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HyMtcf -----
HyVtcf -----
HeTcf -----
NvTcf -----
HumanTcf1 -----
HumanTcf7 -----
HumanTcf4 MPQLNGGGDDLGANDELISFKDEGEQEEKSSENSAERDLADVKSSLVNESETNQNSS 60

HyMtcf -----
HyVtcf -----
HeTcf -----
NvTcf -----
HumanTcf1 -----
HumanTcf7 -----
HumanTcf4 DSEAEERRPPRSESFRDKSRRESLEEAAKRQDGGLFKGGPPYPGYPFIMIPDLTSPYLPKRS 120

HyMtcf -----MPQLPTST-AEEYG-----AEDEIKLYTQEEDECSDT-STVDVVNDIKDDLL 45
HyVtcf -----MPQLPTST-AEEYG-----AEDEIKLYTQEEDECSDT-STVDVVNDIKDDLL 45
HeTcf -----MPQLPTSTPSGEDG-----AEDEVKRYAREEDECSDS-SNIDVVNDIKVDLF 46
NvTcf -----MPQLPRNS-TDDFG-----ADDEVKEYKHEDGEGEENGATLDLVNDIKTDLI 46
HumanTcf1 -----MYKETVYSAFN-----LLMHYPPPSGAGQHPQPQPPLHKANQP-- 38
HumanTcf7 -----MYKETVYSAFN-----LLMHYPPPSGAGQHPQPQPPLHKANQP-- 38
HumanTcf4 VSPARTLHFQSGSTHYSAYKTIETHQIAVQYLOMKWPLLDVQAGSLQSRQALKDARSPPS 180
          :          :          :          :
HyMtcf N-----EDGPDTRKPNDD-MY--HGDSMRYGKSEVGHGIYGSPPAAVIVTPQNRYEYQHQS 97
HyVtcf N-----EDGPDTRKPNDD-MY--HGDSMRYGKSEVGHGIYGSPPAAVIVTPQNRYEYQHQS 97
HeTcf K-----EDDPELGKTNDDDLYRAHPSSNRYGKSEGGHGMYPGSPAAVIVGP-HRYYDQPP 100
NvTcf KKEAEHQSGQETKTPSADSSNAPIAQLLTFQDRYNDHLMPPGPGYHRNQHGSDSKHMRSSQ 106
HumanTcf1 -----PHGVPQLS-----LYEHFNSPHPTP-APADISQKQ-VHRPLQTPDLS 78
HumanTcf7 -----PHGVPQLS-----LYEHFNSPHPTP-APADISQKQ-VHRPLQTPDLS 78
HumanTcf4 AHIVSNKVPVQHPHHVHPLTPLITYSNEHFTPGNPPHLPADVDPKTGIPRPPHPPDIS 240
          .          .          .          .
HyMtcf YRHGNTANSQP-YANPFIS----TRPPLYTRDERPYDHPSPWPLT-QPDGPPQYPLPYG- 150
HyVtcf YRHGNTANSQP-YANPFIS----TRPPLYTRDERPYDHPSPWALT-QPDGPPQYPLPYG- 150
HeTcf YRPGTTTHGPPPTHNSFTSGT-QRMPMPYPREERSYYEHGPPWAT-QVGMPPHYGMSYGS 158
NvTcf ASSGIFHPGHPGYTTAVAGQYYPYVPPGKPEGRYHDPALWPHHGIPQGSQYHPAYPP 166
HumanTcf1 GFYSLTSGSMGQLPHTVSWFT----HPSLMLGSG-----VPG 111
HumanTcf7 GFYSLTSGSMGQLPHTVSWFT----HPSLMLGSG-----VPG 111
HumanTcf4 PYYPLSPGTVGQIPHPLGLWLVPPQGGQVYPIITGGFRHPYPTALTVNASMSRFPPHMVPP 300
          . . .          *
HyMtcf -----AMQQKY-FRYPPGMAGNVFFYSS---GYPVMAGRS-----TKEMK 186
HyVtcf -----AMQQKY-FRYPPGMAGNVFFYSS---GYPVMAGRS-----TKEMK 186
HeTcf -----GMAQKYGFRYPPGVPPGVYYPGPH--GYPGMGRP-----VKEQK 197
NvTcf PVSATTAGIQRLSHQAMTGDPRAGVHCGPAPPNHSVITRAPSSCVAGSTYTSAEIEMME 226
HumanTcf1 -----HPAAIPHPAIVPPSGKQELQPFDR---NLKTQAESKAE-----KEAK 150
HumanTcf7 -----HPAAIPHPAIVPPSGKQELQPFDR---NLKTQAESKAE-----KEAK 150
HumanTcf4 HHTLHTTGIPHPAIVTPTVKQESSQSDVGLHSSKHQDSKKE-----EEKN 346
          :          :          :          :
HyMtcf R-----PHVKKPLNAFMLYMKEQRPKIAAEFTLKESAAINQILGKRWHALEKTEQAKYY 240
HyVtcf R-----PHVKKPLNAFMLYMKEQRPKIAAEFTLKESAAINQILGKRWHALEKTEQAKYY 240
HeTcf R-----PHVKKPLNAFMLFMKEQRPKIAAEFTLKESAAINQILGKRWHALEKSEQAKYY 251
NvTcf RDSKLQLQHIKKPLNAFMLYMKDMRPKVVAECTLKESAAINQILGKKWHALDRSEQAKYY 286
HumanTcf1 K-----PTIKKPLNAFMLYMKEMRAKVI AECTLKESAAINQILGRRWHALSREEQAKYY 204
HumanTcf7 K-----PTIKKPLNAFMLYMKEMRAKVI AECTLKESAAINQILGRRWHALSREEQAKYY 204
HumanTcf4 K-----PHIKKPLNAFMLYMKEMRAKVVAECTLKESAAINQILGRRWHALSREEQAKYY 400
          :          :*****:* *.*: * * *****:*****:*****
HyMtcf EMARKERAIHMQLYPGWSARDNYAQIGRKKK-RPRDKNEEMN-PKKCRARYGLDRQEQC 298
HyVtcf EMARKERAIHMQLYPGWSARDNYAQIGRKKK-RPRDKNEEMN-PKKCRARYGLDRQEQC 298
HeTcf ELARKERAIHMQLYPGWSARDNYAQIGRKKK-RPRDKNEEMN-PKKCRARYGLDRQEQC 309
NvTcf EMARKERALHLQLYPGWSARDNYAQGGKKK-RKRDKSQEITNPKKCRARYGLDRQHEWC 345
HumanTcf1 ELARKERQLHMQLYPGWSARDNYGKKKRSREKHQESTDTPGSPKKCRARFGLNQQTDC 264
HumanTcf7 ELARKERQLHMQLYPGWSARDNYGKKKRSREKHQESTDTPGSPKKCRARFGLNQQTDC 264
HumanTcf4 ELARKERQLHMQLYPGWSARDNYGKKKRRDKQPGETNDANTPKKCRALFGLDRQTLWC 460
          *.******:*****:*****:*****:*****:*****:*****
HyMtcf KPCRKKKCI RFIIGADGEATEVPEKDRSDS--DDNQKSDSEFSKEHLHGLANITTL 356
HyVtcf KPCRKKKCI RFIIGADGEATEVPEKDRSDS--DDNQKSDSEFSKEHLHGLANITTL 356

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HeTcf	KPCRKKKCI RFLV GADGETTEVAEKDNEHSDS--DDNENRT-QINSKENLQELVTMATK	366
NvTcf	KPCRKKKCV RFLAGNNEGAVG-----	367
HumanTcf1	GPCRKKKCI RYLPGEGRCPSPVPSDD SALGCP-----GSPAPQDSPSYHLLPRFPTE	317
HumanTcf7	GPCRKKKCI RYLPGEGRCPSPVPSDD SALGCP-----GSPAPQDSPSYHLLPRFPTE	317
HumanTcf4	KPCRKKKCV RYIQEGSCLSPSSDGSLLDSPPPSPNLLGSPPRDAKSQTEQTPLSLS	520
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HyMtcf	SSDNH----VNNNNTILIDENIK-----D-----ERHSTPPTS KS-----	387
HyVtcf	SSDNH----VNNNNTILIDENIK-----D-----ERHSTPPTS KS-----	387
HeTcf	DTQNI TSTILN NNNSSSVTTSISPVTSPVSSDSTS IYKFSIEA I SSSSTTDSSLNSSTIG	426
NvTcf	-----	
HumanTcf1	LLTSPAERHLHPQVSPLLSASQP-----QGPH-----RPPAA	349
HumanTcf7	LLTSPAEP---APTSPGLSTALS-----LPTP-----GPPQA	346
HumanTcf4	LKPDPLAHL SMMPPPALLLAEA-----THKASALCPNGALDLPPAA	562
HyMtcf	SSLVTNSN-RDLP-QVCSYSERTLPTLQAIETR-----	418
HyVtcf	SSLVTNSN-RDLP-QVCSYSERTLPTLQAIETR-----	418
HeTcf	SAVTYTSNGRFTFTNSIVSDSTQSLKSLK TISAQCS----	461
NvTcf	-----	
HumanTcf1	PCRAHRYSNRNL RDRWPSRHRTPGRLQEPTP-----	380
HumanTcf7	PRSTLQSTQVQQQE---SQRQVA-----	366
HumanTcf4	LQPAAPSSSIAQPSTSSLHSHSSLAGTQPQLSLVTKSLE	602

PodBcat RMSEDKSQDYKKRLSVELTSSSLFRDDMPWEPGSTEMADILTTQSYQDELYSPHVTQQSQT 776
HeBcat RMSEDKSQDYKKRLSVELTSSSLFRDDMPWEPGNTMADILTTQSYQDELYSPHITQQSQT 776
*****:*****:*** **:****::*:. :

HyVbcat ---YNPNSYQHQQ--SGMFPQMNI-----NVTQGWFDPL 805
HyMbcat ---YNPNSYQHQQ--SGMFPQMNI-----NVTQGWFDPL 806
PodBcat SSMQYTNSFQQQQQHPPFPQQQ-----MNVGNSWFESDM 812
HeBcat SSMQYTNSFQQ-----HPFFPQQQQQQQPPLTGGNPWFESDM 815
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