**BCH – 519**

**Suruchi Jaikumar Ahuja**

**50170070**

**EXERCISE 2:**

**Sequence A:**

Frame 1: length= 328

LIMCPLTLQVTGLMNVSEPNSSFAFVNEFILQGFSCEWTIQIFLFSLFTTTYALTITGNGAIAFVLWCDRRLHTPMYMFLGNFSFLEIWYVSSTVPKMLVNFLSEKKNISFAGCFLQFYFFFSLGTSECLLLTVMAFDQYLAICRPLLYPNIMTGHLYAKLVILCWVCGFLWFLIPIVLISQMPFCGPNIIDHVVCDPGPRFALDCVSAPRIQLFCYTLSSLVIFGNFLFIIGSYTLVLKAMLGMPSSTGRHKAFSTCGSHLAVVSLCYSSLMVMYVSPGLGHSTGMQKIETLFYAMVTPLFNPLIYSLQNKEIKAALRKVLGSSNII

Blast p result: olfactory receptor 11H1 [Homo sapiens] 100%identity

Blast n result: Homo sapiens BAC clone CH17-90G15 from chromosome 22, complete sequence

**Sequence B:**

Frame 3: length= 53

DARPLAGPPILPPHYCSSSWCCVCSSQPSSLPLSLVSLPRLPNSVCFVCVYWV

Blastp result: dnaJ homolog subfamily C member 14 isoform X1 [Pelodiscus sinensis] - predicted

Blast n result: Human DNA sequence from clone RP13-455A7 on chromosome 22, complete sequence 100% identity

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Frame 3: length= 62 NDPAPWFPPLSGLRSLPLEPPTLSVLPETAILADTLGLVQEVKNPLRFYAGSEVLYRSFHGF

Blastn result: Human DNA sequence from clone RP13-455A7 on chromosome 22, complete sequence

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Frame 3: length= 64 QAATGLGWARHCPCMTQNLPEACATVVPTLHLRKVRLQFLCPRSCGNGPGSRSLGHSPSSSPLA

Blastn result: Human DNA sequence from clone RP13-455A7 on chromosome 22, complete sequence

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Frame 3: length= 102

LGGVTMCTLSPVTDPCSGTSEGVLLNLSLIIFPPCLTSLAAFLFLEIKRKILGIAWKTAHDFFFFFFFFFLTESLCVTRLDCSGIISAHCNLHIPCSSDSPG

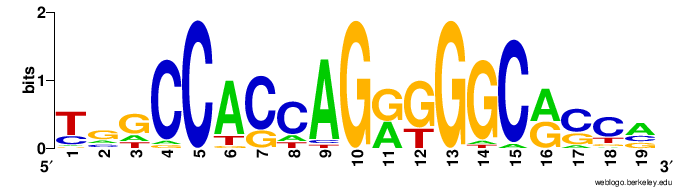
Blastp result: Down syndrome encephalopathy related protein 1 [Homo sapiens]

Blastn result:Human DNA sequence from clone RP13-455A7 on chromosome 22, complete sequence

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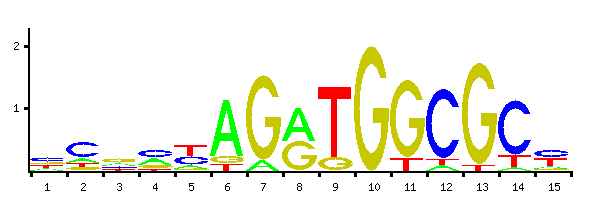
**EXERCISE 3:**

1. Consensus sequence: TGGCCACCAGRGGGCRSCV
2. The logo for the motif is given below:



1. They are close but the consensus sequence doesn’t display the probability of a particular base as well as the motif logo as each base is represented by its probability.
2. This was the logo that I obtained from JASPAR search. The sequence looks conserved.

The two motifs have degenerate consensus sequences that are different, but the logo of the consensus sequences is not same.



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