

Task3:

CENP-B is a centromeric DNA binding protein that recognizes and binds to a specific 17bp motif. Use alpha fold to determine which of the DNA sequences below has the CENP-B binding motif.

>CENP-B

MGPKRRQLTFREKSRIIQEVEENPDLRKGEIARRFNIPPSTLSTILKNKRAILASERKYGVASTCRK
TNKLSPYDKLEGLLIAWFQQIRAAGLPVKGIIKEKALRIAEELGMDDFTASNGWLDRFRRRRS

>DNA1

GCCTTCGTTGGAAACGGGATT

>DNA1

AATCCCGTTTCCAACGAAGGC

>DNA2

cactgctcactgcataccAT

>DNA2

ATggtatgcaagtgagcagtg

Do the same for Evi1 protein.

> **Evi1 protein**

MAPDIHEERQHRCEDCDQLFESKAELADHQQFPCSTPHSAFSMVEEDLQQNLESESDLREIH
GNQDCKECDRVFPDLQSLEKHMLSHTEEREYKCDQCPKAFNWKSNLIRHQMSHDSGKHYE
CENCAKVFTDPSNLQRHIRSQHVGARAHACPECCKTFATSSGLKQHKHIHSSVKPFISFSQSM
YFPDRLRLSLPLKMEPQSPSEVKKLQKGSSSESPFDLTTRKDEKPLTSGPSKPSGTPATSQDQ
PLDLSMGSRRGRASGKLTPEPRKNHVFGEKKGSNMDTRPSSDGLQHARPTPFFMDPIYRVEKR
KLTDPLEALKEKYLRSPGFLFHPQMSAIENMAEKLESFSALKPEASELLQSVPSMFSFRAPPNT
LPENLLRKGKERYTCRYCGKIFPRSANLTRHLRTHTGEQPYRCKYCDRSFSISSNLQRHVRNIH
NKEKPFKCHLCDRCFGQQTNLDRHLKKHENGNMMSGTATSSPHSELESAGAILDDKEDAYFTEI
RNFIGNSNHGSQSPRNMEERMNGSHFKDKKALATSQNSDLLDDEEVEDEVLLDEEDEDNDI
PGKPRKELGVTRLDEEIPEDDYEEAGALEMSCKASPVRHML

>DNA1

ATCGCAGATAAGATAACATAGC

>DNA1

GCTATGTTATCTTATCTGCGAT

>DNA2

>DNA2