

The diagram illustrates a segment of a DNA double helix. Two sugar-phosphate backbones are shown as blue zigzag lines, oriented in opposite directions (antiparallel). The left strand runs from 5' at the top to 3' at the bottom, while the right strand runs from 3' at the top to 5' at the bottom. Between the strands, nitrogenous bases are represented by colored circles: red for Adenine (A), yellow for Thymine (T), green for Guanine (G), and blue for Cytosine (C). The bases form major and minor grooves along the length of the molecule. Base pairs are connected by hydrogen bonds, indicated by thin black lines: A pairs with T (two bonds) and G pairs with C (three bonds).



5'- ucucugugucgagauaaagcacucucguaccagg <u>aguacacga</u> uu <u>cucucgucugugccagggagcgcugaccagaagg</u> <u>gucgugggcucu</u> ggggacgaguauggaagau- 3'				<b>exp</b>
..(((((((.....))))).((((((((( (((((((((((((( (((((((((((((( (((((((((((((( (((((((((((((( ..... reads				
..... accagaagggucgugggcucA.....	1	1		seq
..... accagaagggucgugggcucu.....	5	0		seq
..... accagaagggucgugggcucgU.....	2	1		seq