

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/AASD/HepS Tue Feb 1 11:08:32 2022

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		**:::* ::*: : : ** * . : . :	
Pavo_muticus	-----	MTLHDMVAQAASLHS DRKAVWFDECN DGPPTFY	33
Pavo_cristatus	-----	MTLHDMVAQAASLHS DRKAVWFDECSD GPPTFY	33
Gallus_gallus	-----	MTLHDMVAQAASLHS GRKAVWFDECN DGPPTFY	33
Mus_musculus	-----	MTLQELVLRTASVYMD RTAVCFDEGN QPPVCY	33
Rattus_norvegicus	-----	MTLQELVHQAA SIYLDR TAVCFDEGN QPPVCY	33
Homo_sapiens	-----	MTLQELVHKAASCYMD RVAVCFDEC NNQLPVYY	33
Pan_troglodytes	-----	MTLQELVHKAASCYMD RVAVCFDEC NNQLPVYY	33
Callithrix_jacchus	-----	MTLQELVHKAASCYMD RVAVCFDEC NNQLPVYY	33
Macaca_mulatta	-----	MTLQELVRKAASCYMD KVA VCFDEC NNQLPVYY	33
Bos_taurus	-MISRSNWKNVLKEFSATS DVQISVSE	MTLQELVHQAA SLYS DKIAVCFDEC NNQPPVYY	59
Bos_mutus	-MISRSNWKNVLKEFSATS DVQISVSE	MTLQELVHQAA SLYS DKIAVCFDEC NNQPPVYY	59
Equus_caballus	-----	MTLQELVHQAA SLYS DKIAVCFDEC NNQPPVYY	33
Canis_lupus_familiaris	-----	MTLQELVHQAA SIY SDKIAVCFDEC NNQPPVYY	33
Rhinatrema_bivittatum	-----	MADI VEVT LHELVLQAAA MYADRR AVCFDDCR NKLPSF	39
Xenopus_tropicalis	MECTEPHLTHRSSFCENGKV PNLVPSPS ILQEMVS HTATEHA HRNAVCFHTCQEAP-VYY		59
	1.....10.....20.....30.....40.....50.....60		

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Pavo_muticus	TYATVIKHAMELTAFLQKYCDPOGRCEIGLYCCPGINLP	SWILGILQVPAAYCPIDPDAP	93													
Pavo_cristatus	TYATVIKHAMELTAFLQKYCDPOGRCEIGLYCCPGINLP	SWILGILQVPAAYCPIDPDAP	93													
Gallus_gallus	TYATVIKHATELTAFLQKYCDPOGRCEIGLYCCPGINLP	SWILGILQVPAAYCPIDPDAP	93													
Mus_musculus	SYKALLSAASELSHFLIAHCDFGGIREIGLYCQPGINLP	SWILGILQVPAAYAPIDPDS	93													
Rattus_norvegicus	TYKALLSEASELSAFLIAHCDLGIREIGLYCQPGINLP	SWILGILQIPAAAYAPIDPSL	93													
Homo_sapiens	TYKTVVNAAASELSNFFLLHCDFOGIREIGLYCQPGIDLPS	SWILGILQVPAAYVPIDPDS	93													
Pan_troglodytes	TYKTVVNAAASELSNFFLLHCDFOGIREIGLYCQPGIDLPS	SWILGILQVPAAYVPIDPDS	93													
Callithrix_jacchus	TYKTVVNAAASELSNFFLLHCDFOGIREIGLYCQPGIDLPS	SWILGILQVPAAYVPIDPDS	93													
Macaca_mulatta	TYKTVVNAAASELSNFFLLHCDFOGIREIGLYCQPGIDLPS	SWILGILQVPAAYVPIDTDS	93													
Bos_taurus	TYKTVIHAASALSNFLLHCEFGIREIGLYCHPTINLP	SWILGILQVPAAYVPVDPS	119													
Bos_mutus	TYKTVIHAASALSNFLLHCEFGIREIGLYCHPTINLP	SWILGILHVPAAYVPVDPS	119													
Equus_caballus	TYKTVINAASELSNFFLLHCDFOGIRAIGLYCHPGINLP	SWILGILQVPAAYAPIDPDS	93													
Canis_lupus_familiaris	TYKTVVNAAASELSNFFLLHCDFOEIQEVGLYCHPGINLP	SWILGILQVPAAYAPIDPDS	93													
Rhinatrema_bivittatum	TYKEMVGFAKELTHFLRKHCDSLCKEIGLYCHPGINLAS	SWILGILQVPAAYSPIDPEAP	99													
Xenopus_tropicalis	TYSKMMRLAEELALFLKSHCRHTEICKIGLYCNPGINLP	SYIIGILQVPAAYFPVDPNS	119													
70.....80.....90.....100.....110.....120															

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Pavo_muticus	PLLSTYFMRRKSNLOYILVENDKIKQFQTSHVGWLSYNSSSTIEHIGLTLFOMSRSSADVN	153
Pavo_cristatus	PLLSTYFMRRKSNLOYILVENDKIKQFQTSHVGWLSYNSSSTIEHIGLTLFOMSRSSADVN	153
Gallus_gallus	PLLSAYFMRRKSNLOYILVENDKIKQFQTAHIDWLSSHSSSTVEHIGLTLFHMSRSSTDVN	153
Mus_musculus	PSLSTYFMKKCDLKYLVEKQQLSKFKSSHETVLNYDITSVEHKDLALFRLHWEDGRVST	153
Rattus_norvegicus	PSLATHFMMKKCGLYLVLEKROITFKSSHETVLNYPDTVSVEHKDVLVLRHLHWEDGAVNS	153
Homo_sapiens	PSLSTHFMMKKCNLYIILVEKKQINKFKSSFHETLLNYDTFTVEHNDLVLFRLHWKNTEVNL	153
Pan_troglodytes	PSLSTHFMMKKCNLYIILVEKKQINKFKSSFHETLLNYDTFTVEHNDLVLFRLHWKNTEVNL	153
Callithrix_jacchus	PSLSTHFMMKKCNLYIILVEKKQINKFKSSFHET-LNYDTFTVEHNDLVLFRLHWKNTEVDL	152
Macaca_mulatta	PSLSTHFMMKKCNLYIILVEKKQINKFKSSFHETLLSYDTFTVEHNDLVLFRLHWKNTEVNL	153
Bos_taurus	PALSVMHFMMKKCNLYIILVEKHISKFKSSYEALLNYDMLTVEHNDLVLFRLHWKNVEVSL	179
Bos_mutus	PALSVMHFMMKKCNLYIILVEKHISKFKSSYEALLNYDMLTVEHNDLVLFRLHWKNVEVSL	179
Equus_caballus	PALSIHFMMKKCNLYIILVEKQQINKFKSSYETILLNYDTFTVEHNDIVLFRLHWKNVEVSL	153
Canis_lupus_familiaris	PALSTHFMMKKCNLSYIILVEKQQINKFKSSYETILLNYDTP-KEYNDLVLFRLHWKNABASL	152
Rhinatrema_bivittatum	PNVSSYLMKKYLNLCVLEHDKA EKFRISHSDWC PHSSETHHGLGLMFKIQLNSSAANL	159
Xenopus_tropicalis	SDVS IKLLEKS NVEYMLVHKDMVENFKLOFPGFVELDSS IQIHINVLNFVKRNKKAIVR	179
130.....140.....150.....160.....170.....180	

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      .               :               *               ***:***** *
Pavo_muticus      QADNVKSKFEAFKVMGNSQLGNTVCPEHLELKTSEGGYKDVGGKCSLAYVLHTSGTTGTP 213
Pavo_cristatus    QADNVKSKFEAFKVMGNSQLGNTVCPEHLELKTSEGGYKDVGGKCSLAYVLHTSGTTGTP 213
Gallus_gallus     QADNVKSKLEAFKVMGNSQLRNTVCPEHLELKTSEGGYRDVGQRCSLAYVLHTSGTTGTP 213
Mus_musculus      VLGDRAHQHK-----VTDREDRVSAESRTPEK---EHMDMRHDGCLAYVLHTSGTTGTP 204
Rattus_norvegicus VLSDRTDKCK-----VNDREERVNGENGSGEK---GHMDMRREGCLAYVLHTSGTTGTP 204
Homo_sapiens      MLNDGKEKYE-----KEKIK-SISSEHVNEEKAE-EHMDLRRLKHCLAYVLHTSGTTGTP 205
Pan_troglodytes   MLNDGKEKYE-----KEKIK-SISSEHVNEEKAE-EHMDLRRLKHCLAYVLHTSGTTGIP 205
Callithrix_jacchus MLSDGKEKYE-----KEKIRNSVSSEHVNEEKVE-ERMDLRLEHCLAYVLHTSGTTGIP 205
Macaca_mulatta    MLSDGKEKYE-----KEKIKISVSSEHVNEEK-A-EHMDLRRLKHCLAYVLHTSGTTGIP 205
Bos_taurus        VLNDRKEKYE-----KGKMPKSMHSESSSEEEKSE-EHMDMRQKHCLAYVLHTSGTTGIP 232
Bos_mutus         VLNDRKEKYE-----KGKMTKSMHSESSSEEEKSE-EHMDMRQKHCLAYVLHTSGTTGIP 232
Equus_caballus    MLNERKEKYE-----KEKMTNSTSENSNEEKSE-EHMDARLKHCLAYVLHTSGTTGKP 206
Canis_lupus_familiaris MLNDRKQNYE-----KEKMANSTNSSENSNAEKTE-ERMDVRQKNCLAYVLHTSGTTGIP 205
Rhinatrema_bivittatum LLDGAEKRHQN-----TNNSDQWQKDQENVLEQAEQDQMDVR-NNRLAYVLHTSGTTGIP 213
Xenopus_tropicalis GLHRHQNDTP-----EKKHMMYK---EHMDMRQKHCLAYILHTSGTTGAP 221
.....190.....200.....210.....220.....230.....240

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Pavo_muticus      KVVVRVPHTCIVPNIQHLKSIFEITQDDVLFLASPLTFDPSVVELFIALTS GASILIVPNA 273
Pavo_cristatus    KVVVRVPHTCIVPNIQHLKSIFEITQDDVLFLASPLTFDPSVVELFIALTS GASILIVPNA 273
Gallus_gallus     KVVVRVPHTCIVPNIQHLKSIFEITQDDVLFLASPLTFDPSVVELFIALTS GASILIVPNA 273
Mus_musculus      KIVRVPHACILPNIQHFRSLFDITQEDVLFLASPLTFDPSVVEIFVLSLSSGACLLIVPTS 264
Rattus_norvegicus KIVRVPHACILPNIQHFRSLFDITQEDVLFLASPLTFDPSVVEIFVLSLSSGACLLIVPTS 264
Homo_sapiens      KIVRVPHKCIVPNIQHFRVLF DITQEDVLFLASPLTFDPSVVEIFLALSSGASLLIVPTS 265
Pan_troglodytes   KIVRVPHKCIVPNIQHFRVLF DITQEDVLFLASPLTFDPSVVEIFLALSSGASLLIVPTS 265
Callithrix_jacchus KIVRVPHKCIVPNIQHFRVLF DITQEDVLFLASPLTFDPSVVEIFLALSSGASLLIVPTS 265
Macaca_mulatta    KIVRVPHKCIVPNIQHFRVLF DITQEDVLFLASPLTFDPSVVEIFLALSSGASLLIVPTS 265
Bos_taurus        KIVRVPHACIVPNIQHFRVLF EITHEDVLFLASPLTFDPSVVEIFVALSSGASLLIVPTS 292
Bos_mutus         KIVRVPHACIVPNIQHFRVLF EITHEDVLFLASPLTFDPSVVEIFVALSSGASLLIVPTS 292
Equus_caballus    KIVRVPHACIVPNIQHFRVLF EITQDDVLFLASPLTFDPSVVEIFVALSSGASLLIVPTS 266
Canis_lupus_familiaris KIVRVPHACIVPNIQHFRVLF EITQEDVLFLASPLTFDPSVVEIFVALSSGACLLIVPTS 265
Rhinatrema_bivittatum KIVRVPHACIVPNIQHFRVLF EITQEDVLFLASPLTFDPSVVEIFVALSSGACLLIVPTS 273
Xenopus_tropicalis KIVSVPHKCIVPNIYHLRSIFAI SPDDLFLASPLTFDPSVIELFLALSSGACLLIVPNP 281
.....250.....260.....270.....280.....290.....300

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::::* :.  ** :*:*****:*****:  ::: ***  ****:***** **
Pavo_muticus      VKMMPVELSTALFNHHHVTVLQATPTLLRRFGAHI IKSTVLSANTSLRVLALGGEAF PVL 333
Pavo_cristatus    VKMMPAELSTALFNHHHVTVLQATPTLLRRFGAHI IKSTVLSANTSLRVLALGGEAF PVL 333
Gallus_gallus     VKMMPVELSTALFNHHHVTVLQATPTLLRRFGAHI IKSTVLSANTSLRVLALGGEAF PVL 333
Mus_musculus      VKVLPSKLADILFSRHRVTVLQATPTLLRRFGSEL IKSTVLSAHTSLRVLALGGEAF PSL 324
Rattus_norvegicus VKVLPSKLADVLFSRHRVTVLQATPTLLRRFGSEL MKSTVLSAHTSLRVLALGGEAF PSL 324
Homo_sapiens      VKLLPSKLASVLFSSHRRVTVLQATPTLLRRFGSOL IKSTVLSATTSRLRVLALGGEAF PSL 325
Pan_troglodytes   VKLLPSKLASVLFSSHRRVTVLQATPTLLRRFGSOL IKSTVLSATTSRLRVLALGGEAF PSL 325
Callithrix_jacchus IKLLPSKLATVLFSSHRRVTVLQATPTLLRRFGSOL IKSTVLSATTSRLRVLALGGEAF PSL 325
Macaca_mulatta    IKLLPSKLASVLFSSHRRVTVLQATPTLLRRFGSOL IKSNVLSATTSRLRVLALGGEAF PSL 325
Bos_taurus        VKMVP SKLA AVLFSHHRVTILQATPTLLRRFGSOL IKSTVLSASTSLRILALGGEAF PSL 352
Bos_mutus         VKMVP SKLA AVLFSHHRVTILQATPTLLRRFGSOL IKSTVLSASTSLRILALGGEAF PSL 352
Equus_caballus    VKVIP SKLA AVLFSHHRVTVLQATPTLLRRFGSOL IKSTVLSSTSLRVLALGGEAF PSL 326
Canis_lupus_familiaris VKMLPSKLA AVLFSHHRVTILQATPTLLRRFGSOL IKSTVLSASTSLRVLALGGEAF PSL 325
Rhinatrema_bivittatum IRMPGELCEALFRRHRVTVLQATPTLLRRFGTSLIRAAVLSADTSLRVLALGGEAF PAT 333
Xenopus_tropicalis IKMMPHKLCDILFHQHRVTVLQATPTLLRRFGSR SIRSSVLSKGTSLRVLALGGEAF PPSV 341
.....310.....320.....330.....340.....350.....360

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Pavo_muticus      NLWKSWKHKENKTSIFNLYGITEVSSWATCYRIPEEVFSADFRIDFPVPLGSPLLGTTVE 393
Pavo_cristatus    NLWKSWKHKENKTSIFNLYGITEVSSWATCYRIPEEVFSADFRIDFPVPLGSPLLGTTVE 393
Gallus_gallus     NLWKSWKHKENKTSIFNLYGITEVSSWATCYRIPEEAFSADFRSDFPVPLGSPLLGTTVE 393
Mus_musculus      TILKSWRGKGNRTQIFNLYGITEVSSWATFYRIPEEILNSAVKHESPVOLGSPLLGTTVE 384
Rattus_norvegicus TVLQSWRGKSNRTQIFNLYGITEVSSWATFYRIPEEILNSSVRLESVPOLGSPLLGTTVE 384
Homo_sapiens      TVLRSWRGEGNKTIQIFNVYGITEVSSWATYRIPEKILNSTLKCCELPVOLGFPLLGTTVE 385
Pan_troglodytes   TVLRSWRGEGNKTIQIFNVYGITEVSSWATYRIPEKILNSTLKCCELPVOLGFPLLGTTVE 385
Callithrix_jacchus TVLRSWRGEGNKTIQIFNVYGITEVSSWATYRIPEKILNSTLKCCELPVOLGFPLLGTTVE 385
Macaca_mulatta    TVLRSWRGEGNKTIQIFNVYGITEVSSWATYRIPEKILNSTSKCELPVOLGFPLLGTTVE 385
Bos_taurus        TVLKSWRGVGNKTQIFNLYGITEVSSWATFYRIPEKILNSTLKCCELPVOLGFPLLGTTVE 412
Bos_mutus         TVLKSWRGVGNKTQIFNLYGITEVSSWATFYRIPEKILNSTLKCCELPVOLGFPLLGTTVE 412
Equus_caballus    TVLKSWRGVGNKTQIFNLYGITEVSSWATFYRIPEKILNSTLKCCELPVOLGFPLLGTTVE 386
Canis_lupus_familiaris TVLKSWRGVDNKTQIFNLYGITEVSSWATFYRHRIPEKILNSTLKCCELPVOLGFPLLGTTVE 385
Rhinatrema_bivittatum NVLRSWREAGNQTQVFNLYGITEVSSWATCYRIPEELPNARLE-ECVPVPLGSPPLSGTTVE 392
Xenopus_tropicalis SVLRSWREFGNRTLRNLINLYGITEVSSWATYVEITEQMISHQIGEECVPLGFPLOGTIVE 401
.....370.....380.....390.....400.....410.....420

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Pavo_muticus      IRDANGSAVLEEGEQIFIGGEERICFLDDEIFVPOGTMRETGDFVRVQNAEIFFLGRKDN 453
Pavo_cristatus    IRDANGSAVLEEGEQIFIGGEERICFLDDEIFVPOGTMRETGDFVRVQNAEIFFLGRKDN 453
Gallus_gallus     IRDANGSAVLEEGEQIFIGGEERICFLDDEIIVPOGTMRETGDFVRVQNAEIFFLGRKDN 453
Mus_musculus      VRDQNGSPVLEGTGQVFLGGKNRVCFDDEMTVPLGTMRTGDFVTVKDGEIFFLGRKDS 444
Rattus_norvegicus VRDKNQSPVHEGTGQVFLGGKNRICFLDEEMTVPLGTMRTGDFVTVKGGEIFFLGRKDS 444
Homo_sapiens      VRDTNGFTIQEGSGQVFLGGNRVCFDDEMTVPLGTMRTGDFVTVKDGEIFFLGRKDS 445
Pan_troglodytes   VRDTNGFTIQEGSGQVFLGGNRVCFDDEMTVPLGTMRTGDFVTVKDGEIFFLGRKDS 445
Callithrix_jacchus VRDTNGFTIQEGSGQVFLGGNRVCFDGEVTVPLGTMRTGDFVTVKDGEIFFLGRKDS 445
Macaca_mulatta    VRDTNGFTIQEGSGQVFLGGNRVCFDDEMTVPLGTMRTGDFVTVKDGEIFFLGRKDS 445
Bos_taurus        VRDTNGFTIQEGNGQVFLGGNRVCFDGEVTVPLGTMRTGDFVTVKDGEIFFLGRKDS 472
Bos_mutus         VRDINGFTIQEGNGQVFLGGNRVCFDGEVTVPLGTMRTGDFVTVKDGEIFFLGRKDS 472
Equus_caballus    VRDTDGFAIQEGDGQVFLGGNRVCFDDEMTVPLGTMRTGDFVTVKDGEIFFLGRKDS 446
Canis_lupus_familiaris VRDTDGFTIQEGHGQVFLGGNRVCFDDEMTVPLGTMRTGDLVMVKDGEMFFLGRKDS 445
Rhinatrema_bivittatum IRDASGIALQEGEGHVFGGKRRICFLDDEMTVPLGTMRTGDLAAVKGTNMFFLGRKDS 452
Xenopus_tropicalis VQNEKSYKIDEGEGQVLLGGRERICFLDNEFILPYGTMRTGDMVTVLKDGEYFVLGRKDN 461
.....430.....440.....450.....460.....470.....480

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Pavo_muticus      QIKRHGKRFNIECLQAAEDLCQVEACAVTWYQEEKLILFVVPRGDLEEREILLELOKRL 513
Pavo_cristatus    QIKRHGKRFNIECLQAAEDLCQVEACAVTWYQEEKLILFVVPRGDLEEREILLELOKRL 513
Gallus_gallus     QIKRHGKRFNMECLQAAEDLCQVEACAVTWYQEEKLILFVVPRGDLEEREILHELOKRL 513
Mus_musculus      QIKRHGKRLNIALVQQVAEELQOVESCAVTWYNQERLILFIVSKVDLVKDCIFKELQKHL 504
Rattus_norvegicus QIKRHGKRLSIALVQQVAEELQOVESCAVTWYNQERLILFIVSKVDLVKDYIFKELQKHL 504
Homo_sapiens      QIKRHGKRLNIELVQQVAEELQOVESCAVTWYNQERLILFMVSKDASVKEYIFKELQKYL 505
Pan_troglodytes   QIKRHGKRLNIELVQQVAEELQOVESCAVTWYNQERLILFMVSKDASVKEYIFKELQKYL 505
Callithrix_jacchus QIKRHGKRLNIELVQQVAEELQOVESCAVTWYNQERLILFMVSKDALVKDYIFKELQKHL 505
Macaca_mulatta    QIKRHGKRLNIELVQQVAEELQOVESCAVTWYNQERLILFMVSKDASVKEYIFKELHLYL 505
Bos_taurus        QIKRHGKRLNIELVQQIAEGLQOVESCAVTWYNQERLILFMVTKNDLVKDHIFEELQKHL 532
Bos_mutus         QIKRHGKRLNIELVQQIAEGLQOVESCAVTWYNQERLILFMVTKNDLVKDHIFEELQKHL 532
Equus_caballus    QIKRHGKRLNIELVQQVAEGLQOVESCAVTWYNQERLILFMVSKNDLVKDYIFEELQKHL 506
Canis_lupus_familiaris QIKRHGKRLNIELVQQVAEGLQOVESCAVTWYNQERLILFMVSKNDLVKEYIFKELQKHL 505
Rhinatrema_bivittatum QIKRHGTRINLAVVQQTAEESLQVETCAVTWYQEEKLVLFVVPQGSAAEEREIFRELOKHL 512
Xenopus_tropicalis QIKRHGKRLNIEYVQQAESLAHVEACTALWFOEKQLVMFVIPNGPLEKKFLWKELQSHL 521
.....490.....500.....510.....520.....530.....540

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Pavo_muticus      PTHGIPDELVRITLPLTSHGKVDISELNKIYHYHLNSRRRDSKLSGAEELWERLOYLWK 573
Pavo_cristatus    PTHGIPDELVRITLPLTSHGKVDISELNKIYHYHLNSRRRDSKLSGAEELWERLOYLWK 573
Gallus_gallus     PTHGIPDELVQIKALPLTSHGKVDISELNKIYHYHLNSRRRDSKLSGAEELWKRLLOYLWK 573
Mus_musculus      PAHALPDDMVLIDTLPFTCHGKVDVSELNKIYLDYISSQPRN-ELHGKEELWGKLOYLWK 563
Rattus_norvegicus PAHALPDDMVLIGSLPVTCHGKVDVSELNKIYLDYISSQPRN-KLHGKEELWGKLOCLWK 563
Homo_sapiens      PSHAVPDELVLIDSLPFTSHGKIDVSELNKIYLNINLKSEN-KLSGKEDLWEKLOYLWK 564
Pan_troglodytes   PSHAVPDELVLIDSLPFTSHGKIDVSELNKIYLNINLKSEN-KLSGKEDLWEKLOYLWK 564
Callithrix_jacchus PSHAIPDELVLIDTLPFTSHGKIDVSELNKIYLNINLKSEN-KLSGKEDLWEKLOYLWK 564
Macaca_mulatta    PSHAIPDELVLIDSLPFTSHGKIDVSELNKIYLNINLKSEN-KLSGKEDLWEKLOYLWK 564
Bos_taurus        PSHAIPDELVLINSLPFTSHGKIDVSELNKIYLNIRDLKSEC-KLSGKEELWEKLHHLWK 591
Bos_mutus         PSHAIPDELVLINSLPFTSHGKIDVSELNKIYLNIRDLKSEC-KLSGKEELWEKLHHLWK 591
Equus_caballus    PSHAIPDELVLIDSLPFTSHGKIDVSELNKIYLNINLKSEC-KLNGKEELWEKLOHLWK 565
Canis_lupus_familiaris PSHAIPDELVLIDSLPFTSHGKIDVSELNKIYLN---LKPEC-KLNGKEELWEKLOYLWK 561
Rhinatrema_bivittatum PRPAFPDDLMMIDVLPFTSHGKIDIAKLNKIYSQRLERRKHRCCLLAGEEELWIRLOFIWK 572
Xenopus_tropicalis LSYAVPDDLVLVETLPLTKHGKMDTSKLNMYCEYIN EKKSICTVLGAEDLWNRLQRLWK 581
      .....550.....560.....570.....580.....590.....600

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      * *      : . : : ** ***** : : : * : * : * : : * : * : * :
Pavo_muticus      FVLGLLG---DSSGISKDAVFLYSGGDSLKALQFYGEIEMLVGRGVPGLLEVILSRISIEE 630
Pavo_cristatus    FVLGLLG---DSSGISKDAVFLYSGGDSLKALQFYGEIEMLVGRGVPGLLEVILSRISIEE 630
Gallus_gallus     VVLGLLG---DSSGISKDAVFLYSGGDSLKALQFYDEIEMLVGRGVPGLLEVILSRISIEE 630
Mus_musculus      SILCLPEDPEDTLKVPANSVFLDSGGDSLKSMRLSEIERLTGTAIPGLLEVILSSSLD 623
Rattus_norvegicus SILCLPEDPE--LKVPDINSVFLDSGGDSLKSIWLLGEVEKLTGAPVPGLEVILSSSLD 621
Homo_sapiens      STLNLPE---DLLRVPDESFLNSGGDSLKSIRLLSEIEKLVGTSVPGLEIILSSSILE 621
Pan_troglodytes   STLNLPE---DLLRVPDESFLNSGGDSLKSIRLLSEIEKLVGTSVPGLEIILSSSILE 621
Callithrix_jacchus STLNLPE---DLLKVPDESFLNSGGDSLKSIRLLSEIEKLVGTSVPGLEIILSSSILE 620
Macaca_mulatta    STLNLSE---DLLKVPDESFLNSGGDSLKSIRLLSEIEKLVGTSVPGLEIILSSSILE 621
Bos_taurus        SVLSLSE---DALKIPDESFLNSGGDSLKSIRLLNEIENLVGTSVPGLEIILSSSILR 648
Bos_mutus         SILSLSE---DALKIPDESFLNSGGDSLKSIRLLNEIENLVGTSVPGLEIILSSSILG 648
Equus_caballus    SILSLSE---DPLRIPDESFLNSGGDSLKSIRLLNEIEKLVGTSVPGLEIILSSSILE 622
Canis_lupus_familiaris SILNLSE---DPLKVSDESFLNSGGDSLKSIRLLNEIEKLVGTSVPGLEIILSSSILE 618
Rhinatrema_bivittatum SLLGLPE---DSLAVPEDSLFLSSGGDSLTLRLQEEVENLVGRITVPGLEVILSKSIAD 629
Xenopus_tropicalis TILGLPE---DCPAVPEDSVFLSSGGDSLKAIQFHQFVDILVGRPVTGLVEVILNNSFLD 638
      .....610.....620.....630.....640.....650.....660

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      : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Pavo_muticus      VYKHILKTLFPDEDQLIN-DDNVLKRKLTKNSGEEIHRKYAK-LKSEGYLKVAPGLISFI 688
Pavo_cristatus    VYKHILKTLFPDEDQLIN-DDNVLKRKLTKNNGEEIHRKYAK-LKSEGYLKVAPGLISFI 688
Gallus_gallus     VYKHILKTLFPDEDQLIN-DDSVLKRKLKNNNGEEIHRKYAK-LKSEGYLKVAPGLISFI 688
Mus_musculus      VYNHIVQAVFTPEDRKAN-RSYTTKRKFSADADPEEASGKPAR-LESAWPSNHAGETNSVI 681
Rattus_norvegicus VYNHIIQAVLTREDLKGD-RRYTTKRKFSDDPDEETSGKPAR-LEAAWPWHRDSETNSVV 679
Homo_sapiens      IYNHILQTVVPDEDVTFR-KSCATKRKLSDINQEEASGTSLSH-QKAIMTFTCHNEINAFV 679
Pan_troglodytes   IYNHILQTVVPDEDVTFR-KSCATKRKLSDINQEEASGTSLSH-QKAIMTFTCQNEINAFV 679
Callithrix_jacchus IYNHILQTVFPDEDVTFR-KSCATKRKLSNINQEEASGTSLSH-QKAIMTILSCHNKINAFV 678
Macaca_mulatta    IYNHILQTVFPDEDVTFR-KSCATKRKLSDINQEEASGTSLSH-QKAIMTILSCHNEINAFV 679
Bos_taurus        IYNHILQTVFSDKDMTSL-KNHAMKRKFN-VTQEETSGKSLH-QETVMPPLNCDKEINAFI 705
Bos_mutus         IYNHILQTVFSDKDLTSL-KNHAMKRKFN-VTQEETSGKSLR-QESVMPPLNCDKEISAFI 705
Equus_caballus    IYNHIVQTVFPDEDLTF-KNYATKRKFS-DINQETSGKSLH-QNSVMPPLNCDKINAFI 679
Canis_lupus_familiaris IYNHVLQTVFPDEDLVFS-KNYATKRKFSDIYQEETSGKSLH-QKSVMTLNYDNELTAFT 676
Rhinatrema_bivittatum IHSYLTKAVFQQGDLLIQGIGONKKRKLSSSGKGESIEQYVT-LHR----PEGHSVAAAFV 684
Xenopus_tropicalis IYKHISKSVQLSEHRNTDISQSTADNLRNIKERDSRIKHLGKRKDQAIMLEGNRNLFI 698
      .....670.....680.....690.....700.....710.....720

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      :***.: :
Pavo_muticus      ALSRGNHFFSMNFTKSFMRPSSTVQVRGESLQQPSFLHAVTPS--ITKSHMOGHEKENRT 746
Pavo_cristatus    ALSRGNHFFSMNFTKSFMRPSSTVQVRGESLQQPSFLHAVTPS--ITKSHMOGHEKENRT 746
Gallus_gallus     ALSRGNHFFSMNFTKSFQPSSTVQVGGESLQQPSFLHAVTPS--ITKSHVQGYEKENRT 746
Mus_musculus      ALSRGSQVLSLGAGRLLTQ-----LGLCL-PVCSLDL--IPQNTQILKSL-S-P 726
Rattus_norvegicus ALSRGSQTLTLYLGTGRLLTE-----LGLCPNAVHPPDL--IPQNTTILKSL-S-P 725
Homo_sapiens      VLSRGSQILSLNSTRFLTK-----LGHCS-SACPSDS--VSQTNIQNLKGLN-S 724
Pan_troglodytes   VLSRGSQILSLNSTRFLTK-----LGHCS-SACPSDS--VSQTNIQNLKDLN-S 724
Callithrix_jacchus ALSRGSQILSLNSTRFLPK-----LGHCS-SAYPSDS--VSQTNIQNLKGLN-S 723
Macaca_mulatta    ALSRGSQILSLNSTRFSTK-----LGHCS-SAYPSDS--VSQTNIQNVKDLN-S 724
Bos_taurus        ALSRGNQILSLNTRDKYLTK-----LGHCP-STYSSDL--NSQTDIQNRESLN-T 750
Bos_mutus         ALSRGNQILSLNTRDYLTK-----LGHCP-STYSSDL--NSQTDIQNRESLN-T 750
Equus_caballus    ALSRGGQILSVNTRFLTK-----LGHCP-SACSSDL--ISQTNQNVESLN-P 724
Canis_lupus_familiaris TVSRGSQILSLN-SKFLTK-----LGLCS-SAQSSDL--ISQTNIQNVKSLN-P 720
Rhinatrema_bivittatum ALSRGNRVFMNAPKRMDSSEEGCG--QRIFGHLHPSSCLVSYF-DITTDKAGRTKITQG 741
Xenopus_tropicalis SLRGSRLLGNVLLYSDTMA-----QQHKLFTGLSQELLNIFETIHCMSDSKRTK 748
.....730.....740.....750.....760.....770.....780

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      .      : : ** *:* :***** :.: *
Pavo_muticus      LTITSEVNKTDCCSVQQICAE CNHVT TAEALALRTRWKSNTTRKCVDA SPLIVISSK-DEES 805
Pavo_cristatus    LTITSEVNKTDCCSVQQICAE CNHVT TAEALALRTRWKSNTTRKCVDA SPLIVISSK-DEES 805
Gallus_gallus     LTITNEVNKTDCCSVQQOTCAEC SHVT TADLALMRWKSNTTRRCVDA SPLIVISSK-DEES 805
Mus_musculus      PAPDENLEKP----PLFOQG-SPVVGAMAMALRERWRSDTGKCVDA SPLLVRAAVQDKPS 781
Rattus_norvegicus PALDETLEKP----PLSQER-SPGTGAEP MVLRERWRSDTGKCVDA SPLLVAAVGDTS 780
Homo_sapiens      PVLIGKSKDPSCVAKVSEEG-KPAIGTQKME LHVRWRSDTGKCVDA SPLVVIPTF-DKSS 782
Pan_troglodytes   PVLIGKSKDPSCVAKVSEEG-KPAIGTQKME LHVRWRSDTGKCVDA SPLVVIPTF-DKSS 782
Callithrix_jacchus PVLIGKSKDPSCVAKVPEEG-KPAIGTQKME LHMRWRSDTGKCVDA SPLVVIPTF-DESS 781
Macaca_mulatta    PVLIGKSKDPSCVVKVSEEG-KPVIGTQKME LHVRWRSDTGKCVDA SPLVVIPTF-DKSS 782
Bos_taurus        PPLIGKSEDPS CVVEVSEEE-TPVIRAEKMEFRVRWRSDTGKCVDA SPLVVIPAI-DKSS 808
Bos_mutus         PPLIGKSEDPS CVVEVSEEE-TPVIRAEKMEFRVRWRSDTGKCVDA SPLVVIPAI-DKSS 808
Equus_caballus    PALSGKSKDPSCVAEFFSEEGTPVIEAEKME LCVRWMSDTGKCVDA SPLVVIPAV-DKSS 783
Canis_lupus_familiaris PALIGKSKDPSC TAKVSEEG-TYGTAAKME LHVRWRSDTGKCVDA SPLVVIPAV-DESS 778
Rhinatrema_bivittatum VKSSDSMPVTGTTRAGSNAPAEESPI SVRQLTSLRWSDTGKCVDA SPLAMVSTE-DESS 800
Xenopus_tropicalis KAQYRLCGQSSPISGVASTQ-TQGLLYGFLC LQERWTS DTGKCVDA SPLLVKSAI--RDS 805
.....790.....800.....810.....820.....830.....840

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      :::***** : *::: :. ** : :. *:***** :*:.**:.
Pavo_muticus      ASVFVGSHSHTMQAIDLD TGEVKWEKNLGDRIESSACVSKCGNFIVAG----- 853
Pavo_cristatus    ASVFVGSHSHTMQAIDLD TGEVKWEKNLGDRIESSACVSKCGNFIVAG----- 853
Gallus_gallus     ASVFVGSHSHAMQAIDLD TGEVKWEKNLGDRIESSACVSKCGNFIVAG----- 853
Mus_musculus      TTVYIGSHSHTVKAVDLS SGETRWEQLLGDRIESSACVSKCGNFIVAG----- 829
Rattus_norvegicus TTVYIGSHSHTVKAVDLHSGEMRWERRVGDRIESSACVSKCGNFIVAG----- 828
Homo_sapiens      TTVYIGSHSHRMKAVDFYSGVKVWEQILGDRIESSACVSKCGNFIVAG----- 830
Pan_troglodytes   TTVYIGSHSHRMKAVDFYSGVKVWEQILGDRIESSACVSKCGNFIVVETELLRVVQAGLK 842
Callithrix_jacchus TTVYIGSHSHRMKAVDFYSGVKVWEQSLGDRIESSACVSKCGNFIVAG----- 829
Macaca_mulatta    TTVYIGSHSHRMKAVDFYSGVKVWEQILGDRIESSACVSKCGNFIVAG----- 830
Bos_taurus        ATVYIGSHSHRMIAVDLYSGVKVWEQILGDRIESSACVSKCGNFIVAG----- 856
Bos_mutus         ATVYIGSHSHRMIAVDLYSGVKVWEQILGDRIESSACVSKCGNFIVAG----- 856
Equus_caballus    ATVYIGSHSHRMMAVDLYSGVKVWEQILGDRIESSACVSKCGNFIVAG----- 831
Canis_lupus_familiaris ATVYIGSHSHRMMAVDLYSGVKVWEQILEDRIESSACISKCGNFIVAG----- 826
Rhinatrema_bivittatum AAIYIGSHSHRMQALDLHSGSVIWERILGGRIESSACVSRCGNFIVAG----- 848
Xenopus_tropicalis LVIYIGSHSHRMQALDLPTGQVIWERVLDRIESSAGVSKCGRFILVG----- 853
.....850.....860.....870.....880.....890.....900

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**:* :*.*. ** :* *.* :*:***. *
Pavo_muticus      -----CYDGLVYVLQSSDGETYWTFATEDIVKSSAVVD      886
Pavo_cristatus    -----CYDGLVYVLQSSDGETYWTFATEDIVKSSAVVD      886
Gallus_gallus     -----CYDGLVYVLQSSDGEAYWTFATEDIVKSSAVVD      886
Mus_musculus      -----CYNGLVYVLKSNSEGEKYWTFATEDAVKSSPAVD      862
Rattus_norvegicus -----CYDGLVYVLKSNSEGEKHWTFPTEDAVKSSPAVD      861
Homo_sapiens      -----CYNGLVYVLKSNSEGEKYWMFTTEDAVKSSATMD      863
Pan_troglodytes   LLGSSDLPTSASQSAEITGVSHHVWPGCYNGLVYVLKSNSEGEKYWMFTTEDAVKSSATMD      902
Callithrix_jacchus -----CYNGLVYVLKSNSEGEKYWMFTTEDIKSSPTMD      862
Macaca_mulatta    -----CYNGLVYVLKSNSEGEKYWMFTTGDAVKSSATMD      863
Bos_taurus        -----CYNGLVYVLKSNSEGEKYWMFSTEDAVKSSATMD      889
Bos_mutus         -----CYNGLVYVLKSNSEGEKYWMFSTEDAVKSSATMD      889
Equus_caballus    -----CYNGLVYVLKSSSEGEKYWTFATEDAVKSSATMD      864
Canis_lupus_familiaris -----CYNGLVYVLKSNSEGEKYWMFSTEDAVKSSATMD      859
Rhinatrema_bivittatum -----CYDGLVYVLKSNTEGETYWTFATEDAVKSSATLD      881
Xenopus_tropicalis -----CYDGLYALSNHNGETHWIFTTGNAVKSSPATD      886
.....910.....920.....930.....940.....950.....960

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:***::**** * ***:* * *:* * :* . :*:***. : * :* *** **::*
Pavo_muticus      PSSGLVYIGSHDQHIIYALDIYEKMCVWKLHCEGGAVFSSPCLSSFPHHVYVATLGGLLLA      946
Pavo_cristatus    PSSGLVYIGSHDQHIIYALDIYEKMCVWKLHCEGGAVFSSPCLSSFPHHVYVATLGGLLLA      946
Gallus_gallus     PSSGLVYIGSHDQHMYALDIYEKMCVWKLHCEGGAVFSSPCISSFPHHVYVATLGGLLLA      946
Mus_musculus      PTTGLIYVGSHDQHAYALDIYEKKCVWKLKCEG-ALFSSPCVSLSPHHLYCATLGGLLLA      921
Rattus_norvegicus PTTGLIYVGSHDQHAYALDIYEKKCVWKLKCEG-ALFSSPCLSLGPHHLYCATLGGLLLA      920
Homo_sapiens      PTTGLIYIGSHDQHAYALDIYRKKCVWKSCKGG-TVFSSPCLNLIPIHHLYFATLGGLLLA      922
Pan_troglodytes   PTTGLIYIGSHDQHAYALDIYRKKCVWKSCKGG-TVFSSPCLNLIPIHHLYFATLGGLLLA      961
Callithrix_jacchus PTTGLIYIGSHDQHAYALDIYRKNVCWKSCKGG-TVFSSPCLNLIPIHHLYCATLGGLLLA      921
Macaca_mulatta    PTTGLIYIGSHDQHAYALDIYRKKCVWKSCKGG-TVFSSPCLNLIPIHHLYFATLGGLLLA      922
Bos_taurus        PTTGLLYIGSHDQHAYALDIYKKKCVWKLKCGG-TVFSSPCLSLIPSHLYFATLGGLLLA      948
Bos_mutus         PTTGLLYIGSHDQHAYALDIYKKKCVWKLKCGG-TVFSSPCLSLIPSHLYFATLGGLLLA      948
Equus_caballus    PTTGLLYIGSHDQHAYALDIYKKKCVWKLKCGA-TVFSSPCLSLIPHHLYFATLGGLLLA      923
Canis_lupus_familiaris PTTGLLYIGSHDQHSYALDIYKKKCVWKSQCGG-TVFSSPCLSLIPHHLYVATLGGLLLA      918
Rhinatrema_bivittatum PSTGLVFVGSHDQHTYALNINVKACVWVHCGGGVSFSSPCVSLPHLLYIATLGGLLLA      941
Xenopus_tropicalis FLSGLVYIGSHDGHIIYALDIEAKQCIWKSCHCGGAVFSSPCVSTEPYHLYVATLEGLIMA      946
.....970.....980.....990.....1000.....1010.....1020

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.:* :* :*: ***:*:*:* . : :**** .: * . * *::*:..* :***
Pavo_muticus      VNPVTGNKIWKSFGLGKPLFSSPHCNEKCVCIGCDGNLYCYTHSSEKQVWFSTNGPVFSS      1006
Pavo_cristatus    VNPVTGNKIWKSFGLGKPLFSSPHCNEKCVCIGCDGNLYCYTHSSEKQVWFSTNGPVFSS      1006
Gallus_gallus     VNPVTGNKIWKSFGLGKPLFSSPHCNEKCVCIGCDGNLYCYTHSSEKQVWFSTNGPVFSS      1006
Mus_musculus      LNPASGSTVWKRSCGKPLFSSPRCYQYICIGCDGSLLCFTHSSEQVWRFAAGGPIFSS      981
Rattus_norvegicus VNPATGSLIWKRPCGKPLFSSPRCYQHYVCIGCDGSLLCFTHSSEQVWRFAAGGPIFSS      980
Homo_sapiens      VNPATGNVIWKHSCGKPLFSSPOCCSYICIGCDGNLLCFTHFGEQVWQFSTSGPIFSS      982
Pan_troglodytes   VNPATGNVIWKHSCGKPLFSSPRCCSYICIGCDGNLLCFTHFGEQVWQFSTSGPIFSS      1021
Callithrix_jacchus VNPATGNVIWKHSCGKPLFSSPRCCSYICIGCDGNLLCFTHFGEQVWQFSTSGPIFSS      981
Macaca_mulatta    VNPATGNIIWKHSCGKPLFSSPRCCSYVCIGCDGNLLCFTHFGEQVWQFCTSGPIFSS      982
Bos_taurus        INPATGDRWLKHS CGKPLFSSPRCCLOYVFIGCDGNLLCFTHFGEQVWQFSTNEPIFSS      1008
Bos_mutus         INPATGDRWLKHS CGKPLFSSPRCCLOYVFIGCDGNLLCFTHFGEQVWQFSTNEPIFSS      1008
Equus_caballus    VNPATGNRIWKHSCGKPLFSSPRCCLOYICIGCDGNLLCFTHFGEQVWQFCTSEPIFSS      983
Canis_lupus_familiaris INPATGNRVWKHSCGKPLFSSPRCCLOYVCIGCDGNLLCFTHSSEQVWQFSTSEPIFSS      978
Rhinatrema_bivittatum VNPNTGCSIWKYSCGKPLFSSPOCNQKYVCVCGCDKNLYCFNHSQKIWHFSTSGPVFSS      1001
Xenopus_tropicalis FHPPTGRTIWRYACGKPVFASPOCSDHVFVCGVDENFYCLSHAGEKIWHLSTSGPIFSS      1006
.....1030.....1040.....1050.....1060.....1070.....1080

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** : . ***** :*** . * * * * . : : : * * . * : ***
Pavo_muticus      PCISSLTKQEVFFGSHDHFIYCCNTEGNLLWKFEATSSVYGTPTFVFQSDDSKNKVLLAAV 1066
Pavo_cristatus    PCISSLTKQEVFFGSHDHFIYCCNTEGNLLWKFEATSSVYGTPTFVFQSDDSKNKVLLAAV 1066
Gallus_gallus     PCISSLTKQEVFFGSHDHFIYCCNTEGNLLWKFEATSSVYGTPTFVFQSDDSKNKVLLAAV 1066
Mus_musculus      PCVS-AAEQEIFFGSHDCFIYCCSKEGHLRWKFETTARVYATPFAFNSHPRSDALLAAA 1040
Rattus_norvegicus PCIS-ASEQDIYFGSHDCFLYCCSTEGGLRWKFETTARVYSTPFAFNPNLHLCGSGTLLAAA 1039
Homo_sapiens      PCTS-PSEQKIFFGSHDCFIYCCNMKGHLQWKFETTSRVYATPFAFHNYSNEMLLAAA 1041
Pan_troglodytes   PCTS-PSEQKIFFGSHDCFIYCCNMKGHLQWKFETTSRVYATPFAFHNYSNEMLLAAA 1080
Callithrix_jacchus PCTS-PSEQKIFFGSHDCFIYCCNMKGHLQWKFETTSRVYATPFAFHNYSNEMLLAAA 1040
Macaca_mulatta    PCTS-SSEQKIFFGSHDCFVYCCNMKGHLQWKFETTSRVYATPFAFHNCSSEMLLAAA 1041
Bos_taurus        PCTS-ASEQEIFFGSHDCFIYCCSMKGHLQWKFETTSRVYSTPFFVRNHNHNSSEMLLAAA 1067
Bos_mutus         PCTS-ASEQEIFFGSHDCFIYCCSMKGHLQWKFETTSRVYSTPFFVRNHNHNSSEMLLAAA 1067
Equus_caballus    PCTS-ASEQEIFFGSHDCFIYCCNKGHLQWKFETTSRVYSTPFFNHNHNSDEMLLAAA 1042
Canis_lupus_familiaris PCTS-ASEQEIFFGSHDCFIYCCNMKGHLQWKFETTSQVYATPFAFHYQEGGDEMLLAAA 1037
Rhinatrema_bivittatum PCLT---EWAVWFGSHDSTIYCCAMDGNLLWKFETSQVYATPFFVCLHDTSESSVCVAAA 1058
Xenopus_tropicalis PCLS-NLSGCSIFGSHDGYIYCCSSEGLLLWKHKTSKVYATPFFVFPNFCIEGRELVA 1065
.....1090.....1100.....1110.....1120.....1130.....1140

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****. : : * ****:****:* . *:****:****: :
Pavo_muticus      STDGKVWILNARSGTAEGIDTLPGEVFSSPVVWGTKLVVGCGRNDYVYCLDLYITGKKEQE 1126
Pavo_cristatus    STDGKVWILNARSGTAEGIDTLPGEVFSSPVVWGTKLVVGCGRNDYVYCLDLYITGKKEQE 1126
Gallus_gallus     STDGKVWILNARSGTAEGIDTLPGEVFSSPIVWGTKLVVGCGRNDYVYCLDLYITGKKEQE 1126
Mus_musculus      STDGKLWVLESRSQGLRSVYELPGEVFSSPVVWESMLVIGCRNNYIYCLDLLCGDKNNQV 1100
Rattus_norvegicus STDGKLWVLESRSQGLRSVYELPGEVFSSPVVWESMLVIGCRNNYIYCLDLLCGDKNNQV 1099
Homo_sapiens      STDGKVWILESQSGQLQSVYELPGEVFSSPVVLESMLIIGCRDNYVYCLDLLG--GNQK- 1098
Pan_troglodytes   STDGKVWILESQSGQLQSVYELPGEVFSSPVVLESMLIIGCRDNYVYCLDLLG--GNQK- 1137
Callithrix_jacchus STDGKLWILESQSGQLQSVYELPGEVFSSPVVLESMLIIGCRNNYIYCLDLLG--GNQK- 1097
Macaca_mulatta    STDGKLWILESQSGQLQSVYELPGEVFSSPVVLESMLIIGCRDNYVYCLDLLG--GNKK- 1098
Bos_taurus        STDGKLWILESQSGQLQSVYELPGEVFSSPVVWESMLIIGCRNNYIYCLDVLGDKGNEVQ 1127
Bos_mutus         STDGKLWILESQSGQLQSVYELPGEVFSSPVVWESMLIIGCRNNYIYCLDVLGDKGNEVQ 1127
Equus_caballus    STDGKLWILESQSGQLQSVYELPGEVFSSPVVWESMLIIGCRNNYIYCLDLLG--GNQK- 1099
Canis_lupus_familiaris STDGKLWILESQSGRLQSVYELPGEVFSSPVVWESMLIIGCRNNYIYCLDLLG--GYQI- 1094
Rhinatrema_bivittatum STDGKLWILDQAQHGLLKCVSELPGEVFSSPVVWGKRLVVGCRNDYIYCLDLSEAETQIT 1118
Xenopus_tropicalis STDGDLVILDVQSGSVITERKLPGQIFSSPLVWESSLIVGCRNDFVYCLELFCCKNAIK-- 1123
.....1150.....1160.....1170.....1180.....1190.....1200

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Pavo_muticus      GC--- 1128
Pavo_cristatus    GC--- 1128
Gallus_gallus     GC--- 1128
Mus_musculus      ----- 1100
Rattus_norvegicus ----- 1099
Homo_sapiens      ----- 1098
Pan_troglodytes   ----- 1137
Callithrix_jacchus ----- 1097
Macaca_mulatta    ----- 1098
Bos_taurus        SLEYT 1132
Bos_mutus         SLQYT 1132
Equus_caballus    ----- 1099
Canis_lupus_familiaris ----- 1094
Rhinatrema_bivittatum KDM-- 1121
Xenopus_tropicalis ----- 1123
.....

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