The duplication of \texttt{bt2-7503} might be explained by recombination between unrelated sequences. The mechanism of nonhomologous recombination is still poorly understood. It has been proposed that the nonhomologous recombination is a two step process; generating DNA ends and joining [Roth and Wilson, 1988]. Generating DNA ends could be by errors of DNA replication, transcription or repair [Roth and Wilson, 1988], or by cleavage by DNA topoisomerases [Wang, 1985], or by mechanical breakage [McClintock, 1984] then, DNA ends may be removed by random end-to-end joining linking nonhomologous DNA termini [Roth and Wilson, 1986].

The nonhomologous recombination could occur 1) between recombined \texttt{bt2-7503}s or 2) between recombined \texttt{bt2-7503} and \texttt{Bt2-like}. The possible recombinations are illustrated in Figure 26. A in Figure 26 represents the recombination between recombined \texttt{bt2-7503}s, B represents the one between recombined \texttt{bt2-7503} and \texttt{Bt2-like}. The nucleotide sequences across the duplication junction are displayed in Figure 27. The nucleotide sequence in (a) is the sequence of recombined \texttt{bt2-7503}. (b) displays the nucleotide sequence of recombined \texttt{bt2-7503} or \texttt{Bt2-like}. (c) is the nucleotide sequence of recombinational product, \texttt{bt2-7503} with duplication. Asterisks represent the putative cleavage sites to produce the duplication observed in \texttt{bt2-7503}. The vertical lines between the nucleotide sequences indicate nucleotide matches. There is no apparent sequence motif common to all the possible