074	-1	70 70 70 66 66 63 65 57 58 71 72 76 61 63	VVVPGALLGSHKHA
4085	KKRGPV	4	67	342.73	2	50.102	1.9	50 50 78 79 91 50	KKRGPV
2692	RTKPGSPVGMARTK	9.4	67	495.9488	3	33.329	0.1	52 55 56 55 62 78 78 83 82 83 75 62 56 50	RTKPGSPVGMARTK
2934	RCEAQGCGENNK	8	67	654.7764	2	36.211	2.8	50 86 86 83 55 59 63 68 56 56 65 68	RCEAQGCGENNK
1281	ALFPKLSKT(+79.97)LF	7.3	67	448.917	3	17.019	2.9	50 50 50 89 85 84 82 77 58 54 51	ALFPKLSKT(+79.97)LF
2141	FSPEEL	4	67	721.3397	1	26.64	-0.8	50 83 83 83 50 50	FSPEEL
2585	DYNPSLVALRGAQCLPV	11.4	67	908.4727	2	32.03	-2.2	54 53 57 62 92 93 75 74 68 68 71 69 62 64 58 57 50	DYNPSLVALRGAQCLPV
2618	NSGGCGTPL	6	67	403.18	2	32.439	2.3	50 69 77 78 64 64 70 74 50	NSGGCGTPL
1034	AFEQNQDA	5.3	67	922.3879	1	14.411	-2.4	50 50 88 66 63 61 83 69	AFEQNQDA
1791	EVVGLL	4	67	629.3866	1	22.518	-0.4	50 65 65 52 75 90	EVVGLL
1464	LAGNGEML	5.3	67	804.3929	1	18.976	1.2	67 63 67 71 67 66 79 50	LAGNGEML

2524	QSVADML	4.7	67	763.3657	1	31.289	0.2	70 70 78 68 60 65 54	QSVADML
714	SPGDPVSR	5.3	67	407.7058	2	10.805	-1.2	50 84 82 81 83 50 50 50	SPGDPVSR
1756	RHDLGLGALKKLNQL	10	67	838.5029	2	22.106	1.2	50 63 55 64 63 67 72 72 80 83 73 69 60 62 61	RHDLGLGALKKLNQL
1403	LACACVPVGF	6.7	67	490.2402	2	18.322	-0.9	53 53 66 94 83 83 79 50 50 50	LACACVPVGF
2690	MPGLAM(+15.99)GAVL	6.7	67	488.2535	2	33.309	-0.4	55 72 79 96 70 62 59 57 54 57	MPGLAM(+15.99)GAVL
2202	WHPSVAGGAAENQGLSK	11.3	67	570.2841	3	27.364	-1.4	50 50 50 80 80 72 66 61 81 97 84 80 63 55 52 52 53	WHPSVAGGAAENQGLSK
2320	LQDLVDK	4.7	67	415.735	2	28.813	1.2	50 78 92 93 50 50 50	LQDLVDK
1006	LRQNGGATCLDPGK	9.3	67	715.3647	2	14.101	0.4	53 53 56 58 69 55 54 53 55 92 86 73 81 88	LRQNGGATCLDPGK
1318	WETTQSLLGLNQVVDLR	11.3	67	658.0201	3	17.41	-1.9	62 56 55 56 55 81 93 90 89 87 77 51 51 57 54 58 53	WETTQSLLGLNQVVDLR
2177	DVLCKAATGPAVLSPNM(+15.99)L	12	67	908.4733	2	27.07	2.8	51 54 61 66 63 75 61 60 66 77 78 77 93 77 71 55 55 51	DVLCKAATGPAVLSPNM(+15.99)L
3803	S(+79.97)NDDT(+79.97)CCCGY(+79.97)	6.7	67	660.5765	2	46.652	-45.4	69 70 75 87 66 80 56 55 55 50	S(+79.97)NDDT(+79.97)CCCGY(+79.97)
1928	TLCTATGELAML	8	67	612.3026	2	24.108	-2.5	58 58 68 79 72 56 57 65 85 70 71 55	TLCTATGELAML
1994	LLDYAGARHKK	7.3	67	424.5776	3	24.901	-2.7	67 74 73 76 74 61 65 71 66 50 50	LLDYAGARHKK
3995	S(+79.97)PVLEV	4	67	723.3375	1	49.015	7	50 50 96 68 68 65	S(+79.97)PVLEV
1301	ARSANPCGEAEKEK	9.3	67	745.3552	2	17.227	-2.1	55 57 62 55 54 59 87 86 81 78 81 58 58 53	ARSANPCGEAEKEK
3935	MM(+15.99)PVPAAAV	6	67	902.4468	1	48.273	-0.6	50 50 50 88 88 78 70 70 50	MM(+15.99)PVPAAAV
3581	M(+15.99)M(+15.99)S(+79.97)CEPVY	5.3	67	536.1649	2	43.96	-0.7	50 50 67 67 69 88 88 50	M(+15.99)M(+15.99)S(+79.97)CEPVY
4034	ST(+79.97)TSGCVTAHGAAANLK	11.3	67	834.8754	2	49.48	1.5	52 54 70 66 67 71 74 82 79 74 74 70 66 65 52 54 51	ST(+79.97)TSGCVTAHGAAANLK
2765	FSPEEL	4	67	721.3404	1	34.175	0.2	50 82 82 82 50 50	FSPEEL
1982	QNGSGMHVHLEW	8	67	465.5461	3	24.754	-2.2	52 52 61 57 56 60 70 50 84 82 82 86	QNGSGMHVHLEW
3321	SS(+79.97)CQS(+79.97)GGES(+79.97)ACYF	8.6	67	522.4363	3	40.86	-52.1	50 77 73 60 71 75 72 70 68 68 61 62 50	SS(+79.97)CQS(+79.97)GGES(+79.97)ACYF
978	KMEEGAELASGTK	8.6	67	675.8317	2	13.801	-0.5	58 57 64 91 67 64 74 88 68 65 58 55 50	KMEEGAELASGTK
609	DNGDTTF	4.7	67	385.1541	2	9.481	1.3	51 57 61 82 82 78 50	DNGDTTF
2714	YLPPVVELGNEK	8	67	679.3733	2	33.599	2.4	86 85 95 50 50 84 66 64 52 51 52 57	YLPPVVELGNEK
3423	FTVTYLSEEV	6.7	67	594.2958	2	42.061	1.2	63 56 56 67 66 71 81 63 72 64	FTVTYLSEEV
3418	WGTTMLPGL	6	66	488.2533	2	41.996	2.6	60 60 58 56 56 92 80 82 50	WGTTMLPGL
2099	FFLMCLLF	5.3	66	1033.524	1	26.144	-0.7	50 50 85 71 69 68 85 50	FFLMCLLF
4162	LYHKKFS(+79.97)VKK	6.6	66	679.3715	2	51.034	-2.6	50 75 62 85 53 62 64 75 79 55	LYHKKFS(+79.97)VKK
2266	QASGGSS(+79.97)K	5.3	66	401.16	2	28.151	-1.3	65 70 75 85 75 59 50 50	QASGGSS(+79.97)K
1857	NAVGMFGNGL	6.6	66	490.2354	2	23.271	-3	55 55 55 69 68 71 73 84 79 50	NAVGMFGNGL
1775	MMALVEALS(+79.97)LEV	8	66	693.3272	2	22.323	1.2	51 60 63 84 77 73 72 72 72 56 56 56	MMALVEALS(+79.97)LEV

357	LS(+79.97)DGAACFCV	6.6	66	533.1917	2	5.47	-1.9	50 66 55 55 64 65 65 80 80 80	LS(+79.97)DGAACFCV
2844	ELTEGSEAGEQL	8	66	631.7917	2	35.121	1.2	56 61 74 87 87 77 68 70 53 51 53 53	ELTEGSEAGEQL
3278	GWLLPVYDKA	6.6	66	581.3185	2	40.343	-0.4	55 56 70 71 90 50 91 62 57 57	GWLLPVYDKA
3658	NTVADML	4.6	66	763.3654	1	44.888	-0.2	68 75 70 65 63 66 54	NTVADML
2957	KRTLMGDGPAVLSPNPY	11.3	66	908.4736	2	36.488	-1.1	51 50 51 52 70 68 65 65 71 72 72 91 89 81 59 59 53	KRTLMGDGPAVLSPNPY
1216	DPARTGEKGS(+79.97)PELK	9.3	66	522.2513	3	16.307	1.9	68 63 54 55 59 63 56 56 79 83 83 69 74 60	DPARTGEKGS(+79.97)PELK
3989	EELELCCRETWVKTR	9.9	66	632.3127	3	48.926	4.5	70 68 67 72 69 68 71 74 84 84 52 53 52 53 50	EELELCCRETWVKTR
959	KDGSPCTLGGM(+15.99)L	8	66	597.7785	2	13.593	0.4	62 61 64 61 63 74 73 66 59 57 69 82	KDGSPCTLGGM(+15.99)L
1619	CPLEEGDSGSHWK	8.6	66	482.2104	3	20.605	0.3	50 50 50 96 86 84 79 75 74 50 55 56 52	CPLEEGDSGSHWK
3402	LTPKFCLT(+79.97)VRRTGML	9.9	66	605.9861	3	41.809	3.6	53 57 57 57 58 84 88 77 74 55 72 69 65 66 54	LTPKFCLT(+79.97)VRRTGML
3154	LEGLLGTTTALL	7.9	66	601.3549	2	38.854	-1.1	73 72 79 77 55 53 55 71 78 55 55 66	LEGLLGTTTALL
1665	LDVLGLAGS(+79.97)M(+15.99)M(+15.99)GGMNGLKADHA	14.6	66	757.3382	3	21.116	-0.6	50 50 53 60 65 56 55 56 75 66 60 60 70 88 85 78 69 71 82 72 74 50	LDVLGLAGS(+79.97)M(+15.99)M(+15.99)GGMNGLKADHA
1502	LFDKPVSPI	6	66	508.2948	2	19.369	0.2	50 98 90 78 75 50 50 50 50	LFDKPVSPI
2969	ENGAPVSR	5.3	66	415.2117	2	36.638	0	50 64 66 70 84 91 50 50	ENGAPVSR
2631	STLAPPVDDA	6.6	66	985.4836	1	32.597	0	82 81 88 80 77 50 50 50 50 50	STLAPPVDDA
4052	HGCGARLVSEV	7.3	66	564.285	2	49.7	0.1	50 61 63 59 66 82 95 97 50 50 50	HGCGARLVSEV
2103	VSLLGELCLTLGNK	9.3	66	730.4127	2	26.196	-0.4	50 62 65 77 58 58 81 66 60 64 83 73 74 50	VSLLGELCLTLGNK
580	HFSS(+79.97)CEDPMHV	7.3	66	684.7422	2	9.112	1.8	78 63 63 73 91 91 57 53 53 50 50	HFSS(+79.97)CEDPMHV
2604	TVVVACKDK	6	66	481.7707	2	32.262	0.3	50 73 75 75 82 72 57 57 50	TVVVACKDK
1972	FKNNLVARLKF	7.3	66	675.407	2	24.63	1.3	78 74 69 69 86 70 66 59 51 51 50	FKNNLVARLKF
392	EASGQPV	4.6	66	687.3303	1	6.122	-0.6	76 76 76 79 50 50 51	EASGQPV
3946	MPGLTCAAVL	6.6	66	488.2527	2	48.406	-2.1	55 74 73 93 67 66 65 57 57 50	MPGLTCAAVL
1905	YVPGLVAPI	6	66	464.7784	2	23.833	-0.6	50 50 73 78 78 68 57 88 50	YVPGLVAPI
2295	FEPLAKGVSASVAPL	9.9	66	495.949	3	28.508	1	81 81 79 76 66 61 62 65 61 58 65 61 58 60 50	FEPLAKGVSASVAPL
802	EERAPMAMV	5.9	66	1033.479	1	11.841	-1.5	50 86 68 64 66 66 61 64 65	EERAPMAMV
1188	VENDETVYPMNTTNGKVK	11.9	66	680.3306	3	16.012	1.2	52 52 62 60 59 60 63 82 82 82 86 86 76 61 60 54 54 50	VENDETVYPMNTTNGKVK
3420	SAQGNGPKA	5.9	66	415.2114	2	42.019	-0.8	64 62 62 69 72 69 69 74 50	SAQGNGPKA
3665	LRHAFCRAKGI	7.3	66	424.5779	3	44.973	2.9	56 69 60 85 50 67 69 82 63 60 61	LRHAFCRAKGI
2464	LEPAPVGTDAAPLQL	9.9	66	746.4079	2	30.559	2.1	50 50 50 97 97 66 61 68 70 75 77 69 52 52 50	LEPAPVGTDAAPLQL
3348	VFYNGCHLPF	6.6	66	598.78	2	41.169	-2.3	50 50 95 89 86 85 50 50 50 50	VFYNGCHLPF
2556	FNHGLEKAGELVLY(+79.97)	9.2	66	835.4037	2	31.667	0.9	64 51 52 58 70 68 62 63 82 89 89 58 54 58	FNHGLEKAGELVLY(+79.97)

1010	CDMPVMA	4.6	66	766.2918	1	14.153	-1.8	50 50 82 68 67 67 76	CDMPVMA
4079	WVANKSSLGFAPW	8.6	66	488.2537	3	50.03	-0.8	86 76 61 59 58 61 87 87 64 60 53 50 50	WVANKSSLGFAPW
3882	T(+79.97)SASM(+15.99)PK	4.6	66	409.1617	2	47.616	0	50 70 71 81 87 50 50	T(+79.97)SASM(+15.99)PK
610	GPVCT(+79.97)NGM(+15.99)ET(+79.97)QA	7.9	66	692.22	2	9.492	-2.2	50 88 78 74 64 62 74 76 64 53 53 51	GPVCT(+79.97)NGM(+15.99)ET(+79.97)QA
1463	LEGVGLSSLSVL	7.9	66	587.3404	2	18.966	0.8	59 59 70 78 87 90 92 50 50 50 50 50	LEGVGLSSLSVL
2948	FKPPVPYDKA	6.6	66	581.3185	2	36.386	-0.5	50 52 52 68 50 98 97 70 59 59	FKPPVPYDKA
2297	ELTGNVASSGSNK	8.6	66	632.3136	2	28.529	1.8	55 58 62 70 61 74 75 78 75 59 58 62 63	ELTGNVASSGSNK
4026	VAKPPLLVI	5.9	66	475.325	2	49.387	-1.8	55 56 59 62 86 86 86 50 50	VAKPPLLVI
2218	KLKKSVFELK	6.6	66	407.2636	3	27.563	-0.7	50 50 66 51 71 90 91 65 67 55	KLKKSVFELK
843	ALELGDSEM(+15.99)VSAGAL	9.9	66	493.5728	3	12.306	-0.4	57 57 73 81 75 65 68 82 69 58 53 54 54 66 69	ALELGDSEM(+15.99)VSAGAL
2668	FSPEEI	4	66	721.3416	1	33.04	1.8	50 81 81 81 50 50	FSPEEI
4080	LYRMLALFTKMV	7.9	66	495.9489	3	50.041	0.1	84 84 63 60 58 69 62 62 60 59 69 55	LYRMLALFTKMV
1914	M(+15.99)VGMLVEAPNLSTPL	9.9	66	794.4108	2	23.933	1.5	66 61 61 63 74 77 75 65 64 63 77 63 54 57 62	M(+15.99)VGMLVEAPNLSTPL
3093	WGQCLLTGPGLLSQFPV	11.2	66	605.9859	3	38.129	-1.7	66 55 55 64 73 74 72 69 64 71 85 81 66 54 54 54 55	WGQCLLTGPGLLSQFPV
665	HHDPLGA	4.6	66	746.3559	1	10.201	-2.8	50 50 50 80 68 80 80	HHDPLGA
2769	EWASSCI	4.6	66	795.3351	1	34.224	1.2	56 56 63 77 69 69 69	EWASSCI
4218	QAFGPEFDCPK	7.3	66	619.7808	2	51.718	2.8	63 62 55 61 81 93 98 50 57 50 50	QAFGPEFDCPK
4195	LLPAWGL	4.6	66	385.2348	2	51.437	2.2	50 85 84 83 53 54 50	LLPAWGL
981	HDPPDKTA	5.3	66	880.4152	1	13.841	-0.8	50 50 50 77 75 80 91 50	HDPPDKTA
3394	TNVDMLA	4.6	66	763.3657	1	41.72	0.2	85 79 84 54 51 53 52	TNVDMLA
2532	LELVASLVETK	7.2	66	601.3562	2	31.381	1.1	50 59 80 70 64 65 67 72 65 71 57	LELVASLVETK
3339	LSSVWCL	4.6	66	404.2065	2	41.071	-1.4	50 86 86 86 50 50 50	LSSVWCL
3868	M(+15.99)ELDETNPLVY	7.2	66	670.3074	2	47.449	-0.7	86 79 71 71 62 55 52 52 91 50 50	M(+15.99)ELDETNPLVY
4139	YPTKVLTYGCQSFLPV	10.5	66	605.986	3	50.746	4.7	66 68 59 58 62 61 61 57 58 63 66 76 65 86 89 50	YPTKVLTYGCQSFLPV
3256	DFDAPKA	4.6	66	763.367	1	40.085	6.5	50 50 50 89 80 72 66	DFDAPKA
2646	MVGGRLMDQEK	7.2	66	632.3132	2	32.773	0.7	66 63 64 65 73 79 61 71 59 61 59	MVGGRLMDQEK
1136	TLLSTKAKGDDRPA	9.2	66	491.6079	3	15.482	1.7	79 78 67 58 56 58 55 62 74 69 62 62 76 60	TLLSTKAKGDDRPA
3981	RLKRLPV	4.6	66	441.3067	2	48.838	2.1	50 50 50 85 83 90 50	RLKRLPV
1308	HGKGCTGNK	5.9	66	451.2194	2	17.302	0.7	50 53 56 70 73 76 77 82 50	HGKGCTGNK
3514	WLVPCFVALW	6.6	66	617.3295	2	43.155	2.4	50 50 68 68 68 67 63 66 87 65	WLVPCFVALW
1049	Y(+79.97)VLGPKVPVGCMNY	9.2	66	540.5837	3	14.565	0.3	50 77 69 67 63 65 75 68 64 67 80 58 58 54	Y(+79.97)VLGPKVPVGCMNY

535	QQNTSK	4	66	353.18	2	8.505	0.2	50 61 61 80 90 50	QQNTSK
1085	M(+15.99)TMLATPA	5.3	66	851.401	1	14.942	1	50 94 72 68 65 58 55 60	M(+15.99)TMLATPA
3078	KNEELYPENK	6.6	66	632.3132	2	37.935	-1.8	54 54 60 91 78 54 60 63 73 64	KNEELYPENK
1052	APPMCQLTGA	6.6	66	988.4608	1	14.605	1.8	50 50 91 69 65 58 81 55 55 79	APPMCQLTGA
2104	MPGGGQGGVSLDL	8.6	66	594.29	2	26.208	0.2	80 80 70 57 56 57 67 62 61 65 87 50 55	MPGGGQGGVSLDL
1007	RTDLFGMGHWM(+15.99)K	7.9	66	498.9055	3	14.111	2.8	66 59 58 59 70 71 70 74 86 58 58 54	RTDLFGMGHWM(+15.99)K
604	QPGTDGM(+15.99)VF	5.9	66	484.2141	2	9.417	2	58 60 70 61 56 59 78 95 50	QPGTDGM(+15.99)VF
2436	M(+15.99)QNDVLCGPAGSPK	9.2	66	716.8307	2	30.219	-1.2	51 51 78 96 75 59 59 68 64 54 55 56 72 76	M(+15.99)QNDVLCGPAGSPK
3173	FKPASGVEALPEI	8.5	66	679.3721	2	39.081	0.6	50 80 72 59 61 85 85 85 62 58 51 50 50	FKPASGVEALPEI
2951	EPDVNELVA	5.9	66	985.4826	1	36.417	-1.1	50 50 92 57 55 56 61 83 83	EPDVNELVA
2530	MNKAGSAQGSSSSA	9.2	66	641.7869	2	31.361	-2.1	58 57 63 68 68 68 69 76 90 96 50 50 50 50	MNKAGSAQGSSSSA
2446	NKGLGLGTSRAK	7.9	66	601.3558	2	30.343	2.6	71 73 68 66 67 70 74 70 67 54 53 50	NKGLGLGTSRAK
2698	TLLM(+15.99)LVGGSHTLCRGEL	11.2	66	605.9865	3	33.4	-0.4	65 65 63 64 77 69 67 71 66 69 83 76 62 53 52 56 51	TLLM(+15.99)LVGGSHTLCRGEL
3977	LTQSNRSQNK	6.6	66	588.311	2	48.783	1.8	72 71 62 55 54 56 83 65 70 64	LTQSNRSQNK
1869	DALLW	3.3	66	617.3297	1	23.417	0.7	51 51 60 96 68	DALLW
2326	M(+15.99)DSVPKA	4.6	66	763.3658	1	28.886	0.6	50 86 86 86 50 50 50	M(+15.99)DSVPKA
1788	WELGATLYKKYRGGHAGVHR	13.1	66	575.5612	4	22.477	1	62 62 56 76 74 73 62 60 52 54 55 53 58 72 88 87 76 67 64 54	WELGATLYKKYRGGHAGVHR
3528	QSVADML	4.6	66	763.3646	1	43.319	-1.1	67 67 72 68 64 66 52	QSVADML
3599	NKLYRGGLAPL	7.2	66	601.3549	2	44.18	-2	57 55 61 62 64 88 85 83 51 51 60	NKLYRGGLAPL
2750	FVKPPPYDKA	6.6	66	581.3198	2	34	1.8	50 50 61 75 82 82 83 61 54 54	FVKPPPYDKA
2645	M(+15.99)NPPLFHVMLCHSK	9.2	66	835.4047	2	32.761	0.5	62 56 62 66 50 50 50 84 78 89 91 74 50 50	M(+15.99)NPPLFHVMLCHSK
1746	MY(+79.97)VMLALPT(+79.97)RW	7.2	66	770.8283	2	21.983	0	50 50 59 70 72 75 89 89 57 53 52	MY(+79.97)VMLALPT(+79.97)RW
2308	KNGLGLSASARK	7.9	66	601.3559	2	28.667	2.8	74 72 64 63 69 66 56 59 84 63 61 51	KNGLGLSASARK
2638	WRTTQCSAELERTK	9.2	66	570.2853	3	32.68	-1.3	50 62 56 64 57 60 61 90 94 87 65 57 58 50	WRTTQCSAELERTK
2808	M(+15.99)NVHAFHMVPGVVCL	9.8	66	835.4039	2	34.685	-0.4	55 55 52 55 56 50 50 93 79 73 71 71 72 73 72	M(+15.99)NVHAFHMVPGVVCL
247	T(+79.97)S(+79.97)PSPAGF	5.2	66	462.15	2	3.769	-2.1	50 50 50 79 77 71 73 70	T(+79.97)S(+79.97)PSPAGF
2633	SGMPPVCAALGVKK	9.2	66	679.3721	2	32.617	2.8	62 60 64 77 87 58 56 56 55 58 68 73 78 60	SGMPPVCAALGVKK
1521	TFDFCQTNEFAK	7.9	66	725.8206	2	19.57	2.1	60 60 68 50 83 56 60 60 79 72 75 57	TFDFCQTNEFAK
1293	MDPALERA	5.2	66	902.4413	1	17.146	1.4	50 50 72 72 76 70 72 59	MDPALERA
1236	DTVAGPHVKGNPK	8.5	66	660.3557	2	16.517	-1.8	65 59 56 59 65 62 65 94 89 67 59 56 50	DTVAGPHVKGNPK
2370	YLPGDVVALGPEK	8.5	66	679.3718	2	29.415	0.2	75 73 80 67 62 70 69 55 54 58 63 63 56	YLPGDVVALGPEK

4106	LELTTGMGVQPV	7.9	66	622.8304	2	50.342	-1.6	53 68 92 86 61 57 59 61 72 55 60 55	LELTTGMGVQPV
2070	ELTEPCGEKAW	7.2	66	631.7914	2	25.798	2.6	53 55 59 78 73 65 67 83 63 66 54	ELTEPCGEKAW
930	KNAPSF	3.9	66	332.1765	2	13.275	-0.4	58 57 62 82 82 50	KNAPSF
541	T(+79.97)DM(+15.99)ENAF	4.6	66	462.1457	2	8.582	-1.1	56 56 56 66 66 77 78	T(+79.97)DM(+15.99)ENAF
1476	MELAVMGPL	5.9	66	480.7486	2	19.102	0.7	69 70 85 70 67 66 53 54 53	MELAVMGPL
3474	M(+15.99)TLDHETAGNMSK	8.5	65	725.8198	2	42.674	1.5	70 69 74 69 73 69 57 58 66 77 55 56 50	M(+15.99)TLDHETAGNMSK
560	GRKGNS(+79.97)ADNHY	7.2	65	649.7657	2	8.865	-2.4	50 50 68 65 69 71 69 71 65 70 66	GRKGNS(+79.97)ADNHY
1409	CHAEEQNGPSEPNK	9.2	65	770.3265	2	18.388	-2.1	50 50 50 94 82 60 64 68 90 75 59 59 59 50	CHAEEQNGPSEPNK
2460	LEGLDALFGLW	7.2	65	617.3301	2	30.508	1.4	53 52 59 68 70 70 64 66 68 83 62	LEGLDALFGLW
2363	LLPENSQTPGLMDK	9.2	65	771.895	2	29.331	-0.2	50 71 61 61 60 77 61 91 76 64 62 60 60 54	LLPENSQTPGLMDK
1470	DEAPGDVLQL	6.5	65	528.7635	2	19.041	-0.8	50 50 70 71 69 74 89 63 61 52	DEAPGDVLQL
2454	MDRSSLVADPGGLTLQR	11.1	65	908.4744	2	30.436	1.9	85 83 61 72 50 78 66 65 60 56 59 70 81 64 51 51 50	MDRSSLVADPGGLTLQR
1346	GKSVLSDTYGGNLVHV	10.5	65	549.2897	3	17.715	0	62 62 75 50 77 67 64 53 53 56 70 76 83 91 50 50	GKSVLSDTYGGNLVHV
1959	MDLVPYV	4.6	65	836.4223	1	24.48	0.1	82 81 92 50 50 50 50	MDLVPYV
3690	NPPT(+79.97)APLGLEV	7.2	65	594.29	2	45.272	1.6	60 73 65 56 53 54 60 83 88 60 61	NPPT(+79.97)APLGLEV
4100	NAGMKTGGAGSSSSA	9.8	65	641.7874	2	50.272	-1.3	52 53 71 81 90 60 57 57 74 82 96 50 50 50 50	NAGMKTGGAGSSSSA
1264	NTVADML	4.6	65	763.3655	1	16.83	0.1	60 62 72 75 63 69 54	NTVADML
4121	S(+79.97)RQGPLTGAPW	7.2	65	625.2886	2	50.533	-2	50 80 67 78 80 74 66 58 58 54 50	S(+79.97)RQGPLTGAPW
1750	S(+79.97)PAY(+79.97)TFEFGKCKKKVKF	11.1	65	1084.504	2	22.033	-2.3	50 50 50 51 60 62 78 80 87 89 77 52 72 81 58 54 52	S(+79.97)PAY(+79.97)TFEFGKCKKKVKF
630	EPSAVCPDW	5.9	65	502.2143	2	9.767	2.4	60 60 56 58 74 86 89 50 50	EPSAVCPDW
1880	WPSGGGGPCW	6.5	65	502.2083	2	23.545	0.2	83 83 74 56 60 68 60 66 50 50	WPSGGGGPCW
2394	TTVAAKPDDLLKK	8.5	65	467.2766	3	29.708	-0.2	62 63 58 60 56 59 60 74 77 78 79 67 50	TTVAAKPDDLLKK
892	WVASGSAGLPFGSPSPR	11.1	65	558.2876	3	12.854	2.4	57 57 56 63 60 56 58 66 86 59 57 79 86 87 75 50 50	WVASGSAGLPFGSPSPR
529	GQGRNM(+15.99)CS(+79.97)YQL	7.2	65	676.7596	2	8.429	-0.4	50 50 54 69 81 68 88 50 66 71 66	GQGRNM(+15.99)CS(+79.97)YQL
1776	LSPLAMYGL	5.9	65	482.7621	2	22.335	-0.2	50 50 82 71 71 82 64 62 52	LSPLAMYGL
4098	VDAAELSVKV	6.5	65	515.7932	2	50.251	1.3	72 64 65 79 74 75 70 50 50 50	VDAAELSVKV
473	TKLLKPAAGPLLPPA	9.8	65	743.9726	2	7.478	1.6	80 77 65 50 50 51 71 81 64 54 51 59 73 73 73	TKLLKPAAGPLLPPA
2799	QFGVHGNGVA	6.5	65	985.4842	1	34.587	-0.8	63 70 81 50 50 70 64 69 79 50	QFGVHGNGVA
3162	WWLPAHCATGANYELKK	11.1	65	663.332	3	38.949	-1.6	50 60 59 64 72 83 86 84 84 76 57 57 59 56 52 54 50	WWLPAHCATGANYELKK
2895	FSEPEI	3.9	65	721.3403	1	35.743	0	50 78 78 82 50 50	FSEPEI
422	SNHWKHA	4.6	65	440.2135	2	6.69	-2.6	73 64 70 61 71 57 57	SNHWKHA

960	EDAACAAAPNVA	7.8	65	551.7453	2	13.603	0	50 65 64 71 75 80 82 68 55 54 54 59	EDAACAAAPNVA
881	EEAEERADLA	6.5	65	566.759	2	12.727	-0.9	50 50 50 50 84 75 73 79 68 69	EEAEERADLA
1859	LYPRASKSHGNK	7.8	65	679.3715	2	23.291	1.7	78 78 93 79 59 54 60 50 58 58 59 50	LYPRASKSHGNK
1995	LLAGLFLTSFPSLL	9.1	65	746.4438	2	24.911	-1.1	50 55 56 66 65 65 78 72 70 72 82 62 62 51	LLAGLFLTSFPSLL
3226	YPTLLRGDPLCAGMLPV	11.1	65	605.9864	3	39.722	-2.6	54 62 60 65 65 57 55 63 70 90 88 73 70 58 57 65 50	YPTLLRGDPLCAGMLPV
3117	LLDYAGARKHK	7.2	65	424.5782	3	38.414	-1.4	75 78 69 62 61 78 67 65 57 50 50	LLDYAGARKHK
1644	VFEQM(+15.99)V	3.9	65	768.3596	1	20.874	-0.1	50 50 75 64 64 86	VFEQM(+15.99)V
1487	YLPGEKVTPPEK	7.8	65	679.3724	2	19.214	1.1	79 77 83 54 52 59 62 63 69 61 62 55	YLPGEKVTPPEK
2982	YLMGPGKVHVTR	7.8	65	679.3721	2	36.789	-3	52 79 57 67 60 71 71 73 50 68 70 57	YLMGPGKVHVTR
675	FLSPSSVLW	5.9	65	518.28	2	10.331	1.8	73 73 64 65 64 74 70 50 50	FLSPSSVLW
3550	DLGAPNSR	5.2	65	415.2111	2	43.583	-1.6	58 57 66 79 72 61 64 60	DLGAPNSR
2627	LYTVQGLPGALEPK	9.1	65	495.9486	3	32.542	0.1	71 68 63 63 56 67 66 66 62 69 81 59 61 53	LYTVQGLPGALEPK
519	S(+79.97)S(+79.97)VGS(+79.97)F	3.9	65	412.09	2	8.261	1.9	50 75 65 64 64 70	S(+79.97)S(+79.97)VGS(+79.97)F
1586	QLYHRAQSAVANK	8.5	65	743.4017	2	20.265	2.8	58 63 67 79 83 57 53 68 70 69 59 64 53	QLYHRAQSAVANK
2136	VFEVPAKL	5.2	65	902.5341	1	26.579	-0.5	50 50 95 83 68 56 61 54	VFEVPAKL
2364	AKNMAKLVGACAGHFR	10.4	65	558.6284	3	29.342	-1.2	51 52 51 60 60 63 72 67 67 70 83 81 75 61 60 60	AKNMAKLVGACAGHFR
3107	VLGLPPKTPKHA	7.8	65	629.386	2	38.289	-2.4	54 56 68 76 79 57 55 55 73 71 75 55	VLGLPPKTPKHA
786	KT(+79.97)DVSAL	4.6	65	407.1923	2	11.646	2.4	53 53 54 78 69 70 76	KT(+79.97)DVSAL
628	CSTYYDA	4.6	65	822.299	1	9.744	1.9	50 50 79 79 57 80 57	CSTYYDA
2571	M(+15.99)LKMGNGAGAQAV	8.5	65	632.3146	2	31.864	2.9	57 55 54 60 85 83 72 65 65 73 61 55 55	M(+15.99)LKMGNGAGAQAV
4324	ARHTDPGSGA	6.5	65	484.73	2	53.094	-1.7	56 62 69 81 84 81 64 50 50 50	ARHTDPGSGA
2172	TSLDHRWA	5.2	65	985.483	1	27.007	-2	57 61 81 50 50 72 83 62	TSLDHRWA
165	SCFTAL	3.9	65	321.1517	2	2.526	-0.3	50 86 86 58 55 51	SCFTAL
4183	DKVMAMGGGCHPI	8.5	65	658.3	2	51.291	-2.2	57 57 64 70 78 74 72 69 72 78 50 50 50	DKVMAMGGGCHPI
2632	WVALGGAALACLTNM(+15.99)LPV	11.7	65	605.9871	3	32.606	-1.6	73 55 53 52 53 56 55 61 70 77 78 73 52 52 73 82 96 50	WVALGGAALACLTNM(+15.99)LPV
2362	WLVAAALRKTGHY	8.5	65	495.9488	3	29.321	-0.5	50 66 58 59 62 77 80 84 83 59 53 57 52	WLVAAALRKTGHY
676	DPNCCW	3.9	65	369.1218	2	10.342	-2.5	63 60 55 72 85 50	DPNCCW
2091	HEAAASHI	5.2	65	835.4036	1	26.054	-2.5	50 50 66 66 72 79 82 50	HEAAASHI
3086	ATLLAM(+15.99)GPW	5.8	65	488.2531	2	38.045	2.3	61 55 65 93 60 57 58 80 50	ATLLAM(+15.99)GPW
789	KLAGSLDEEFEQQL	9.1	65	536.271	3	11.689	1.6	74 75 65 58 57 58 73 80 50 50 83 59 61 59	KLAGSLDEEFEQQL
4141	WRAGSHPAAEGGKGQSL	11	65	570.29	3	50.766	2.5	53 62 52 55 58 67 74 92 87 78 73 80 55 55 51 51 51	WRAGSHPAAEGGKGQSL

235	DMTTPL	3.9	65	339.1621	2	3.588	-0.7	58 64 67 70 71 56	DMTTPL
4166	DAMHK	3.2	65	301.1409	2	51.076	-2.8	72 72 78 50 50	DAMHK
1037	MPPAGGSNNAR	7.1	65	536.2545	2	14.436	1.7	50 50 72 71 83 82 57 57 55 72 59	MPPAGGSNNAR
2358	HESGVGHL	5.2	65	835.4034	1	29.267	-2.7	50 87 69 68 65 72 50 54	HESGVGHL
1266	DLVCVRASLDAGMVLPK	11	65	596.3231	3	16.846	-0.3	51 52 52 55 56 74 72 70 69 73 81 84 76 67 57 56 51	DLVCVRASLDAGMVLPK
3711	FRRSS(+79.97)AGGKAVTY	8.4	65	740.3589	2	45.536	0.1	55 55 51 68 57 65 62 62 70 71 75 81 64	FRRSS(+79.97)AGGKAVTY
2194	LALDNM(+15.99)A	4.5	65	763.3656	1	27.276	0.2	62 71 78 58 57 59 65	LALDNM(+15.99)A
3956	VVKGSK	3.9	65	309.2033	2	48.531	2.2	50 81 77 66 62 50	VVKGSK
1024	EPDLLSTGAVGVK	8.4	65	429.2375	3	14.297	-1.2	50 83 79 82 75 67 68 61 55 53 52 53 58	EPDLLSTGAVGVK
1641	WDAPDLGGAFAKAVK	9.7	65	773.4043	2	20.845	-2.9	56 54 58 83 82 78 71 58 55 60 69 58 58 65 58	WDAPDLGGAFAKAVK
1703	M(+15.99)WAKAVVAGLGALGGYGW	11.7	65	911.9689	2	21.523	-0.2	50 64 61 68 72 73 63 62 67 79 72 71 55 54 62 62 65 59	M(+15.99)WAKAVVAGLGALGGYGW
2417	MCS(+79.97)CT(+79.97)DGGY(+79.97)EDF	7.8	65	523.1135	3	29.983	-0.4	50 50 50 84 77 75 78 82 75 50 50 50	MCS(+79.97)CT(+79.97)DGGY(+79.97)EDF
1731	CAALLVTV	5.2	65	789.4525	1	21.833	-1.7	50 97 70 70 78 50 50 50	CAALLVTV
929	TRETASCGSSQM(+15.99)A	8.4	65	672.7812	2	13.264	2.4	55 55 56 60 62 64 78 50 73 70 68 80 63	TRETASCGSSQM(+15.99)A
1383	Y(+79.97)LVCLALQW	5.8	65	594.7808	2	18.108	1.7	79 82 57 63 63 57 55 61 59	Y(+79.97)LVCLALQW
2123	DYDVLWL	4.5	65	923.4506	1	26.425	-0.3	92 69 69 50 62 57 51	DYDVLWL
3306	HLVT(+79.97)AAEL	5.2	65	933.4413	1	40.674	-2.9	50 50 75 60 60 70 70 78	HLVT(+79.97)AAEL
1185	M(+15.99)SGVGPLGNKTL	7.8	65	397.214	3	15.985	2.6	50 63 63 63 75 77 77 69 65 58 59 51	M(+15.99)SGVGPLGNKTL
2968	M(+15.99)MVPPTEL	5.2	65	933.4426	1	36.628	0.6	50 86 86 86 50 55 50 50	M(+15.99)MVPPTEL
2387	RMEDSSQGGGPTLKR	9.7	65	540.2696	3	29.624	-1.5	57 73 58 68 71 67 57 66 75 69 71 67 58 56 51	RMEDSSQGGGPTLKR
753	LEEAT(+79.97)TLA	5.2	65	464.205	2	11.272	-4.6	50 50 97 91 68 55 52 50	LEEAT(+79.97)TLA
3693	KVVGSK	3.9	65	309.2036	2	45.316	2.9	50 67 70 70 77 50	KVVGSK
3660	M(+15.99)VYTPARDDL	6.5	65	598.7854	2	44.911	1.7	50 50 93 77 73 65 59 62 62 50	M(+15.99)VYTPARDDL
2286	KFPTGMAGGHVKK	8.4	65	679.3721	2	28.389	-3	50 50 85 63 61 66 60 55 56 64 77 84 62	KFPTGMAGGHVKK
4276	WCS(+79.97)VY	3.2	65	369.1217	2	52.452	-0.5	50 74 74 74 50	WCS(+79.97)VY
2238	STLKYSESA	5.8	65	985.4837	1	27.803	0.1	63 63 88 80 55 60 57 61 50	STLKYSESA
1526	SALENNELTGEAM(+15.99)RHA	10.3	65	586.9393	3	19.625	-2.3	52 51 68 69 64 53 53 59 64 65 74 75 75 81 61 62	SALENNELTGEAM(+15.99)RHA
2763	MPGAPGTCLLEV	7.8	65	594.2957	2	34.154	3.6	78 69 65 67 72 62 55 54 62 62 61 62	MPGAPGTCLLEV
3915	RRKLLPV	4.5	65	441.3061	2	48.034	0.8	50 50 50 91 79 79 50	RRKLLPV
2727	LVAMKI	3.9	65	674.426	1	33.747	-1.4	50 50 81 76 78 50	LVAMKI
1628	HPEHAETL	5.2	65	933.4422	1	20.705	-0.3	50 50 50 50 91 81 87 53	HPEHAETL

1175	FGGKGAVASGA	7.1	65	461.2416	2	15.877	-3	54 78 92 95 68 58 54 52 52 52 50	FGGKGAVASGA
2531	FPCGGHR	4.5	65	387.1801	2	31.371	2.4	50 50 67 79 80 71 50	FPCGGHR
3125	DFDAPKA	4.5	65	763.3647	1	38.504	3.5	50 50 50 85 75 70 67	DFDAPKA
731	ETEGNGF	4.5	65	753.3044	1	11.009	-0.7	50 79 65 65 62 77 50	ETEGNGF
2963	TLMSSGLSGVRPNGMVPI	11.6	64	605.9877	3	36.565	1.7	51 53 55 72 69 70 75 70 70 76 63 62 63 60 59 60 75 50	TLMSSGLSGVRPNGMVPI
1770	S(+79.97)NGGAYL	4.5	64	381.1463	2	22.263	-1.5	59 56 58 77 69 73 56	S(+79.97)NGGAYL
3300	FETVKVPAQLEPK	8.4	64	495.9485	3	40.604	0	50 77 63 63 86 55 55 54 66 82 59 67 54	FETVKVPAQLEPK
1204	EVKTFTGGHCRW	7.7	64	474.2322	3	16.179	2.3	54 54 59 72 77 72 73 82 61 56 57 51	EVKTFTGGHCRW
2723	LDALGEFVALW	7.1	64	617.329	2	33.699	-0.4	54 52 52 71 60 60 67 60 66 91 69	LDALGEFVALW
1990	EPPVLYPNGVQLVRAK	10.3	64	890.5156	2	24.847	7	50 50 50 98 98 98 92 53 50 50 53 77 52 51 50 51	EPPVLYPNGVQLVRAK
4286	VM(+15.99)SEST(+79.97)GHR	5.8	64	550.217	2	52.59	2.7	62 62 62 55 66 78 76 64 50	VM(+15.99)SEST(+79.97)GHR
4178	M(+15.99)LPVGSLAQVDV	7.7	64	622.8297	2	51.225	-2.6	57 57 50 90 72 55 54 58 65 70 70 68	M(+15.99)LPVGSLAQVDV
2176	NKGLGLAYPLR	7.1	64	601.3556	2	27.058	-0.9	75 79 72 67 66 66 62 58 53 56 51	NKGLGLAYPLR
752	DLGNGS(+79.97)GGMA	6.4	64	479.6699	2	11.263	-1	60 60 69 67 77 66 51 70 64 56	DLGNGS(+79.97)GGMA
4257	Y(+79.97)TGMGAAEW	5.8	64	533.19	2	52.206	-1.8	55 53 55 75 90 76 56 56 60	Y(+79.97)TGMGAAEW
2915	EKTVCCLGCTKGPWW	9.7	64	570.93	3	35.98	-2.7	52 51 52 53 63 79 69 65 63 67 71 72 63 68 70	EKTVCCLGCTKGPWW
3591	LLKTVHGGQYR	7.1	64	424.5785	3	44.085	-0.7	56 60 60 65 69 82 78 67 52 52 61	LLKTVHGGQYR
3540	FPAGLPLPLVVVV	8.4	64	660.9177	2	43.464	-0.6	50 88 61 58 64 75 75 75 80 52 51 51 51	FPAGLPLPLVVVV
2190	RSKSDGGGGGK	7.1	64	503.257	2	27.223	-0.4	69 69 75 74 74 80 53 56 51 51 50	RSKSDGGGGGK
2538	GTFPVPDA	5.1	64	803.394	1	31.453	0.8	73 73 86 50 50 59 59 59	GTFPVPDA
3994	LLFMAAAFFLK	7.1	64	424.5781	3	49.005	-1.9	54 54 56 80 79 88 70 68 52 51 50	LLFMAAAFFLK
1203	M(+15.99)VMVYFYPF	5.8	64	606.778	2	16.171	1.5	50 91 91 91 50 50 50 50 50	M(+15.99)VMVYFYPF
3864	WKWLTQSLPT(+79.97)W	7.1	64	763.3651	2	47.394	-0.6	50 50 51 60 58 55 63 86 75 75 77	WKWLTQSLPT(+79.97)W
1419	LAYVAPV	4.5	64	366.718	2	18.504	-0.2	53 55 62 66 69 92 50	LAYVAPV
3075	LYKRKVGGPHTMV	8.3	64	495.9487	3	37.906	-2.9	65 65 54 54 57 74 77 74 69 62 59 64 55	LYKRKVGGPHTMV
2562	LYPGGGSLAVLPDV	9	64	679.3721	2	31.747	0.6	61 61 74 74 56 51 51 52 81 83 75 62 62 50	LYPGGGSLAVLPDV
476	VMDDGGGAVNSCA	8.3	64	598.24	2	7.524	0.7	50 61 62 53 50 62 77 84 78 58 69 74 50	VMDDGGGAVNSCA
3561	VVKGSK	3.9	64	309.2033	2	43.722	2.2	50 78 76 65 63 50	VVKGSK
910	WVRGADNGSSGPYLKR	10.3	64	588.3055	3	13.052	2.1	50 57 59 60 61 64 67 73 73 77 73 73 69 58 53 52	WVRGADNGSSGPYLKR
1258	LTSVVVLLK	5.8	64	486.3296	2	16.76	2.1	61 60 66 69 69 78 60 60 51	LTSVVVLLK
3438	RRKLLPV	4.5	64	441.3063	2	42.237	1.3	50 50 50 88 79 79 50	RRKLLPV

3132	CCGSSLDDLKEL	7.7	64	641.7857	2	38.584	-1	51 50 50 50 50 89 86 87 74 60 64 52	CCGSSLDDLKEL
616	SNVM(+15.99)GEA	4.5	64	723.2965	1	9.572	-1.8	50 50 85 85 71 50 55	SNVM(+15.99)GEA
1361	KEEAGSGM(+15.99)GAGNAASPK	10.9	64	789.3625	2	17.871	-2.9	52 52 55 63 64 66 72 73 86 85 63 56 63 60 55 57 61	KEEAGSGM(+15.99)GAGNAASPK
3612	MVLNHACGFNDMV	8.3	64	725.819	2	44.327	2.1	52 53 62 50 50 53 82 87 88 59 69 73 50	MVLNHACGFNDMV
1565	WRDETVYVDANSNGSGTWKWR	13.5	64	843.0624	3	20.03	-0.9	50 50 55 57 68 71 93 59 58 60 66 75 65 72 68 69 81 65 50 51 50	WRDETVYVDANSNGSGTWKWR
1506	LSAEEAEGTI	6.4	64	1019.489	1	19.406	0.1	50 51 51 55 50 88 78 78 84 50	LSAEEAEGTI
4213	KVKFGLALRKKKA	8.3	64	744	2	51.654	-1.1	50 50 67 81 88 78 73 67 64 59 50 50 50	KVKFGLALRKKKA
3719	M(+15.99)LVVSMNGLPV	7	64	588.3127	2	45.633	1.8	66 66 58 60 58 69 53 55 66 74 75	M(+15.99)LVVSMNGLPV
4111	MNNTPQMGAPV	7	64	387.1801	3	50.407	2	69 66 66 65 63 59 56 53 55 69 77	MNNTPQMGAPV
1733	CCPLLQDVGL	6.4	64	1060.519	1	21.848	2.1	50 50 56 56 79 55 58 59 86 87	CCPLLQDVGL
4051	NKLVAGPLYRA	7	64	601.3555	2	49.688	-1	63 61 81 70 67 63 61 61 63 56 54	NKLVAGPLYRA
3652	S(+79.97)SNSAY(+79.97)PW	5.1	64	536.165	2	44.815	0.7	50 74 74 75 76 54 52 54	S(+79.97)SNSAY(+79.97)PW
598	M(+15.99)QS(+79.97)AMACGQEVK	7.7	64	689.7617	2	9.335	-2.8	73 54 52 55 55 60 69 70 67 68 71 69	M(+15.99)QS(+79.97)AMACGQEVK
3629	LTMQPCELLK	6.4	64	588.3107	2	44.532	-1.8	72 72 77 62 63 66 50 57 65 52	LTMQPCELLK
1298	WLPLAGPPGCLTHV	8.9	64	487.5965	3	17.2	2.1	76 79 60 53 57 73 72 67 66 58 54 54 70 50	WLPLAGPPGCLTHV
1086	HCQHLTGA	5.1	64	866.3915	1	14.952	-2.6	50 50 73 78 78 79 50 50	HCQHLTGA
998	GSLDVPT(+79.97)TL	5.8	64	491.7294	2	14.015	2.4	63 63 85 50 50 83 61 66 50	GSLDVPT(+79.97)TL
2163	LSLKAEPAAKVEMV	8.9	64	495.9485	3	26.902	-2.4	65 60 59 51 51 51 56 62 83 86 75 63 65 60	LSLKAEPAAKVEMV
3564	VPPAKLVLL	5.7	64	475.3254	2	43.752	-0.8	50 50 61 69 74 84 82 50 50	VPPAKLVLL
646	HPPQDMR	4.5	64	880.4087	1	9.968	-0.8	50 92 66 60 56 65 55	HPPQDMR
2526	VEAEGLFGLLW	7	64	617.3295	2	31.308	0.3	51 51 55 63 63 69 70 63 74 82 56	VEAEGLFGLLW
539	CNNM(+15.99)T(+79.97)T(+79.97)PWQL	6.4	64	692.23	2	8.56	1.1	62 62 63 65 69 84 50 54 63 61	CNNM(+15.99)T(+79.97)T(+79.97)PWQL
3234	MEELVPCL	5.1	64	933.4406	1	39.815	-1.5	50 50 89 89 63 58 58 50	MEELVPCL
1107	NNAAEAAAHANVLLF	9.6	64	509.2638	3	15.176	0.6	66 64 69 67 58 59 58 70 71 71 65 64 59 57 51	NNAAEAAAHANVLLF
2793	NM(+15.99)MGGPKPPGTF	7.7	64	625.2883	2	34.512	-0.7	55 55 55 54 59 83 78 79 70 60 57 54	NM(+15.99)MGGPKPPGTF
3255	MDPAPLMK	5.1	64	902.4487	1	40.076	1.4	50 50 50 71 74 71 79 61	MDPAPLMK
920	ASSFHRMDTR	6.4	64	403.1927	3	13.171	-0.2	55 56 73 76 76 50 58 58 80 50	ASSFHRMDTR
3646	AEVLW	3.2	64	617.3297	1	44.744	0.7	59 55 55 98 50	AEVLW
2001	VAVLDML	4.5	64	760.4279	1	24.985	0.8	54 53 61 79 66 71 58	VAVLDML
636	QDGEGF	3.8	64	652.2568	1	9.84	-0.7	50 65 64 64 87 50	QDGEGF
1416	LGELEEL	4.5	64	802.418	1	18.469	-1.6	64 63 72 94 50 50 50	LGELEEL

2493	FESLKGPGGRGRPK	8.9	64	495.9486	3	30.914	2	78 76 55 55 68 65 60 73 73 60 62 55 56 50	FESLKGPGGRGRPK
2447	EVKLSGCKV	5.7	64	481.771	2	30.354	0.8	52 52 54 77 78 75 61 58 62	EVKLSGCKV
3827	NNSAFRTLGPV	7	64	588.3111	2	46.944	-1.5	53 52 52 53 86 88 72 59 52 64 65	NNSAFRTLGPV
999	FLQMLLAPA	5.7	64	502.2889	2	14.021	6.1	53 58 53 82 91 75 51 51 55	FLQMLLAPA
1728	EDGGNSGGAGEGPLVLVL	11.5	64	820.9083	2	21.794	-1.9	61 59 54 56 59 80 84 68 56 55 64 72 78 88 52 50 50 50	EDGGNSGGAGEGPLVLVL
2171	YGCPPFPVSPW	7	64	625.2879	2	26.996	-2	56 59 61 77 67 68 70 87 50 50 50	YGCPPFPVSPW
4395	T(+79.97)T(+79.97)SGSAA	4.5	64	377.6064	2	54.273	0.1	50 52 51 70 85 85 50	T(+79.97)T(+79.97)SGSAA
1011	ASMGQL	3.8	64	606.2914	1	14.162	-0.3	50 50 50 82 84 63	ASMGQL
1342	LLNNVLMGGLLEGWW	9.5	64	572.3038	3	17.664	-0.9	69 64 59 57 58 54 55 69 83 85 74 58 55 57 50	LLNNVLMGGLLEGWW
1865	NNATGPDPW	5.7	64	486.2138	2	23.363	-1.4	63 54 54 58 70 82 87 50 50	NNATGPDPW
874	QNGPGPVGLL	6.4	64	317.8466	3	12.652	-0.4	56 53 54 59 55 56 82 60 62 92	QNGPGPVGLL
4201	EERGDSAS(+79.97)LLKQL	8.3	64	763.3649	2	51.513	-2.1	50 61 64 68 88 60 59 72 91 55 50 51 51	EERGDSAS(+79.97)LLKQL
1067	VRGEAEF	4.5	64	807.4	1	14.754	0.6	50 56 60 81 95 50 50	VRGEAEF
1986	M(+15.99)VASRGHNAYEK	7.6	64	460.2225	3	24.794	-0.3	74 74 58 59 69 74 62 61 60 57 57 52	M(+15.99)VASRGHNAYEK
1076	HEAHQTI	4.4	64	835.4052	1	14.85	-0.5	50 50 90 70 62 70 50	HEAHQTI
2944	YLHALVLAKMPMV	8.3	64	495.9482	3	36.333	-1.3	50 61 51 57 58 67 70 71 73 59 58 68 77	YLHALVLAKMPMV
2897	MLGPF	3.2	64	564.2855	1	35.766	0.8	50 78 69 68 50	MLGPF
2477	EDEVAQLKVK	6.4	64	579.8221	2	30.71	0.4	50 67 72 70 77 51 51 52 82 59	EDEVAQLKVK
3881	NGGPTREV	5.1	63	415.2112	2	47.605	-1.2	54 60 73 62 63 62 64 65	NGGPTREV
3425	FVYPGSPGMEI	7	63	598.7865	2	42.084	0.1	50 50 88 77 78 50 59 62 62 66 51	FVYPGSPGMEI
3410	AWVLVPYDAK	6.3	63	581.3198	2	41.908	1.8	54 54 54 50 50 94 85 64 65 59	AWVLVPYDAK
2242	KNGGLLPGPHVL	7.6	63	601.3548	2	27.857	-2.2	71 67 64 60 69 77 80 67 50 50 50 50	KNGGLLPGPHVL
275	LET(+79.97)CS(+79.97)PDF	5.1	63	536.16	2	4.16	-1.4	50 50 50 50 50 84 84 84	LET(+79.97)CS(+79.97)PDF
4117	QVQSM(+15.99)LSPNT(+79.97)LK	7.6	63	721.3395	2	50.479	-2.8	53 53 53 73 71 72 83 66 63 61 55 52	QVQSM(+15.99)LSPNT(+79.97)LK
1931	LLDPEKATKEK	7	63	424.5781	3	24.138	-0.5	66 73 72 67 64 65 78 53 51 51 51	LLDPEKATKEK
489	QQY(+79.97)AGS(+79.97)DF	5.1	63	538.162	2	7.759	0	56 58 57 63 77 64 65 61	QQY(+79.97)AGS(+79.97)DF
2940	RSGSNVATGVTPVSRW	10.1	63	558.6283	3	36.282	-0.9	58 58 63 64 59 64 60 53 54 60 72 50 50 80 80 80	RSGSNVATGVTPVSRW
3165	EAVSPGNR	5.1	63	415.2111	2	38.991	-1.5	74 67 67 79 55 54 55 51	EAVSPGNR
903	KLTDSKMEENCFGPF	9.5	63	437.2026	4	12.973	0.8	67 62 62 60 58 57 58 60 76 73 81 63 54 56 54	KLTDSKMEENCFGPF
1653	LTWEKEGLYDSGFPTWLY	11.4	63	1103.031	2	20.972	0.3	50 50 51 53 55 78 76 76 82 79 82 90 56 51 51 50 50 50	LTWEKEGLYDSGFPTWLY
4116	AEGLEQLDNQL	7	63	615.304	2	50.469	0	62 62 60 61 71 72 91 57 51 53 51	AEGLEQLDNQL

3702	MKPLPVYDAK	6.3	63	581.3194	2	45.424	-1.7	60 59 57 59 50 50 92 69 70 60	MKPLPVYDAK
3372	M(+15.99)LPVVEEGKNL	7	63	622.8297	2	41.456	-2.6	73 73 50 50 84 85 64 60 50 51 50	M(+15.99)LPVVEEGKNL
2298	KEGSGGAGVPSGVRRPY	10.7	63	558.6289	3	28.541	0.2	51 51 68 62 52 52 55 66 83 73 69 76 76 74 53 54 53	KEGSGGAGVPSGVRRPY
988	SLDVPT(+79.97)TL	5.1	63	925.4263	1	13.91	-1.6	50 50 50 50 94 74 84 50	SLDVPT(+79.97)TL
3980	DPPSNPF	4.4	63	387.1801	2	48.827	8.4	50 50 76 77 60 65 61	DPPSNPF
807	KPNVLS(+79.97)PESAVQMPL	9.5	63	423.2128	4	11.898	0.7	60 59 57 71 72 63 63 60 56 57 64 58 69 77 56	KPNVLS(+79.97)PESAVQMPL
582	FQGQT(+79.97)DAENEK	7	63	673.767	2	9.146	0.5	52 51 62 69 86 80 64 59 53 61 51	FQGQT(+79.97)DAENEK
3432	FQQPLDCSARV	7	63	632.3135	2	42.166	3.8	53 59 54 84 72 65 63 79 55 56 52	FQQPLDCSARV
977	TTPAAGPASGTTATF	9.5	63	450.8902	3	13.791	1.9	54 52 52 80 56 55 56 61 64 57 56 72 80 80 65	TTPAAGPASGTTATF
2931	CLAES(+79.97)GLHTLW	6.9	63	437.1932	3	36.181	0.3	59 59 58 60 60 66 74 80 61 61 51	CLAES(+79.97)GLHTLW
3011	YLSLEGAFVKVFI	8.2	63	495.9492	3	37.132	-1.5	50 77 63 64 78 63 62 68 89 50 50 50 50	YLSLEGAFVKVFI
3252	M(+15.99)QPLGACVGLPKK	8.2	63	679.3718	2	40.034	2.3	55 54 81 83 76 52 52 54 73 67 59 58 50	M(+15.99)QPLGACVGLPKK
2376	NKLGLGASSARK	7.6	63	601.3553	2	29.488	1.9	68 66 63 63 66 65 64 66 72 55 53 50	NKLGLGASSARK
1664	TAALSKHLGCMMS(+79.97)K	8.8	63	519.9048	3	21.108	0.8	53 55 64 57 56 72 69 65 68 63 56 71 65 64	TAALSKHLGCMMS(+79.97)K
3142	RMVCNTFVQL	6.3	63	404.2067	3	38.708	-1.4	64 65 69 71 56 64 68 52 66 52	RMVCNTFVQL
3026	VFGCGAHVGLEV	7.6	63	594.2962	2	37.322	-2.3	50 50 73 55 55 60 69 81 81 61 58 59	VFGCGAHVGLEV
1167	ARS(+79.97)EGTGSLASVFKK	9.5	63	539.9368	3	15.794	-2.1	52 52 56 56 64 62 64 67 61 60 71 74 75 68 56	ARS(+79.97)EGTGSLASVFKK
1217	YT(+79.97)GPLGGHGAAM(+15.99)VPR	9.5	63	527.2412	3	16.316	0.2	59 56 52 58 55 54 57 84 81 71 66 64 66 63 50	YT(+79.97)GPLGGHGAAM(+15.99)VPR
3220	FLPVVTDSNGPV	7.6	63	622.8296	2	39.646	-0.1	50 50 50 50 50 85 78 78 60 60 70 70	FLPVVTDSNGPV
1060	TQQVEEL	4.4	63	846.4202	1	14.686	-0.1	55 54 55 85 90 50 50	TQQVEEL
1523	EEKCPVPGSM(+15.99)YPGKT(+79.97)NMAMMPYSKK	15.8	63	967.4248	3	19.584	1.3	56 52 51 51 65 68 64 65 66 68 60 53 63 76 77 57 57 78 76 66 59 60 62 62 50	EEKCPVPGSM(+15.99)YPGKT(+79.97)NMAMMPYSKK
4328	Y(+79.97)ECLACMGMI	6.3	63	607.2103	2	53.148	-2.4	50 50 76 74 76 77 63 53 55 51	Y(+79.97)ECLACMGMI
2712	FLKAVTWDFDLKNF	8.8	63	872.4579	2	33.566	-1	55 56 64 58 51 51 78 62 73 82 71 60 61 53	FLKAVTWDFDLKNF
1174	FGPNK	3.1	63	562.2969	1	15.87	-2.5	50 50 73 89 50	FGPNK
2433	ESSPDAPLVA	6.3	63	985.4824	1	30.19	-1.2	50 50 50 50 50 65 66 81 81 81	ESSPDAPLVA
3797	WKADLGTTGLTS(+79.97)PV	8.8	63	763.3667	2	46.58	-2.3	66 62 62 69 73 60 57 53 54 82 68 68 50 50	WKADLGTTGLTS(+79.97)PV
2900	FFCEKVNMLL	6.3	63	415.2112	3	35.807	-1.7	61 61 63 70 70 73 57 55 63 51	FFCEKVNMLL
954	QNSRSPR	4.4	63	422.724	2	13.536	2.7	50 74 81 82 50 50 50	QNSRSPR
4148	TKYCASKTQPLM(+15.99)R	8.2	63	771.8942	2	50.856	2.9	58 64 73 56 56 59 73 83 53 55 56 72 55	TKYCASKTQPLM(+15.99)R
1594	LHS(+79.97)PSAQFGGLPTGF	9.4	63	532.58	3	20.346	0.1	50 50 50 71 60 59 52 54 75 69 67 67 74 78 61	LHS(+79.97)PSAQFGGLPTGF
279	SVVGKK	3.8	63	309.2029	2	4.228	0.9	73 66 62 60 64 50	SVVGKK

2346	FLPVVESSNGPV	7.5	63	622.8295	2	29.12	-0.3	50 50 50 50 50 63 68 72 62 67 81 85	FLPVVESSNGPV
3791	SATNT(+79.97)PF	4.4	63	409.16	2	46.508	0	50 76 72 68 71 50 50	SATNT(+79.97)PF
1828	RFCPMPLGPAHHAK	8.8	63	521.2676	3	22.931	0.4	50 50 63 86 74 75 84 73 63 54 50 51 50 50	RFCPMPLGPAHHAK
3729	YPCLDL	3.8	63	723.3384	1	45.759	0.3	55 55 55 96 50 63	YPCLDL
2214	WGGSSGDGVSGLGAAGKR	11.3	63	540.2704	3	27.508	2.1	56 63 62 54 62 60 64 60 63 64 70 70 69 71 66 59 59 51	WGGSSGDGVSGLGAAGKR
1958	FVRVYAGVSNK	6.9	63	620.3474	2	24.469	2.6	50 50 50 96 89 75 62 54 52 55 51	FVRVYAGVSNK
1079	SDLVAGVGA	5.7	63	788.4152	1	14.875	0.5	50 50 50 50 50 87 74 75 76	SDLVAGVGA
2896	WLFSCVNYLKSFLPV	9.4	63	605.9866	3	35.755	-2.7	61 62 52 52 52 52 51 52 60 71 85 88 97 50 50	WLFSCVNYLKSFLPV
3593	RTPYELS(+79.97)AGQLLK	8.2	63	778.3976	2	44.106	0	50 62 71 81 83 73 60 70 57 51 50 51 50	RTPYELS(+79.97)AGQLLK
1390	SVLTEGPPDA	6.3	63	985.4841	1	18.183	0.4	50 50 90 77 60 57 62 77 50 50	SVLTEGPPDA
4153	WPQVEDLVVGESVK	8.8	63	528.9467	3	50.919	-0.9	50 62 51 52 54 74 81 80 76 66 55 56 65 50	WPQVEDLVVGESVK
1740	YLEMGVPAPPMPL	8.2	63	707.8569	2	21.919	-3	51 71 56 68 69 70 64 64 50 50 71 71 55	YLEMGVPAPPMPL
2340	LAGKTK	3.8	63	309.2031	2	29.047	1.5	50 50 75 75 75 50	LAGKTK
1811	EHGNNSV	4.4	63	378.6679	2	22.734	1.9	50 50 70 69 68 79 50	EHGNNSV
354	WAT(+79.97)T(+79.97)V	3.1	63	369.12	2	5.438	2.8	50 81 81 50 50	WAT(+79.97)T(+79.97)V
3152	LEVGASCLLAFGPW	8.8	63	488.2528	3	38.834	2.8	87 61 56 55 59 61 63 66 83 64 62 55 50 50	LEVGASCLLAFGPW
1134	LAPYFSSRYDF	6.9	63	455.8878	3	15.452	1.1	50 51 53 59 65 65 74 91 76 50 50	LAPYFSSRYDF
1232	MEEEDEGHKLLY	7.5	63	746.8355	2	16.482	1	50 50 50 50 98 94 82 64 57 51 51 50	MEEEDEGHKLLY
3222	NKLGGLGTSKAR	7.5	63	601.3554	2	39.665	2	80 78 61 60 60 58 58 66 69 54 52 50	NKLGGLGTSKAR
1115	MPKAGNAVPNMDLVK	9.4	63	528.9457	3	15.255	-0.6	72 73 59 55 54 55 56 70 76 82 64 58 52 54 51	MPKAGNAVPNMDLVK
1763	LPKMGSVLVFADL	8.1	63	695.3921	2	22.184	-2.9	55 56 58 62 58 58 55 50 77 77 72 76 55	LPKMGSVLVFADL
1248	AMPGNLQGRGL	6.9	63	557.2936	2	16.646	-2.8	52 64 66 69 58 55 52 62 76 65 66	AMPGNLQGRGL
595	SS(+79.97)SGDQEHQGQL	7.5	63	676.7602	2	9.303	1.3	50 50 91 72 63 54 62 62 64 63 62 53	SS(+79.97)SGDQEHQGQL
4055	LM(+15.99)PGEGDS(+79.97)CCY(+79.97)	6.9	63	675.6761	2	49.743	-2.8	54 55 63 62 69 78 77 76 50 50 50	LM(+15.99)PGEGDS(+79.97)CCY(+79.97)
1199	FGVTFQFGA	5.6	63	973.4824	1	16.128	4.8	50 95 83 55 52 52 53 64 55	FGVTFQFGA
4013	DGLLASATDL	6.3	63	488.2532	2	49.234	-0.1	55 53 64 90 64 54 55 61 70 54	DGLLASATDL
1882	WVALTKCGALPSPPVLKK	11.3	63	636.7109	3	23.566	2.3	53 51 51 69 75 79 76 61 63 75 76 78 50 50 54 52 54 50	WVALTKCGALPSPPVLKK
3228	TSLVDPEPGA	6.3	63	985.4829	1	39.745	-0.7	79 74 86 50 50 50 50 66 66 50	TSLVDPEPGA
1548	ELEKNEI	4.4	63	874.4534	1	19.848	2	50 76 66 59 58 65 60	ELEKNEI
2250	MAGMVPTV	5	63	805.3934	1	27.951	-1.5	91 70 66 54 58 58 50 50	MAGMVPTV
1833	WTQQGDFKSGMACERHK	10.6	62	1004.959	2	22.994	-0.5	50 50 50 50 61 62 74 70 59 60 73 76 76 82 60 50 50	WTQQGDFKSGMACERHK

1354	MEPDLSSSSA	6.2	62	1023.431	1	17.797	0.9	50 50 91 88 91 50 50 50 50 50	MEPDLSSSSA
1336	WALMDNNWLKKL	7.5	62	511.2756	3	17.601	2.2	69 56 58 74 70 63 68 67 69 50 50 50	WALMDNNWLKKL
3732	VVAHKVDGKRY	6.9	62	424.5781	3	45.788	-1.7	63 63 64 74 51 50 51 87 65 61 52	VVAHKVDGKRY
744	TNPGNVV	4.4	62	700.3625	1	11.163	0.2	50 50 50 50 73 80 81	TNPGNVV
842	NEELEA	3.7	62	704.3093	1	12.299	-0.5	63 64 94 50 50 50	NEELEA
792	KRTKTT(+79.97)YMQELK	7.5	62	402.4551	4	11.719	-2.3	56 58 65 64 61 51 51 62 61 76 78 59	KRTKTT(+79.97)YMQELK
2914	CGCSSGQRDKGGK	8.1	62	641.7866	2	35.97	2.5	50 50 50 50 93 75 52 52 52 58 69 70 83	CGCSSGQRDKGGK
255	NNS(+79.97)GPW	3.7	62	377.6308	2	3.876	-1.7	60 60 61 90 50 50	NNS(+79.97)GPW
2506	NQEELASFNLV	6.9	62	632.3132	2	31.07	-1.9	59 58 72 87 74 55 53 57 54 56 54	NQEELASFNLV
891	AEAGGGPAQAK	6.9	62	478.7429	2	12.844	-1	50 80 65 58 77 71 61 61 52 52 53	AEAGGGPAQAK
3453	MM(+15.99)PPGLLGA	5.6	62	902.4454	1	42.428	-2.2	50 50 50 69 69 83 75 61 50	MM(+15.99)PPGLLGA
1518	MEELELA	4.4	62	834.3904	1	19.533	-1	50 50 50 90 66 70 56	MEELELA
2428	WNRMVNVLLTNELDV	9.3	62	605.9858	3	30.125	0.5	75 58 62 54 67 63 60 61 83 56 54 59 59 64 52	WNRMVNVLLTNELDV
969	M(+15.99)LRPTRPVTLSL	7.5	62	350.7086	4	13.707	2.5	52 68 66 70 59 54 52 65 65 67 70 53	M(+15.99)LRPTRPVTLSL
1943	TLLMFLLVLL	6.2	62	588.3756	2	24.283	-2.8	69 73 75 76 50 50 50 62 62 50	TLLMFLLVLL
1046	EVKSHGTCVLVW	7.5	62	453.2367	3	14.537	1.6	60 60 79 50 53 57 65 66 74 77 50 50	EVKSHGTCVLVW
3630	GDANKPRLCMEHA	8.1	62	721.3395	2	44.542	3	50 50 50 50 50 52 68 90 96 97 50 50 50	GDANKPRLCMEHA
3623	LVRVLKLPKLF	6.8	62	663.4534	2	44.461	-2.6	50 50 55 85 90 70 62 63 52 53 50	LVRVLKLPKLF
1092	FEVGA	3.1	62	522.2557	1	15.013	-0.1	50 68 68 72 50	FEVGA
566	CCMTVSSKATTNS(+79.97)CGA	10	62	822.2997	2	8.943	-0.7	50 50 50 50 59 71 67 80 90 90 79 51 51 50 50 50	CCMTVSSKATTNS(+79.97)CGA
4003	SQAVDLMLLRHY(+79.97)	7.5	62	763.3655	2	49.106	0.3	57 56 69 59 59 62 60 65 69 66 59 60	SQAVDLMLLRHY(+79.97)
898	DGLAVSTANQPSVQQK	9.9	62	548.2849	3	12.918	0.3	52 52 57 66 81 66 55 55 54 58 91 77 72 50 50 50	DGLAVSTANQPSVQQK
1706	LYVDPPLEV	5.6	62	1044.562	1	21.565	0.9	50 50 50 50 50 50 85 85 85	LYVDPPLEV
2418	RTLKEYGSDHRKRY(+79.97)V	9.3	62	663.332	3	29.995	-2.2	55 57 63 61 65 56 70 67 69 69 59 64 56 56 56	RTLKEYGSDHRKRY(+79.97)V
2603	KGSVVK	3.7	62	309.2034	2	32.252	2.5	73 72 59 59 56 50	KGSVVK
2622	MMTGCT(+79.97)PL	5	62	467.1679	2	32.479	0.5	55 56 55 67 72 71 62 55	MMTGCT(+79.97)PL
1908	VM(+15.99)PEPMML	5	62	963.4329	1	23.864	-2	50 50 50 50 90 75 77 50	VM(+15.99)PEPMML
2049	RHKLYSAKPYLLYK	8.7	62	890.517	2	25.553	0	50 51 50 68 68 54 52 58 75 88 91 54 52 51	RHKLYSAKPYLLYK
3485	EPLGGNSR	5	62	415.2113	2	42.806	-1.1	50 73 72 74 50 57 58 59	EPLGGNSR
2006	EVVM(+15.99)VCNAGLMEV	8.1	62	705.3279	2	25.044	0.9	50 79 58 56 54 57 53 57 71 66 61 70 67	EVVM(+15.99)VCNAGLMEV
1827	YY(+79.97)HGHLAVRLAM(+15.99)GT(+79.97)KK	9.9	62	1010.963	2	22.92	-2	50 69 54 59 67 79 61 59 70 70 73 63 53 52 52 52	YY(+79.97)HGHLAVRLAM(+15.99)GT(+79.97)KK

1080	VLSVSLK	4.3	62	373.2448	2	14.884	0.7	50 50 68 68 67 71 55	VLSVSLK
4147	Y(+79.97)CT(+79.97)MVT(+79.97)DL	5	62	593.1573	2	50.845	2.4	50 50 84 84 50 70 50 53	Y(+79.97)CT(+79.97)MVT(+79.97)DL
3159	MPVMGATLDPLLCKVDL	10.5	62	605.9861	3	38.919	1.3	75 76 59 56 56 61 57 57 63 58 68 89 65 52 51 52 50	MPVMGATLDPLLCKVDL
1110	RM(+15.99)SGCSRLNTLHV	8	62	497.251	3	15.202	1.4	50 50 50 50 84 71 56 56 68 80 83 50	RM(+15.99)SGCSRLNTLHV
3976	SLALDPGSDNAVA	8	62	615.3047	2	48.773	1.1	72 70 60 60 75 72 72 52 51 51 52 52	SLALDPGSDNAVA
1854	MWVQAGALHQRMS(+79.97)R	8.7	62	875.9062	2	23.229	1.3	54 54 53 61 77 76 74 76 60 55 53 52 56 56	MWVQAGALHQRMS(+79.97)R
3143	LTLAAGGTMK	6.2	62	481.7709	2	38.719	0.6	51 54 63 68 82 64 56 56 69 50	LTLAAGGTMK
81	LRVHKNLLLLM(+15.99)GT(+79.97)QV	9.3	62	916.01	2	1.298	5.7	50 50 50 57 59 81 94 94 68 68 50 50 50 50 50	LRVHKNLLLLM(+15.99)GT(+79.97)QV
1313	WHAGHVVTLNGVW	8	62	492.5905	3	17.355	1.9	50 61 61 68 71 50 79 76 66 54 55 56 50	WHAGHVVTLNGVW
3036	LLLLVKLALKR	6.8	62	640.4636	2	37.432	1	50 50 73 76 69 62 61 63 57 59 53	LLLLVKLALKR
672	T(+79.97)YMMPATTPEV	6.8	62	660.7678	2	10.287	2.5	50 50 52 62 75 84 79 58 54 54 56	T(+79.97)YMMPATTPEV
904	EEAEERADL	5.6	62	531.2408	2	12.981	-0.2	50 50 50 50 89 78 64 67 53	EEAEERADL
1026	SGDGVPAI	4.9	62	715.3617	1	14.314	-0.5	50 50 50 50 82 79 79 50	SGDGVPAI
1930	LTLLWGPL	4.9	62	456.7812	2	24.129	-0.2	50 61 93 60 54 68 50 53	LTLLWGPL
1337	ATLLSLVTGPEAKW	8.6	62	495.9488	3	17.611	0.6	52 52 60 66 66 64 70 81 65 62 63 52 52 50	ATLLSLVTGPEAKW
1736	S(+79.97)PVLDL	3.7	62	723.3378	1	21.889	7.5	50 50 50 98 50 69	S(+79.97)PVLDL
1803	S(+79.97)PVLDL	3.7	62	723.3383	1	22.651	8.2	50 50 50 98 50 69	S(+79.97)PVLDL
4075	LTLKVT(+79.97)FQDLRYAPA	9.2	62	605.9866	3	49.979	2.6	50 63 81 74 59 53 51 51 54 87 65 52 56 73 50	LTLKVT(+79.97)FQDLRYAPA
94	KKKKKRSKV	5.5	62	377.2684	3	1.462	1.5	50 50 50 50 66 62 84 87 50	KKKKKRSKV
4292	DPDMT(+79.97)PGGGAT(+79.97)AA	8	62	660.7134	2	52.677	-1.4	67 67 56 57 59 58 64 75 76 63 51 50 50	DPDMT(+79.97)PGGGAT(+79.97)AA
1956	FAFLPVGPGTLTDL	8.6	62	724.3961	2	24.434	1.2	51 53 53 66 50 50 58 68 58 57 64 78 86 62	FAFLPVGPGTLTDL
3666	GSNLTNTSVNSVA	8	62	632.3135	2	44.984	1.6	50 51 51 65 73 65 69 66 65 62 60 57 58	GSNLTNTSVNSVA
3251	WLAVLPV	4.3	62	399.2504	2	40.024	2.1	74 72 81 50 50 50 50	WLAVLPV
3296	TLLTSACLCADKGPRAPV	11.1	61	605.9864	3	40.561	-0.5	50 50 60 68 64 66 76 76 75 53 53 60 75 64 53 51 51 51	TLLTSACLCADKGPRAPV
2777	APWSRRGM(+15.99)GVNELRV	9.2	61	872.4594	2	34.317	2.4	61 52 52 54 71 82 64 56 59 78 70 66 50 50 50	APWSRRGM(+15.99)GVNELRV
2403	S(+79.97)PVLDL	3.7	61	723.3382	1	29.821	8	50 50 50 98 50 68	S(+79.97)PVLDL
2230	VFDLNTLCANKLHNTL	9.8	61	605.9866	3	27.711	1.7	55 53 53 56 54 72 79 59 58 57 77 59 58 57 75 56	VFDLNTLCANKLHNTL
3200	S(+79.97)PVLDL	3.7	61	723.3377	1	39.415	7.3	50 50 50 98 50 68	S(+79.97)PVLDL
3134	S(+79.97)PVLDL	3.7	61	723.3379	1	38.617	7.6	50 50 50 98 50 68	S(+79.97)PVLDL
3597	S(+79.97)PVLDL	3.7	61	723.3373	1	44.16	6.8	50 50 50 98 50 68	S(+79.97)PVLDL
2738	S(+79.97)PVLDL	3.7	61	723.3387	1	33.871	8.8	50 50 50 97 50 68	S(+79.97)PVLDL

2271	S(+79.97)PVLDL	3.7	61	723.3372	1	28.214	6.6	50 50 50 97 50 68	S(+79.97)PVLDL
613	CCY(+79.97)DAQLI	4.9	61	504.6823	2	9.538	0.7	50 50 50 82 69 64 72 50	CCY(+79.97)DAQLI
3029	LTLALDVQGTNLCMRPA	10.4	61	605.9872	3	37.353	0.8	50 52 60 54 54 55 61 59 71 70 64 65 64 68 67 66 55	LTLALDVQGTNLCMRPA
3694	KPGPLLLVI	5.5	61	475.3246	2	45.326	-2.7	54 54 57 70 71 92 50 50 50	KPGPLLLVI
1751	WLEY(+79.97)PEGPPLGSAAPVGYT(+79.97)V	12.3	61	1131.993	2	22.044	1.4	50 50 50 50 61 62 70 72 85 82 78 58 57 74 55 54 56 51 50 51	WLEY(+79.97)PEGPPLGSAAPVGYT(+79.97)V
2138	S(+79.97)PVLDL	3.7	61	723.3372	1	26.611	6.7	50 50 50 97 50 67	S(+79.97)PVLDL
1632	ACS(+79.97)M(+15.99)DGDCM(+15.99)MQY	7.4	61	733.6599	2	20.738	-46.3	58 58 58 84 77 59 50 50 50 61 64 61	ACS(+79.97)M(+15.99)DGDCM(+15.99)MQY
3002	S(+79.97)PVLDL	3.7	61	723.3377	1	37.037	7.3	50 50 50 97 50 67	S(+79.97)PVLDL
2352	NKQQGPRGVTGGYKRY(+79.97)V	10.4	61	663.3325	3	29.193	-1.5	53 50 51 53 59 58 60 69 71 83 79 63 58 62 53 55 55	NKQQGPRGVTGGYKRY(+79.97)V
2337	S(+79.97)PVLDL	3.7	61	723.3376	1	29.02	7.3	50 50 50 97 50 67	S(+79.97)PVLDL
3068	S(+79.97)PVLDL	3.7	61	723.3378	1	37.824	7.5	50 50 50 97 50 67	S(+79.97)PVLDL
1821	VAFSPLV	4.3	61	732.4301	1	22.854	1.5	54 57 76 88 50 50 50	VAFSPLV
4151	NCES(+79.97)V	3.1	61	316.0967	2	50.899	10.9	64 68 71 50 50	NCES(+79.97)V
4043	NNNNAGAV	4.9	61	387.1803	2	49.596	-0.5	61 75 74 56 54 51 56 57	NNNNAGAV
1719	HGVPDLKPL	5.5	61	488.286	2	21.702	2.6	50 50 50 87 84 64 56 54 51	HGVPDLKPL
2039	M(+15.99)VLAGSGGTGHGK	7.9	61	594.2954	2	25.428	-0.1	73 76 75 65 59 58 56 56 57 59 54 51 50	M(+15.99)VLAGSGGTGHGK
3531	S(+79.97)PVLDL	3.7	61	723.3381	1	43.359	7.8	50 50 50 97 50 67	S(+79.97)PVLDL
4300	LAVNVKLVV	5.5	61	477.8216	2	52.771	1.5	76 67 66 57 63 60 54 52 50	LAVNVKLVV
2967	MGGQVGRVVK	6.1	61	515.7943	2	36.618	-1.2	50 65 63 61 62 65 64 75 50 50	MGGQVGRVVK
2600	S(+79.97)PVLDL	3.7	61	723.3383	1	32.22	8.1	50 50 50 97 50 67	S(+79.97)PVLDL
2729	KTAFSA	3.7	61	624.3385	1	33.765	5.5	50 50 77 59 59 68	KTAFSA
3533	ELEELTGM(+15.99)GRL	6.7	61	632.3144	2	43.38	-2.7	50 50 50 86 84 72 61 60 52 52 50	ELEELTGM(+15.99)GRL
2843	FQPAVRAGACPLK	7.9	61	679.3722	2	35.111	-2.8	65 62 80 59 56 58 57 58 68 68 52 53 51	FQPAVRAGACPLK
694	LNGGDI	3.7	61	588.2989	1	10.568	0.3	62 61 83 58 50 50	LNGGDI
755	LES(+79.97)AMCPL	4.9	61	472.1873	2	11.291	1	50 85 66 67 59 54 54 50	LES(+79.97)AMCPL
1186	Y(+79.97)TMVVLYVKCANVGRSR	10.4	61	510.505	4	15.994	0.8	53 54 51 57 59 73 78 55 52 52 75 57 58 74 63 67 50	Y(+79.97)TMVVLYVKCANVGRSR
1319	REHGKSMALVKVF	7.9	61	501.2803	3	17.419	-2.9	53 59 53 62 69 69 56 56 59 73 78 50 50	REHGKSMALVKVF
2273	KAKGTL	3.7	61	309.203	2	28.233	1.1	50 50 74 59 59 72	KAKGTL
3749	EAVGGSGPR	5.5	61	415.2111	2	45.992	-1.5	59 57 57 76 76 62 54 54 50	EAVGGSGPR
3467	S(+79.97)PVLDL	3.7	61	723.3371	1	42.594	6.5	50 50 50 97 50 66	S(+79.97)PVLDL
3795	S(+79.97)PVLDL	3.7	61	723.3381	1	46.561	7.8	50 50 50 97 50 66	S(+79.97)PVLDL

678	Y(+79.97)EVT(+79.97)K	3	61	400.137	2	10.362	-0.9	50 74 59 65 54	Y(+79.97)EVT(+79.97)K
481	AESGPVGA	4.9	61	687.3302	1	7.599	-0.8	78 78 78 50 50 50 50 50	AESGPVGA
1810	S(+79.97)PVLDL	3.7	61	723.3388	1	22.725	8.9	50 50 50 97 50 66	S(+79.97)PVLDL
1654	RNMCNCATCATDWLRVKW	11	61	1085.99	2	20.983	-1.8	55 56 53 67 60 57 59 65 65 75 77 72 52 54 55 55 57 53	RNMCNCATCATDWLRVKW
730	NGSAEDEPPV	6.1	61	507.7227	2	10.999	0.8	61 61 64 78 90 50 50 50 50 50	NGSAEDEPPV
4004	FHWGSAAALEV	6.7	61	594.2953	2	49.117	-0.9	50 50 50 80 56 53 51 72 67 68 65	FHWGSAAALEV
3298	LENAGGAVSFADL	7.9	61	632.3134	2	40.583	-1.6	54 54 52 58 73 70 69 68 57 56 53 70 51	LENAGGAVSFADL
3210	MLAVASGGPPKMKAK	9.1	61	495.9485	3	39.521	1.8	58 58 59 57 63 58 57 55 56 78 86 64 52 52 51	MLAVASGGPPKMKAK
4182	HEAHQTI	4.3	61	835.4042	1	51.282	-1.7	50 50 79 64 60 69 50	HEAHQTI
2229	NKKDLAGPGKKACR	8.5	61	495.9486	3	27.701	-0.4	53 54 51 52 58 58 62 74 82 89 54 52 52 50	NKKDLAGPGKKACR
2834	AAKKSL	3.6	61	309.2032	2	35.012	1.8	52 52 52 73 74 59	AAKKSL
3890	KAKASL	3.6	61	309.2034	2	47.723	2.3	50 56 56 65 66 68	KAKASL
97	TTGT(+79.97)DY	3.6	61	369.1223	2	1.493	-2	50 50 67 65 71 58	TTGT(+79.97)DY
4014	KWTMEL	3.6	61	404.2065	2	49.243	-1.4	53 53 57 64 78 57	KWTMEL
2328	LDAPVM(+15.99)AVPRVNTW	8.5	61	528.946	3	28.906	2.1	54 53 58 60 61 63 58 59 77 75 60 55 57 52	LDAPVM(+15.99)AVPRVNTW
1734	LTDVPF	3.6	61	691.3679	1	21.859	2.6	64 64 82 50 50 50	LTDVPF
2427	VMARVLGPGGSGTKR	9.1	61	495.9486	3	30.115	-0.4	53 53 52 60 62 77 65 60 70 65 58 57 58 59 51	VMARVLGPGGSGTKR
951	ALEEGGEEM(+15.99)EKLKR	8.5	61	545.6069	3	13.509	0.6	50 51 52 54 55 63 71 85 50 61 61 66 67 54	ALEEGGEEM(+15.99)EKLKR
1014	QQPMEL	3.6	61	745.3545	1	14.187	-0.5	50 59 67 85 50 50	QQPMEL
1557	EELEACFLQKTWVYVTEEFY	12.1	61	632.5492	4	19.948	0.6	54 53 60 72 65 63 52 55 52 54 52 50 51 71 77 72 73 74 50 50	EELEACFLQKTWVYVTEEFY
1265	TVNADM(+15.99)L	4.2	60	779.3604	1	16.838	0	60 59 59 92 50 50 50	TVNADM(+15.99)L
4126	LLSSSSLGGQLPL	7.9	60	424.5782	3	50.597	-0.2	62 62 62 50 50 55 55 59 70 71 55 78 50	LLSSSSLGGQLPL
947	RSTAGAELFPMPWR	8.5	60	405.4585	4	13.463	-2.3	73 53 51 50 52 59 56 63 64 65 65 70 62 57	RSTAGAELFPMPWR
1436	ELMS(+79.97)CTQNKKFVKRPV	9.7	60	663.3336	3	18.69	0.3	58 57 59 54 50 50 50 51 50 66 50 82 79 73 73 56	ELMS(+79.97)CTQNKKFVKRPV
2903	S(+79.97)LVLLPQL	4.8	60	481.7709	2	35.839	2.4	50 50 50 95 68 54 57 55	S(+79.97)LVLLPQL
484	DPPGSAGA	4.8	60	671.2993	1	7.644	-0.3	50 50 50 50 50 89 90 50	DPPGSAGA
737	QTLRSYSEV	5.4	60	361.5206	3	11.08	-0.3	52 52 53 61 61 85 62 62 50	QTLRSYSEV
2878	LYPGGLPVDLGEKK	8.4	60	495.9486	3	35.533	0.1	58 58 60 53 53 54 55 72 64 68 80 55 56 52	LYPGGLPVDLGEKK
750	AYM(+15.99)TTSF	4.2	60	836.3513	1	11.231	2.1	50 50 67 68 60 62 63	AYM(+15.99)TTSF
2043	LNGANNANAT(+79.97)TV	7.2	60	620.2734	2	25.481	2.5	56 56 69 66 58 59 60 65 64 55 56 53	LNGANNANAT(+79.97)TV
1468	LEELTSTPSAGNERSPV	10.2	60	596.2982	3	19.023	-0.9	53 53 78 63 61 58 56 56 61 64 55 54 69 61 58 66 50	LEELTSTPSAGNERSPV

565	QAAAYPSGAANCAF	8.4	60	671.3	2	8.931	2.7	51 54 60 54 51 50 70 69 75 85 54 58 55 50	QAAAYPSGAANCAF
2555	DSGGGGGGNK	6	60	403.1747	2	31.656	-1.7	72 69 66 50 50 50 50 55 61 74	DSGGGGGGNK
3635	VFFTKK	3.6	60	385.2346	2	44.605	1.6	54 58 57 69 70 50	VFFTKK
2009	QVVLPF	3.6	60	702.4189	1	25.074	0.6	69 69 70 50 50 50	QVVLPF
1576	VNTKDPMAGTQKPL	8.4	60	500.5998	3	20.156	-2.4	60 59 61 65 62 62 64 66 56 56 53 54 64 52	VNTKDPMAGTQKPL
3642	DVGST(+79.97)MK	4.2	60	409.1619	2	44.689	0.4	50 69 67 65 67 50 50	DVGST(+79.97)MK
1422	SFAVLPV	4.2	60	732.4288	1	18.53	-0.3	67 68 65 68 50 50 50	SFAVLPV
3819	KKVPKVKDKKK	6.6	60	663.4537	2	46.85	0.7	51 51 51 50 75 81 72 55 55 63 50	KKVPKVKDKKK
3903	FELGTLGVASVPPA	8.4	60	679.372	2	47.881	0.5	90 91 52 50 50 54 57 59 53 53 63 54 54 54	FELGTLGVASVPPA
1414	DLDAGELPGHPI	7.2	60	617.3085	2	18.45	-1	52 57 58 61 56 63 72 72 75 50 50 50	DLDAGELPGHPI
2702	LFPPKK	3.6	60	729.4678	1	33.454	2.8	50 72 72 63 50 50	LFPPKK
2513	S(+79.97)TGSDHA	4.2	60	377.6245	2	31.151	1.8	75 71 63 57 50 50 50	S(+79.97)TGSDHA
1142	QWTTANQVTGAGRRK	9	60	558.6339	3	15.541	2.5	54 57 56 67 55 55 60 63 66 73 67 62 53 53 51	QWTTANQVTGAGRRK
2890	FVGPPESA	4.8	60	803.3927	1	35.677	-0.8	50 50 50 50 84 71 71 50	FVGPPESA
754	ANGPELCYA	5.4	60	937.4103	1	11.282	2.1	53 55 60 72 50 50 61 71 61	ANGPELCYA
63	DS(+79.97)AANS(+79.97)GDF	5.4	60	522.14	2	0.923	-2.5	68 68 67 68 54 60 50 50 50	DS(+79.97)AANS(+79.97)GDF
3196	MLWPWA	3.6	60	803.3928	1	39.363	2.4	75 75 55 50 50 50	MLWPWA
2416	KNT(+79.97)HREAKLKYY(+79.97)	7.2	60	570.93	3	29.972	-0.5	50 55 53 54 62 59 76 68 68 58 54 53	KNT(+79.97)HREAKLKYY(+79.97)
2183	MMVKHSA	4.2	60	803.3919	1	27.141	2.1	50 77 69 70 50 50 50	MMVKHSA
619	MGS(+79.97)PCDCS(+79.97)CACA	7.2	60	654.0948	2	9.618	-64.8	72 72 88 50 50 50 50 60 60 60 50 50	MGS(+79.97)PCDCS(+79.97)CACA
3000	RCTGRFGCSHW	6.6	60	437.193	3	37.004	-2.4	66 57 55 61 63 70 80 50 50 50 50	RCTGRFGCSHW
29	QADSSDF	4.2	60	385.1527	2	0.368	-2.1	56 56 57 63 62 61 59	QADSSDF
495	QADEDECTNK	6	60	576.726	2	7.833	-2.2	64 66 64 68 50 50 60 56 61 54	QADEDECTNK
2279	M(+15.99)LPVVESTPQK	6.6	60	622.8314	2	28.303	0	52 52 50 50 50 76 74 73 58 59 58	M(+15.99)LPVVESTPQK
1396	EFPSEI	3.6	60	721.34	1	18.249	-0.3	50 50 77 59 64 56	EFPSEI
1152	MEPEGMLK	4.8	60	934.4362	1	15.632	-1.2	50 50 50 85 65 56 61 57	MEPEGMLK
3782	MTYPYV	3.6	60	387.1802	2	46.402	-0.9	69 66 70 50 50 50	MTYPYV
1059	KNSVGEEL	4.8	60	438.2271	2	14.679	0.2	50 50 54 64 64 91 50 50	KNSVGEEL
2086	NGGPANR	4.2	60	343.1724	2	25.989	-0.1	52 52 72 79 58 51 50	NGGPANR
2873	STVPLLGA	4.8	60	757.4457	1	35.472	0.4	50 50 50 68 68 88 50 50	STVPLLGA
687	KM(+15.99)QCDK	3.6	60	768.3373	1	10.486	-0.8	50 50 60 65 70 60	KM(+15.99)QCDK

3250	ELGLGEAFVLW	6.6	60	617.3291	2	40.012	-0.3	51 51 51 83 66 65 64 60 60 50 50	ELGLGEAFVLW
3948	GPKLLALVRLLK	7.2	60	660.9582	2	48.427	0.2	50 56 55 72 62 62 65 66 69 51 50 50	GPKLLALVRLLK
3089	TSVPLLGA	4.8	60	757.4448	1	38.074	-0.8	50 50 50 66 66 90 50 50	TSVPLLGA
4263	FFVKTK	3.6	60	385.235	2	52.283	2.8	54 54 58 69 70 50	FFVKTK
4082	FLT(+79.97)HVGLSGSGAHA	8.3	60	717.3331	2	50.06	1.2	50 50 50 50 53 64 65 74 63 59 69 64 66 50	FLT(+79.97)HVGLSGSGAHA
4410	CDM(+15.99)NYDF	4.2	60	462.15	2	54.501	1.9	50 65 65 62 70 50 50	CDM(+15.99)NYDF
2993	MMWPKA	3.6	59	763.3642	1	36.922	1.6	50 50 50 68 78 58	MMWPKA
2868	LSTTLF	3.6	59	341.1953	2	35.411	2.4	50 62 62 80 50 50	LSTTLF
3836	LYVGPMAPKPWV	7.1	59	679.3719	2	47.064	2.2	50 88 71 58 58 55 55 54 54 64 50 50	LYVGPMAPKPWV
3997	M(+15.99)DS(+79.97)CHNY(+79.97)	4.2	59	523.1141	2	49.033	1.8	50 50 50 67 64 64 69	M(+15.99)DS(+79.97)CHNY(+79.97)
2669	SACDLPVV	4.8	59	803.3947	1	33.052	-2.5	67 67 87 50 50 50 50 50	SACDLPVV
2693	NGGSQTRA	4.8	59	790.3799	1	33.34	-0.4	54 60 59 57 53 55 70 62	NGGSQTRA
4269	Y(+79.97)GNPGM(+15.99)GT(+79.97)V	5.3	59	536.1652	2	52.369	-2.2	58 60 56 69 71 60 52 54 51	Y(+79.97)GNPGM(+15.99)GT(+79.97)V
1953	VDLFPLGA	4.7	59	831.4604	1	24.403	-0.7	50 50 50 50 70 64 67 70	VDLFPLGA
2676	GCCSSLVMSLPW	7.1	59	641.7862	2	33.133	1.7	50 50 51 50 50 50 92 77 68 70 50 50	GCCSSLVMSLPW
32	DGLACGSDS(+79.97)A	5.9	59	488.16	2	0.401	0.3	51 56 69 74 64 56 59 59 50 50	DGLACGSDS(+79.97)A
2730	NS(+79.97)GGHEF	4.2	59	414.1393	2	33.774	-0.6	61 65 67 61 58 50 50	NS(+79.97)GGHEF
1877	EVKFGQKPV	5.3	59	516.3001	2	23.504	4.5	55 54 53 51 58 56 76 76 50	EVKFGQKPV
3774	TLLLPLVI	4.7	59	441.3071	2	46.289	-0.1	56 56 71 64 63 61 50 50	TLLLPLVI
4309	SMAGYHMGHTGM(+15.99)K	7.7	59	712.3	2	52.901	0.9	51 51 54 59 70 85 72 58 53 54 51 51 50	SMAGYHMGHTGM(+15.99)K
1676	AEM(+15.99)TSHSRHYEKAF	8.3	59	570.5943	3	21.243	-1	51 53 53 62 62 62 50 75 73 60 68 51 51 50	AEM(+15.99)TSHSRHYEKAF
4226	LCELGVQL	4.7	59	437.74	2	51.813	2.9	50 50 70 67 65 50 50 66	LCELGVQL
2753	M(+15.99)TS(+79.97)HGPASSAR	6.5	59	599.2396	2	34.028	0.1	50 50 50 50 72 66 62 65 62 64 52	M(+15.99)TS(+79.97)HGPASSAR
1353	HGNERVGFKVLVY	7.7	59	506.6118	3	17.788	-0.8	53 59 62 70 64 60 61 67 59 53 53 50 50	HGNERVGFKVLVY
1031	LLT(+79.97)LVKMTCLK	6.5	59	448.2451	3	14.37	-2.2	50 73 52 53 58 71 71 56 55 54 50	LLT(+79.97)LVKMTCLK
1496	LSVGLKCDK	5.3	59	481.771	2	19.307	1	50 55 55 61 86 56 54 55 54	LSVGLKCDK
1634	ECLEPVPF	4.7	59	933.4413	1	20.769	2.9	50 50 50 61 61 61 67 67	ECLEPVPF
4435	SS(+79.97)VTTS(+79.97)DAA	5.3	59	499.66	2	54.834	1.2	56 58 60 67 81 53 50 50 50	SS(+79.97)VTTS(+79.97)DAA
3737	Y(+79.97)GST(+79.97)NSPW	4.7	59	536.1653	2	45.848	1.3	50 62 64 75 52 53 61 50	Y(+79.97)GST(+79.97)NSPW
4163	FVKPPPYDKA	5.9	59	581.3186	2	51.044	-0.3	50 50 50 52 62 63 77 65 57 57	FVKPPPYDKA
2518	VLLLTLALELPLK	7.6	59	479.3222	3	31.213	1.7	54 54 53 58 65 62 60 64 66 55 55 59 51	VLLLTLALELPLK

2816	M(+15.99)NAYPVLLPK	5.9	59	581.319	2	34.788	-2.4	66 52 53 91 50 50 61 53 55 51	M(+15.99)NAYPVLLPK
3342	LLALLLKALVL	6.5	59	590.4257	2	41.098	0.1	52 52 52 53 53 58 58 61 67 65 70	LLALLLKALVL
1661	QNPNDLALGLAHNEPEQKL	11.2	59	701.0267	3	21.067	-0.8	61 61 56 53 60 63 59 55 53 52 53 71 67 77 58 58 50 50 50	QNPNDLALGLAHNEPEQKL
434	WMSM(+15.99)CCF	4.1	59	462.15	2	6.848	0.9	50 69 69 69 50 50 50	WMSM(+15.99)CCF
433	KCT(+79.97)S(+79.97)GV	3.5	59	377.6163	2	6.838	1.5	59 59 50 60 60 60	KCT(+79.97)S(+79.97)GV
491	GGKEAM(+15.99)GALPGL	7	59	558.79	2	7.782	0.9	50 50 50 50 54 59 78 83 72 51 51 50	GGKEAM(+15.99)GALPGL
1119	NDVEM(+15.99)L	3.5	58	736.3181	1	15.301	-0.1	60 57 57 66 54 54	NDVEM(+15.99)L
600	AEGS(+79.97)TSAMFNRA	7	58	661.264	2	9.37	-2.5	51 53 57 53 53 60 61 67 75 58 56 53	AEGS(+79.97)TSAMFNRA
1312	ANLPLEA	4.1	58	727.3988	1	17.347	0.5	58 57 61 50 80 50 50	ANLPLEA
4295	KKKKKKLALLLVTHPGNNGPSCY(+79.97)	13.4	58	873.15	3	52.707	-2.1	50 50 50 50 50 53 53 57 50 73 80 75 58 60 73 88 58 52 50 50 50 50	KKKKKKLALLLVTHPGNNGPSCY(+79.97)
906	QLATMESQFEGVEKR	8.7	58	438.9698	4	13	-0.4	57 53 54 70 72 58 57 58 59 53 54 56 56 57 52	QLATMESQFEGVEKR
2561	KMNGTQGEACSAEGTVK	9.9	58	570.93	3	31.736	-1.8	53 53 56 69 61 51 52 52 63 64 57 58 73 60 55 52 54	KMNGTQGEACSAEGTVK
3021	AMPSVQTI	4.7	58	846.4413	1	37.261	2.8	50 52 52 74 66 57 61 50	AMPSVQTI
1701	ATPLDLK	4.1	58	757.446	1	21.509	0.9	50 52 52 58 64 72 56	ATPLDLK
2856	KNLGGLTSGAKR	7	58	601.3553	2	35.267	1.8	58 56 64 67 65 62 54 54 54 55 53 51	KNLGGLTSGAKR
1120	S(+79.97)KPGHF	3.5	58	752.3134	1	15.308	0.9	50 62 61 73 50 50	S(+79.97)KPGHF
1294	EKALKCSQLTWYRTSTPRMY	11.6	58	616.313	4	17.153	-0.6	53 52 52 56 66 52 52 55 70 76 52 52 51 53 73 75 56 51 52 51	EKALKCSQLTWYRTSTPRMY
3964	LAATLKACGSQV	7	58	581.3187	2	48.625	0.5	50 51 52 54 66 72 59 53 65 51 51 66	LAATLKACGSQV
2756	MDAPPLF	4.1	58	790.3801	1	34.071	-0.3	74 64 65 50 50 50 50	MDAPPLF
795	YPAPPGA	4.1	58	336.6711	2	11.762	-0.3	50 50 50 50 76 76 50	YPAPPGA
3458	MMWPKA	3.5	58	763.3651	1	42.489	2.8	50 50 50 67 71 57	MMWPKA
818	VHLDAAEEA	5.2	58	477.7299	2	12.024	-0.1	50 50 62 58 58 89 50 50 50	VHLDAAEEA
4366	GDCDAS(+79.97)S(+79.97)CCGY(+79.97)	6.4	58	660.6084	2	53.736	2.9	50 50 50 50 50 69 70 64 64 64 50	GDCDAS(+79.97)S(+79.97)CCGY(+79.97)
4258	DGSS(+79.97)DAHPSAGCFPLLVL	10.4	58	933.41	2	52.217	-0.7	50 50 50 51 51 52 52 93 79 68 57 56 74 50 50 50 50 50	DGSS(+79.97)DAHPSAGCFPLLVL
3815	SGNLEPGR	4.6	58	415.2111	2	46.797	-1.5	50 73 65 65 50 56 50 50	SGNLEPGR
4407	VVLLVVPALVFL	6.9	58	641.4312	2	54.456	0.6	50 50 54 54 50 74 58 58 70 70 50 50	VVLLVVPALVFL
2764	VDDGACCHCYK	6.4	58	607.2266	2	34.165	2	50 87 68 56 54 55 50 50 56 53 52	VDDGACCHCYK
457	TY(+79.97)GSGGNQMA	5.8	58	533.19	2	7.248	1.8	50 50 50 66 63 53 52 58 72 60	TY(+79.97)GSGGNQMA
3990	YLAMNSANKKKRLFMKSLALSMV	13.3	58	529.695	5	48.938	-1.5	58 57 56 54 54 56 55 52 53 55 50 50 53 54 60 56 77 75 64 59 57 58 53	YLAMNSANKKKRLFMKSLALSMV
431	CSS(+79.97)ACSGQTGDS(+79.97)A	7.5	58	667.1774	2	6.804	0.2	50 69 59 57 57 57 65 58 69 53 51 50 50	CSS(+79.97)ACSGQTGDS(+79.97)A
2438	KGLLPVL	4	58	370.2582	2	30.253	2.2	50 50 85 58 58 50 50	KGLLPVL

1530	Y(+79.97)LVNSNLKT(+79.97)MMKSWLPLT(+79.97)SEY	12.1	58	920.0591	3	19.659	-2.9	50 54 50 53 53 52 53 57 51 52 51 52 52 52 83 89 82 58 54 53 50	Y(+79.97)LVNSNLKT(+79.97)MMKSWLPLT(+79.97)SEY
965	AEPAPEPV	4.6	58	809.4036	1	13.657	-0.4	50 50 50 50 50 69 69 69	AEPAPEPV
680	HSHDNL	3.5	58	722.3197	1	10.395	-2.6	50 50 80 56 56 51	HSHDNL
4190	NEM(+15.99)PSVGCV	5.2	58	476.1982	2	51.373	-2.1	54 54 66 50 71 58 53 53 54	NEM(+15.99)PSVGCV
4009	WLLESLSSLW	5.7	57	617.3277	2	49.179	-2.6	56 56 58 64 64 71 50 50 50 50	WLLESLSSLW
894	GCGEEAFYGA	5.7	57	1003.383	1	12.872	0.9	56 50 50 50 50 50 50 71 83 60	GCGEEAFYGA
1692	WLPVYDQA	4.6	57	991.488	1	21.409	-0.4	50 50 50 50 86 60 50 59	WLPVYDQA
2674	FLPVVPTGGDDK	6.9	57	622.8306	2	33.113	1.6	50 50 50 50 50 59 62 62 67 61 65 57	FLPVVPTGGDDK
882	ELEEAEERA	5.2	57	538.2481	2	12.736	-1.1	50 50 50 50 50 50 75 72 65	ELEEAEERA
648	Y(+79.97)FT(+79.97)AY(+79.97)LMA	4.6	57	610.1833	2	9.991	0.9	50 50 63 63 54 59 60 56	Y(+79.97)FT(+79.97)AY(+79.97)LMA
249	VVRPQMHHL	5.2	57	558.81	2	3.791	2.8	50 50 72 65 52 61 61 50 50	VVRPQMHHL
3947	LMAEPTPA	4.6	57	415.2107	2	48.416	2.2	62 61 80 50 50 50 50 50	LMAEPTPA
620	LPLLVGLVV	5.1	57	461.8201	2	9.63	-0.7	50 50 50 59 63 62 58 58 60	LPLLVGLVV
1850	LGVLDL	3.4	57	629.387	1	23.19	0.3	50 50 50 86 50 55	LGVLDL
3638	LYAELARARSHA	6.9	57	679.3711	2	44.648	1.2	63 63 62 60 61 60 60 50 50 50 50 50	LYAELARARSHA
43	SM(+15.99)T(+79.97)NLVA	4	57	416.17	2	0.545	1.2	50 50 50 80 62 52 52	SM(+15.99)T(+79.97)NLVA
2248	GKRKSK	3.4	57	352.2326	2	27.93	1	50 50 62 62 66 50	GKRKSK
8	YS(+79.97)S(+79.97)GRCTT(+79.97)A	5.1	57	593.1577	2	0.096	-0.2	50 50 74 68 56 54 53 53 50	YS(+79.97)S(+79.97)GRCTT(+79.97)A
838	NHKPELL	4	57	425.7422	2	12.25	-1.1	50 50 50 50 89 50 56	NHKPELL
3789	MGKAPEMSSRAV	6.8	57	632.3123	2	46.485	-0.8	50 50 50 50 50 81 69 69 58 50 50 50	MGKAPEMSSRAV
1784	LGVLDL	3.4	57	629.3864	1	22.437	-0.8	50 50 50 84 50 54	LGVLDL
459	CCEGGY	3.4	57	316.0961	2	7.282	-0.1	50 50 61 61 66 50	CCEGGY
2784	RDGPGR	3.4	57	329.1748	2	34.4	-0.5	50 62 61 57 58 50	RDGPGR
3855	MKTFGFTA	4.5	57	902.445	1	47.29	1.1	50 82 59 58 51 50 50 50	MKTFGFTA
46	M(+15.99)CHPGLGASTM(+15.99)SY	7.4	57	693.78	2	0.609	2.9	50 50 71 56 55 51 53 73 61 59 50 50 50	M(+15.99)CHPGLGASTM(+15.99)SY
4314	FVLRKKKVL	5.1	57	377.5981	3	52.98	2.3	50 72 70 61 50 50 50 51 50	FVLRKKKVL
351	FEGCLAHPGW	5.6	56	558.75	2	5.393	-0.3	50 50 51 52 56 72 79 50 50 50	FEGCLAHPGW
948	RNGRLCGEQLLNDF	7.9	56	409.4572	4	13.471	0.2	63 54 54 55 56 51 50 50 56 59 65 57 60 55	RNGRLCGEQLLNDF
256	NPHHRAAWEGF	6.2	56	661.3138	2	3.887	1.5	55 60 74 70 53 52 51 50 50 50 50	NPHHRAAWEGF
3724	GAGPNW	3.4	56	301.1408	2	45.696	2.4	50 57 57 58 50 64	GAGPNW
4333	KVVMPPV	3.9	56	385.2352	2	53.212	-1.2	50 56 59 59 67 50 50	KVVMPPV

3672	M(+15.99)GNCAY(+79.97)	3.4	56	377.6007	2	45.054	0.7	50 50 61 62 62 50	M(+15.99)GNCAY(+79.97)
2795	MMWPKA	3.4	56	763.3651	1	34.533	2.8	50 50 50 65 65 55	MMWPKA
2466	NTGPNDR	3.9	56	387.1802	2	30.58	-0.7	51 51 54 64 55 66 50	NTGPNDR
2316	LTMVSTGKGGLAFT(+79.97)R	8.4	56	540.2711	3	28.76	-2	52 51 51 51 56 54 54 57 77 56 55 60 56 56 52	LTMVSTGKGGLAFT(+79.97)R
3917	YMPGYEGCRVPNALLHTR	10.1	56	1039.01	2	48.053	1.1	50 51 52 54 55 63 57 58 69 55 54 51 53 63 62 54 54 50	YMPGYEGCRVPNALLHTR
4123	KNQPLDLNKKRHMT(+79.97)W	8.4	56	663.6667	3	50.554	-1.5	51 51 51 51 51 58 62 54 57 59 71 63 55 50 50	KNQPLDLNKKRHMT(+79.97)W
2961	FKKKKMLVK	5.1	56	575.3809	2	36.542	0.4	57 57 50 50 58 57 55 63 52	FKKKKMLVK
316	VVVKVFLLLKV	6.2	56	628.94	2	4.884	1.9	50 50 50 50 50 68 68 68 53 53 51	VVVKVFLLLKV
3942	YT(+79.97)CGCK	3.4	56	377.6177	2	48.356	-2.5	56 62 55 60 50 50	YT(+79.97)CGCK
2700	MCTAPCCY(+79.97)	4.5	56	486.1	2	33.42	-62.1	58 58 60 61 57 50 50 50	MCTAPCCY(+79.97)
523	TFTCCSS(+79.97)A	4.5	56	899.2658	1	8.315	-1.8	50 57 68 68 50 50 50 50	TFTCCSS(+79.97)A
252	DPGSGSGCCGCY(+79.97)	6.7	56	593.1567	2	3.833	1.3	63 63 64 50 50 50 60 50 50 63 50 50	DPGSGSGCCGCY(+79.97)
693	EEEEDTA	3.9	56	822.299	1	10.559	-1.2	50 50 50 58 58 71 50	EEEEDTA
3585	VLSDPSGDL	5	56	902.446	1	44.014	-0.6	50 50 50 50 50 57 54 67 67	VLSDPSGDL
4312	KKKKKGLLLLL	6.1	55	641.4713	2	52.946	0.8	50 50 50 50 90 57 57 50 50 50 50	KKKKKGLLLLL
2859	MMWPKA	3.3	55	763.3651	1	35.31	2.7	50 50 50 63 62 54	MMWPKA
2774	GNSVGNSR	4.4	55	790.3803	1	34.289	0.2	50 50 55 58 58 54 58 53	GNSVGNSR
3779	WLLWCTLLW	5	55	617.3297	2	46.356	2.6	53 53 50 50 50 51 54 76 55	WLLWCTLLW
343	Y(+79.97)GFCNA	3.3	55	377.6172	2	5.296	0.8	60 60 50 53 50 53	Y(+79.97)GFCNA
31	ATGHS(+79.97)GNCGQCV	6.6	55	607.21	2	0.39	0.2	51 51 51 51 76 70 52 50 50 50 51 51	ATGHS(+79.97)GNCGQCV
3846	LLLLTLPV	4.4	55	441.3072	2	47.18	0.2	50 50 50 50 53 60 74 50	LLLLTLPV

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BIOGRAPHICAL SKETCH

Stefan Crynen was born in 1976 in Mönchengladbach, Germany. He attended the Stifitisch Humanistisches Gymnasium (high school) and graduated in 1996. After the one year of mandatory military service he attended culinary school and graduated as a professional chef in summer 2000. From 2000 to 2004 he studied food technology at the University of Applied Sciences in Trier, Germany and graduated in October 2004 with the degree Diplom-Engineer of Food Technology. He enrolled in the University of Florida graduate school in 2005 and graduated with the Master of Science degree in 2007. He continued his enrollment and research in 2008 towards a Doctor of Philosophy degree in food science and human nutrition.