

# CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep\_msa/ZNF910.pep Tue Feb 1 14:58:29 2022

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*****:*****:*****..*.*.*.:*****
Pavo_muticus      -----MLSDELESKPELLVQFVQNTSIPLAQGLVESEPKDITCLSLLPVT 45
Pavo_cristatus    -----MLSDELESKPELLVQFVQNTSIPLAQGLVESEPKDITCLSLLPVT 45
Gallus_gallus     -----MLSDELESKPELLVQFVQNTSIPLAQGLVESEPKDITCLSLLPVT 45
Chelonia_mydas    -----MLSDELESKPELLVQFVQNTSIPLGRGLVESEPKGITCLSLLPVT 45
Mus_musculus      -----MLSDELESKPELLVQFVQNTSIPLGQGLVESEAKDITCLSLLPVT 45
Rattus_norvegicus -----MLSDELESKPELLVQFVQNTSIPLGQGLVESEAKDITCLSLLPVT 45
Homo_sapiens      -----MLSDELESKPELLVQFVQNTSIPLGQGLVESEAKDITCLSLLPVT 45
Pan_troglodytes   -----MLSDELESKPELLVQFVQNTSIPLGQGLVESEAKDITCLSLLPVT 45
Macaca_mulatta    -----MLSDELESKPELLVQFVQNTSIPLGQGLVESEAKDITCLSLLPVT 45
Callithrix_jacchus -----MLSDELESKPELLVQFVQNTSIPLGQGLVESEAKDITCLSLLPVT 45
Canis_lupus_familiaris -----MLSDELESKPELLVQFVQNTSIPLGQGLVESEAKDITCLSLLPVT 45
Bos_taurus        -----MLSDELESKPELLVQFVQNTSIPLGQGLVESEAKDITCLSLLPVT 45
Equus_caballus    -----MLSDELESKPELLVQFVQNTSIPLGQGLVESEAKDITCLSLLPVT 45
Rhinatrema_bivittatum -----MLSDELESKPELLVQFVQNTSIPLGEGLGES--KDLTCLSLLPVT 43
Xenopus_tropicalis MVVSSLDLLCIRTVPMLSDELQSKPELLVEFVQNTSIPLGELVEGDSKDLACLCLLP-- 58
1.....10.....20.....30.....40.....50.....60

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*..****.*:***
Pavo_muticus      ETSECNRLMLPDDERDL-----TSPSHTNSSKDVSSSAVLRSLQVNVGPDGEE 93
Pavo_cristatus    ETSECNRLMLPDDERDL-----TSPSHTNSSKDVSSSAVLRSLQVNVGPDGEE 93
Gallus_gallus     ETSECNRLMLPDDERDL-----TSPSHANSSKDVSSSAVLRSLQVNVGPDGEE 93
Chelonia_mydas    ETSECNRLMLPDD-----SPSHTNSSKDVPSAVLRSLQVNVGPDGEE 88
Mus_musculus      EASECSRLMLPD-----ETPNHANSSKEVPSSAVLRSLQVNVGPDGEE 88
Rattus_norvegicus EASECSRLMLPD-----ETANHANSSKEVPSSAVLRSLQVNVGPDGEE 88
Homo_sapiens      EASECSRLMLPD-----DTTNHSNSSKEVPSSAVLRSLRVNVGPDGEE 88
Pan_troglodytes   EASECSRLMLPEVPVWREEDGKSGCSDLNDTTNHSNSSKEVPSSAVLRSLRVNVGPDGEE 105
Macaca_mulatta    EASECSRLMLPD-----DTTNHSNSSKEVPSSAVLRSLRVNVGPDGEE 88
Callithrix_jacchus ETSECSRLMLPD-----DTTNHSNSSKEVPSSAVLRSLRVNVGPDGEE 88
Canis_lupus_familiaris EASECSRLMLPD-----DTPSHTNSSKEVPSSAVLRSLQVNVGPDGEE 88
Bos_taurus        EASECSRLMLPD-----DTPNHTNSSKEVPSSAVLRSLQVNVGPDGEE 88
Equus_caballus    EASECSRLMLPD-----DTPNHNSSKEVPSSAVLRSLQVNVGPDGEE 88
Rhinatrema_bivittatum ETSECSQLLLPG----- 55
Xenopus_tropicalis EPSECGSLLLPD-----ASVAQGMPAKDSGTSLNLSLQVDIDH 96
.....70.....80.....90.....100.....110.....120

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*..*:*****.:***
Pavo_muticus      TRAQNVQKPSSELLSSPETSSLLQDLQPSDSTSFILLNLTRAGLGSPAHLVFVQDEAEDS 153
Pavo_cristatus    TRAQNVQKPSSELLSSPETSSLLQDLQPSDSTSFILLNLTRAGLGSPAHLVFVQDEAEDS 153
Gallus_gallus     TRAQNVQKPSSELLSSPETSSLLQDLQPSDSTSFILLNLTRAGLGSPAHLVFVQDEVEDS 153
Chelonia_mydas    TRAQTVQKPEPELLSSPEPSGLLQDLQPSDSTSFILLNLTRAGLGCPAHLVFVQDEAEDS 148
Mus_musculus      TRAQTVQKSPEFLTTPESPSSLQDLQPSDSTSFILLNLTRAGLGSSAEHFVFVQDETEDS 148
Rattus_norvegicus TRAQTVQKSPEFLTSTESPSSLQDLQPSDSTSFILLNLTRAGLGSSAEHFVFVQDEAEDS 148
Homo_sapiens      TRAQTVQKSPEFLTSTESSSSLQDLQPSDSTSFILLNLTRAGLGSSAEHLVFVQDEAEDS 148
Pan_troglodytes   TRAQTVQKSPEFLTSTESSSSLQDLQPSDSTSFILLNLTRAGLGSSAEHLVFVQDEAEDS 165
Macaca_mulatta    TRAQTVQKSPEFLTSTESSSSLQDLQPSDSTSFILLNLTRAGLGSSAEHLVFVQDEAEDS 148
Callithrix_jacchus TRAQTVQKSPEFLTSTESSSSLQDLQPSDNTSFILLNLTRAGLGSSAEHLVFVQDEAEDS 148
Canis_lupus_familiaris TRAQTVQKSPEFLTSTESPSSLQDLQPSDSTSFILLNLTRAGLGSSAEHLVFVQDEAEDS 148
Bos_taurus        TRAQTVQKSPEFLTSTESPSSLQDLQPSDSTSFILLNLTRAGLGSSAEHLVFVQDEADD 148
Equus_caballus    TRAQTVQKSPEFLTSTESPSSLQDLQPSDSTSFILLNLTRTGLGSSAEHLVFVQDEAEDS 148
Rhinatrema_bivittatum -----LGPSSAEHLVFVQDEVEDS 73
Xenopus_tropicalis CTDSREEKPIALLSPSEPSSLLHDLPTNDNSSFILLNLARTGLTSPSEHLVFVQDEAEDS 156
.....130.....140.....150.....160.....170.....180

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# CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep\_msa/ZNF910c.fst Tue Feb 14:58:29 2022

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* ****      :.*.  **:*****.....*:.  **..      : : :
Pavo_muticus      GNDFLSHDSDSSTPWFLRVQELAHDSLIAATRAQLAKNAKASNNGENVHLCSGDGQPKD  213
Pavo_cristatus    GNDFLSHDSDSSTPWFLRVQELAHDSLIAATRAQLAKNAKASNNGENVHLCSGDGQPKD  213
Gallus_gallus     GNDFLSHDSDSSTPWFLRVQELAHDSLIAATRAQLAKNAKASNNGENVHLCSGDGQPKD  213
Chelonia_mydas    GNDFLSHDSDSSTPWFLRVQELAHDSLIAATRAQLAKNAKASNNGESVHLCSGDGQPKD  208
Mus_musculus      GADFLSAESTDSNIPWFLRVQELAHDSLIAATRAQLAKNAKTGSNGENVHLGSGDGQPKD  208
Rattus_norvegicus GADFLSAESTDSNIPWFLRVQELAHDSLIAATRAQLAKNAKTGSNGENVHLGSGDGQPKD  208
Homo_sapiens      GNDFLSSESTDSSIPWFLRVQELAHDSLIAATRAQLAKNAKTSSNGENVHLGSGDGQSKD  208
Pan_troglodytes   GNDFLSSESTDSSIPWFLRVQELAHDSLIAATRAQLAKNAKTSSNGENVHLGSGDGQSKD  225
Macaca_mulatta    GNDFLSSESTDSSIPWFLRVQELAHDSLIAATRAQLAKNAKTSSNGENVHLGSGDGQPKD  208
Callithrix_jacchus GNDFLSSESTDSSIPWFLRVQELAHDSLIAATRAQLAKNAKTSSNGENVHLGSGDGQPKD  208
Canis_lupus_familiaris GNDFLSSESTDSSIPWFLRVQELAHDSLIAATRAQLAKNAKTSSNGENVHLGSGDGQPKD  208
Bos_taurus        GNDFLSSESTDSSIPWFLRVQELAHDSLIAATRAQLAKNAKTSSNGENVHLGSGDGQPKD  208
Equus_caballus    GNDFLSSESTDSSIPWFLRVQELAHDSLIAATRAQLAKNAKTSSNGENVHLGSGDGQPKD  208
Rhinatrema_bivittatum GNDFLSSGSADNNTPWFLRVQELAHDSLIAATRAQLAKNAKANNIGENVQNCLGDGQPKD  133
Xenopus_tropicalis GNDFLSNDCTDSNTPWYLRVQELAHDSLIAATRAQLAKSVKTSSVGETALSSFTTETESRT  216
.....190.....200.....210.....220.....230.....240

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. *          *::*.*:.* **::*::*::*::*::*::*::*::*::*::*::*::*::*::*::*::*
Pavo_muticus      SSPIPHLSRVERKLKCTVEGCDRTFVWPAHFKYHLKTHRNDRSFTCPAEGCGKSFYVLRQ  273
Pavo_cristatus    SSPIPHLSRVERKLKCTVEGCDRTFVWPAHFKYHLKTHRNDRSFTCPAEGCGKSFYVLRQ  273
Gallus_gallus     SSPIPHLSRVERKLKCTVEGCDRTFVWPAHFKYHLKTHRNDRSFTCPAEGCGKSFYVLRQ  273
Chelonia_mydas    SSPIPHLSRVEKKLKCTVEGCDRTFVWPAHFKYHLKTHRNDRSFTCPAEGCGKSFYVLRQ  268
Mus_musculus      SGPLP---QAEKKLKCTVEGCDRTFVWPAHFKYHLKTHRNDERSFICPAEGCGKSFYVLRQ  265
Rattus_norvegicus SGPLP---QVEKKLKCTVEGCDRTFVWPAHFKYHLKTHRNDERSFICPAEGCGKSFYVLRQ  265
Homo_sapiens      SGPLP---QVEKKLKCTVEGCDRTFVWPAHFKYHLKTHRNDERSFICPAEGCGKSFYVLRQ  265
Pan_troglodytes   SGPLP---QVEKKLKCTVEGCDRTFVWPAHFKYHLKTHRNDERSFICPAEGCGKSFYVLRQ  282
Macaca_mulatta    SGPLP---QVEKKLKCTVEGCDRTFVWPAHFKYHLKTHRNDERSFICPAEGCGKSFYVLRQ  265
Callithrix_jacchus SGPLP---QVEKKLKCTVEGCDRTFVWPAHFKYHLKTHRNDERSFICPAEGCGKSFYVLRQ  265
Canis_lupus_familiaris SGPLP---QVEKKLKCTVEGCDRTFVWPAHFKYHLKTHRNDERSFICPAEGCGKSFYVLRQ  265
Bos_taurus        SGPLP---QMEKKLKCTVEGCDRTFVWPAHFKYHLKTHRNDERSFICPAAGCGKSFYVLRQ  265
Equus_caballus    SGPLP---QVEKKLKCTVEGCDRTFVWPAHFKYHLKTHRNDERSFICPAEGCGKSFYVLRQ  265
Rhinatrema_bivittatum QSPILHTTKSEKKLECTFDGCRRTFVWPAHLKYHLKTHRNDERSFICPAEGCGKSFYVLXR  193
Xenopus_tropicalis SLPPPNQSPREKRLHCSFGQCDRSFVYPTHLRYHLKTHRNDERSFACPSEGGCKRFYVLRQ  276
.....250.....260.....270.....280.....290.....300

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*****:* * .***** *****:**** *****
Pavo_muticus      LKVHMRTHNGEKPFFVCTELGCGKQFTTAGNLKNHLRIHTGEKPFLCEAOGCGRSFAEYSS  333
Pavo_cristatus    LKVHMRTHNGEKPFFVCTELGCGKQFTTAGNLKNHLRIHTGEKPFLCEAOGCGRSFAEYSS  333
Gallus_gallus     LKVHMRTHNGEKPFFVCTELGCGKQFTTAGNLKNHLRIHTGEKPFLCEAOGCGRSFAEYSS  333
Chelonia_mydas    LKVHMRTHNGEKPFFVCTEVGCGKQFTTAGNLKNHLRIHTGEKPFLCEAOGCGRSFAEYSS  328
Mus_musculus      LKVHMRTHNGEKPFFMCHESGCGKQFTTAGNLKNHRRRIHTGEKPFLCEAOGCGRSFAEYSS  325
Rattus_norvegicus LKVHMRTHNGEKPFFMCHESGCGKQFTTAGNLKNHRRRIHTGEKPFLCEAOGCGRSFAEYSS  325
Homo_sapiens      LKVHMRTHNGEKPFFMCHESGCGKQFTTAGNLKNHRRRIHTGEKPFLCEAOGCGRSFAEYSS  325
Pan_troglodytes   LKVHMRTHNGEKPFFMCHESGCGKQFTTAGNLKNHRRRIHTGEKPFLCEAOGCGRSFAEYSS  342
Macaca_mulatta    LKVHMRTHNGEKPFFICHESGCGKQFTTAGNLKNHRRRIHTGEKPFLCEAOGCGRSFAEYSS  325
Callithrix_jacchus LKVHMRTHNGEKPFFMCHESGCGKQFTTAGNLKNHRRRIHTGEKPFLCEAOGCGRSFAEYSS  325
Canis_lupus_familiaris LKVHMRTHNGEKPFFMCPESGCGKQFTTAGNLKNHLRIHTGEKPFLCEAOGCGRSFAEYSS  325
Bos_taurus        LKVHMRTHNGEKPFFVCPESNCGKQFTTAGNLKNHLRIHTGEKPFLCEAOGCGRSFAEYSS  325
Equus_caballus    LKVHMRTHNGEKPFFMCPESGCGKQFTTAGNLKNHLRIHTGEKPFLCEAOGCGRSFAEYSS  325
Rhinatrema_bivittatum LKVHMRTHNGEKPFLCTELGCGKQFTTAGNLKNHQRHTGEKPFLCDAGCGRXFAEYSS  253
Xenopus_tropicalis LKVHMRTHNGEKPFLCSEPGCGKQFTTAGNLKNHLRIHTGEKPFLCEMEGCGRSFAEYSS  336
.....310.....320.....330.....340.....350.....360

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# CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep\_msa/ZNF410.pep Tue Feb 1 14:58:29 2022

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**** *:*** *.*** :*****.***:**** :
Pavo_muticus      LRKHLVVHSGLKPHQCQICGKTFSQSGSRNVHMRKHHSRIGTGGSREREQEP----ESLMG 389
Pavo_cristatus    LRKHLVVHSGLKPHQCQICGKTFSQSGSRNVHMRKHHSRIGTGGSREREQEP----ESLMG 389
Gallus_gallus     LRKHLVVHSGVKPHQCQICGKTFSQSGSRNVHMRKHHSRIGTGGSREREQEP----ESLMG 389
Chelonia_mydas    LRKHLVVHSGVKPHQCQICGKTFSQSGSRNVHMRKHHSRIGAAGSREREQEP----ESLVG 384
Mus_musculus      LRKHLVVHSGEKPHQCQVCGKTFSQSGSRNVHMRKHHLQLGTTGSGEQEDQT---AEPLMG 382
Rattus_norvegicus LRKHLVVHSGEKPHQCQVCGKTFSQSGSRNVHMRKHHLQLGTTGSGEQEDQT---AEPLMG 382
Homo_sapiens      LRKHLVVHSGEKPHQCQVCGKTFSQSGSRNVHMRKHHLQLGAAGSQEQEQET---AEPLMG 382
Pan_troglodytes   LRKHLVVHSGEKPHQCQVCGKTFSQSGSRNVHMRKHHLQLGAAGSQEQEQETGEEAEPLMG 402
Macaca_mulatta    LRKHLVVHSGEKPHQCQVCGKTFSQSGSRNVHMRKHHLQLGAAGSQEQEQET---AEPLMG 382
Callithrix_jacchus LRKHLVVHSGEKPHQCQVCGKTFSQSGSRNVHMRKHHLQLGAAGSQEQEQEP---AEPLMG 382
Canis_lupus_familiaris LRKHLVVHSGEKPHQCQVCGKTFSQSGSRNVHMRKHHLQLGAAGSQEQEQET---AEPLMG 382
Bos_taurus        LRKHLVVHSGEKPHQCQVCGKTFSQSGSRNVHMRKHHLQMGAGSQEQEQEPA---AEPLMG 382
Equus_caballus    LRKHLVVHSGEKPHQCQVCGKTFSQSGSRNVHMRKHHLQMGAGSQEQEQET---AEPLMG 382
Rhinatrema_bivittatum LRKHLVIHSGVKPHQCQICGKTFSQSGSRNVHIRKHHSKSRASVSTQEEI---EVLIN 309
Xenopus_tropicalis LRKHQVVHSGVKSHQCQVCGKTFSQSGSRNAHLRKHHHSR-----SIDDS 381
.....370.....380.....390.....400.....410.....420

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.. * .: : : :
Pavo_muticus      SSSLLEESTVHSKNLI SVNSQPSLGVESLHLPDTEIIGVEEGETSCSFFRPLICTD---- 445
Pavo_cristatus    SSSLLEESTVHSKNLI SVNSQPSLGVESLHLPDTEIIGVEEGETSCSFFRPLICTD---- 445
Gallus_gallus     SSSLLEESTVHSKNLI SVNSQPSLGVESLHLPDTEIIGVEEGETSCSFFRPLICTD---- 445
Chelonia_mydas    SSSLLEEA AVHSKNLI SMNSQPR LGVESLHLPDTEIIGVEEEVLAEATPGALQ SAPDVVL 444
Mus_musculus      SSSLLEDASVPNKNLVSMNSQSSLGGESLNLNTNSILGVDDEVLTERRASRPLSSVPDVT- 441
Rattus_norvegicus SSSLLEEASVPNKTLVSMNPQSSLGGETLNLPTNSILGVDDEVLTERRSRPLSSVPDVT- 441
Homo_sapiens      SSSLLEEASVP SKNLVSMNSQPSLGGESLNLPTNSILGVDDEVLAEGSPRSLSSVPDVT- 441
Pan_troglodytes   SSSLLEEASVP SKNLVSVNSQPSLGGESLNLPTNSILGVDDEVLAEGSPRSLSSVPDVT- 461
Macaca_mulatta    SSSLLEEASVP GKNLVSMNSQPSLGGESLNLPTNSILGVDDEVLAEGSPRSLSSVPDVT- 441
Callithrix_jacchus SSSLLEEASVP SKNLVSMNSQPSLGGESLNLPTNSILGVDDEVLAEGSPRSLSSVPDVT- 441
Canis_lupus_familiaris TSLLLEEASVT SKNLVPMNSQPSLGGESLNLPTNSILGVDDEVLAEGSPRPLSSVPDVT- 441
Bos_taurus        SSSLLEEASVT SKNLVSMNSQPSLGGESLNLPTNSILGVDDEVLAEGSPRPLSSVPDVT- 441
Equus_caballus    SSSLLEEASVT SKNLVSMNTQPSLGGESLNLPTNSVLGVDDEVLAEGSPRPLSSVPDVT- 441
Rhinatrema_bivittatum GS-----SSPGSLQAVHDVLPQTHSLDTITAGRQSYEDDMVLLQ----- 348
Xenopus_tropicalis -----TSSHCTHTVQETLQHS-LLSVGSRERQSYEEDVSIILN----- 418
.....430.....440.....450.....460.....470.....480

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Pavo_muticus      ----- 445
Pavo_cristatus    ----- 445
Gallus_gallus     ----- 445
Chelonia_mydas    PQSHHLVTMSTGRHSYGVSALLQ----- 467
Mus_musculus      ---HHLVTMQSGRQSYEVSVLTAVNPQE--LLNQGDLTERRQT----- 478
Rattus_norvegicus ---HHLVTMQSGRQSYEVSVLTAVNPQE--LLNQGDLTDRQT----- 478
Homo_sapiens      ---HHLVTMQSGRQSYEVSVLTAVNPQE--LLNQGDLTERRT----- 478
Pan_troglodytes   ---HHLVTMQSGRQSYEVSVLTAVNPQE--LLNQGDLTERRT----- 498
Macaca_mulatta    ---HHLVTMQSGRQSYEVSVLTAVNPQE--LLNQGDLTERRT----- 478
Callithrix_jacchus ---HHLVTMQSGRQSYEVSVLTAVNPQE--LLNQGDLTERRT----- 478
Canis_lupus_familiaris ---HHLVAMQSGRQSYEVSVLTAVNPQE--LLNQGDLTERRT----- 478
Bos_taurus        ---HHLVTMQSGRQSYEVSVLTAVNPQE--LLNQGDLTERRT----- 478
Equus_caballus    ---HHLVTMQSGRQSYEVSVLTAVNPQE--LLNQGDLTERRT----- 498
Rhinatrema_bivittatum ----- 348
Xenopus_tropicalis ----- 418
.....490.....500.....510.....520.....530.....540

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# CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep\_msa/ZNF110pep Tue Feb 1 14:58:29 2022

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Pavo_muticus	-----	445
Pavo_cristatus	-----	445
Gallus_gallus	-----	445
Chelonia_mydas	-----	467
Mus_musculus	-----	478
Rattus_norvegicus	-----	478
Homo_sapiens	-----	478
Pan_troglodytes	-----	498
Macaca_mulatta	-----	478
Callithrix_jacchus	-----	478
Canis_lupus_familiaris	-----	478
Bos_taurus	-----	478
Equus_caballus	QFLQKRGRRAGPVTCSPPRSPHLRGRPQHPPTAQAHGPNHS	540
Rhinatrema_bivittatum	-----	348
Xenopus_tropicalis	-----	418
	.....550.....560.....570.....580..	