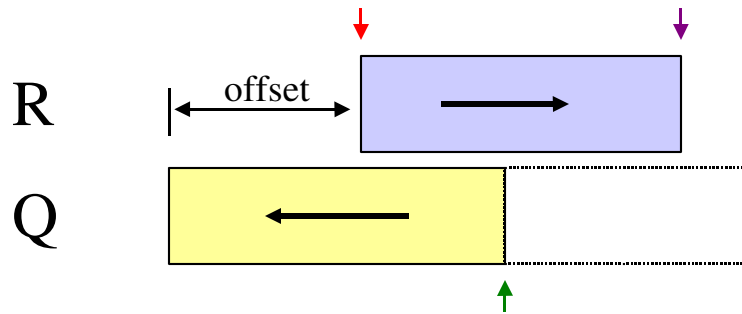
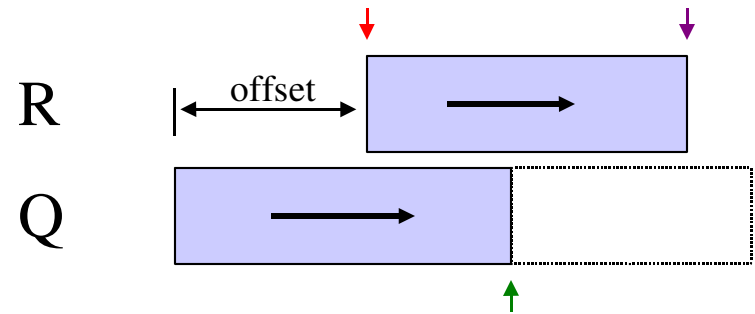


Zipclap Alignment Constraints

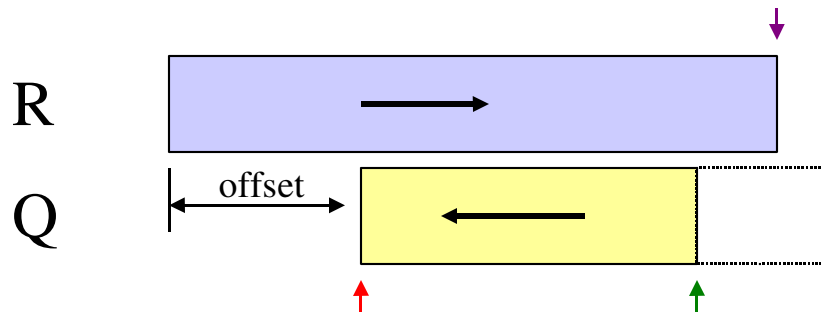
Type I $RAlignStart = 1$



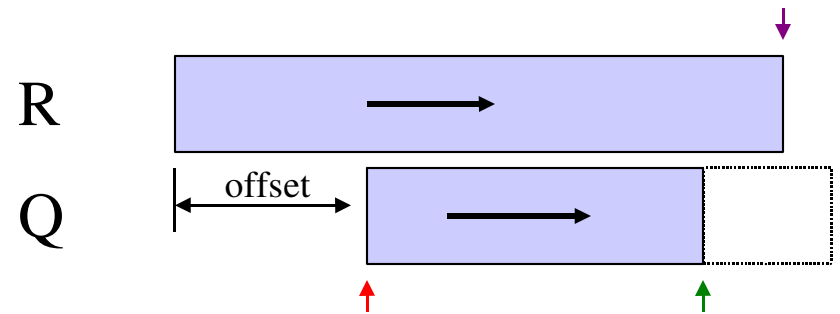
Type IIIa $RAlignStart = 1$



Type II $QAlignStart = Qlen$



Type IIIb $QAlignStart = 1$



For each of the four alignment types, there is 1 key start position which must be included in the alignment (indicated by red arrows). The query contig may or may not extend beyond the reference contig (dashed lines)- if the query does extend beyond the reference the alignment must end at the end of the reference contig (purple arrow) otherwise it must end at the end of the query (green arrow). Note the reference contig is always oriented forward.