

Name: _____

ID: _____

CIS 455 Class Activity #2: **Finding Motifs**

- Find the pattern that is implanted in each of the individual sequences, namely, the motif

cctgatagacgctatctggctatc**acgtacgt**aggtcctctgtgcgaatctatgcgtttccaaccat
agtactgggtgtacatttga**acgtacgt**acaccggcaacctgaaacaaacgctcagaaccagaagtgc
aa**acgtacgt**gcaccctctttcttcgtggctctggccaacgagggtgatgtataagacgaaaatttt
agcctccgatgtaagtcatactgtaactattacctgccaccctattacatct**acgtacgt**ataca
ctgttataacaacgcgtcatggcggggtatgcgttttggtcgtcgtacgctcgatcgtaa**acgtacgt**c

Find the profile and the consensus string of this small collection of NF-kb binding sites.

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T C G G G G A T T T C A
A C G G G G A T T T T T
T C G G T A C T T T A C
T T G G G G A C T T T T
C C G G T G A T T C C C
G C G G G G A A T T T C
T C G G G G A T T C C T
T C G G G G A T T C C T
T A G G G G A A C T A C
T C G G G T A T A A A C
T C G G G G G T T T T T
C C G G T G A C T T A C
C C A G G G A C T C C C
A A G G G G A C T T C C
T T G G G G A C T T T T
T T T G G G A G T C C C
T C G G T G A T T T C C
T A G G G G A A G A C C
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A: 2 3 1 0 0 1 16 3 1 2 4 1

C: 3 12 0 0 0 0 1 5 1 5 9 11

G: 1 0 16 18 14 16 1 1 1 0 0 0

T: 12 3 1 0 4 1 0 9 15 11 5 6

T C G G G G A T T T C C