

**Figure S11. Human-mouse-fugu alignment and predicted TFBS of CNE4.**

TFBS on the forward strand are shown in blue and TFBS on the reverse strand are shown in red below the human-mouse-fugu sequence alignment. The binding TF and position weight matrix similarity score are listed next to each predicted site. Sequences enclosed in blue boxes are instances of motifs over-represented in the CNEs of central nervous system-expressed TF-encoding genes. Motif numbers are listed and described in Table 3.

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human   GATTTATGACTTATGACTTGTTCATATTTAATTTGTAACCAAACACTTCCCCTTCCTCTT 60
mouse   GATTTATGACTTATGACTTGTTCATATTTAATTTGTAACCAAACACTTCCCCTTCCTCTT 60
fugu     GATTTATGGCTTATGACAAACATATAT-----ACCAAACACTTCCCATTCTCTC 50
        gttcatattTAATttgt 0.993 MSX.01
        ttcattattTAATttgta 0.987 LHX3.02
        tattTAATttgtaacca 0.963 GSH2.01
        tattTAATttgta 0.96 BRIGHT.01
        tTAAAttgta 0.92 NKX61.01
        accaaacacTCCccttctc 0.997 SPI1_PU1.02
        cacttccccTCCctt... 0.962 SPI1_PU1.02
        cacttCCCCtt 1 MZF1.02

        Motif #4      Motif #1
human   AGCTACCTTAGAACTCTTCGATTAACTCTTGTTCACAGGTCAGAGGTAAATAAAGGA 119
mouse   AGCTACCTTAGAACTCTTGATTAACTCTTGTTCACAGGTCAGAGGTAAATAAAGGA 119
fugu     AACTTCCTCAGAACTCTGGAAGATGCCTTATTTTCTCAGGTCAGAGGTAAACAATGAA 109
        ...agct 0.962 SPI1_PU1.02
        aactcttGATTaactct 0.906 OC2.01
        attaactcttgtTCCaca 0.979 NFAT.01
        gttccacaggtcagAGGTaaata 0.905 RAR_RXR.01
        tccacAGGTcagaggttaataaaa 0.917 TR4.02
        agGTCagaggt 0.953 DREAM.01

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