

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/RMData Date: Tue Feb 14:23:51 2022

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*      .      :...:** :*:*** **.*::*: :**      * *:::..*: *****
Pavo_muticus      MPTPNVTARVETWLSSTWHIKVPPLTWLEACINWIOEENG GGNLSQAQINRQVFEQWLLTD      60
Pavo_cristatus    MPTPNVTARVETWLSSTWHIKVPPLTWLEACINWIOEENG GGNLSQAQINRQVFEQWLLTD      60
Gallus_gallus     MSTPNVTARVETWLSSTWTHVKVPLTWLEACINWIOEENG GGNLSQAQISRQVFEQWLLTD      60
Anas_platyrhynchos MSTLNIAARVETWLSAAWHVKVPLTWLEACINWIOEENG SGNLSQAQINKQVFEQWLLTD      60
Chelonia_mydas    MSGSSVAGKVETWLSSTWTHVKVPLTWLEACINWIOEEN -GCNLTQAQINKQVFEQWLLTD      59
Rhinatrema_bivittatum MNTSSVAVRAHTWLSSTWHIKVPDQWLRACIDWIKQENNAGNLSQAQAEINKQIYEQWLLTD      60
Mus_musculus      MSVASAVLRVETWLLATWHVKVPPMWLEACVNWIOEENN NATLSQAQINKQVLEQWLLTD      60
Rattus_norvegicus MSVASAVLRVETWLLATWNHVKVPLMWLEACVNWIOEENN SANLSQAQINKQVLEQWLLTD      60
Bos_taurus        MSVTSIALRVETWLSATWTHVKVPVTWLEACINWIOEEND HVNLSQAQMNKQVFEQWLLTD      60
Canis_lupus_familiaris MNVTNIALRVETWLLATWHVKVPLTWLEACVNWVQ EENDNVNLSQAQMNKQVFEQWLLTD      60
Homo_sapiens      MNVTSIALRAETWLLAAWHVKVPPMWLEACINWIOEENN NVNLSQAQMNKQVFEQWLLTD      60
Pan_troglodytes   MNVTSIALRAETWLLATWHVKVPPMWLEACINWIOEENN NVNLSQAQMNKQVFEQWLLTD      60
Macaca_mulatta    MNVTSIALRAETWLLATWHVKVPPMWLEACINWIOEENN NVNLSQAQMNKQVFEQWLLTD      60
Callithrix_jacchus MSVTSIVLRAETWLLATWHIKVPMPWLEACINWIOEENN NVNLSQAQMNKQVFEQWLLTD      60
Heterocephalus_glaber MSVASIALRVETWLLATWHVKVPPMWLEACINWIOEENN NVNLSQAQMNKQVFEQWLLTD      60
Xenopus_tropicalis MATSGIANRVKLTWLASTWTHVKVPNPWLEACINWIOEENN GSSILLQAQAEINKQVFEQWLLTD      60
Latimeria_chalumnae MSSAGIGQKVEAWLQSTWTHVKVPVQWLEACIDWIOEENQ GVTLNLSQAQINKQVFEQWLLTD      60
1.....10.....20.....30.....40.....50.....60

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Pavo_muticus      LRDLEYFVLPDGLDAPKGELSGFYSLQIDSLLDVSPAYSQLOKIRGKSTVNEEVTANT      120
Pavo_cristatus    LRDLEYFVLPDGLDAPKGELSGFYSLQIDSLLDVSPAYSQLOKIRGKSTVNEEVTANT      120
Gallus_gallus     LRDLEYFVLPDGLDAPKGELSGFYSLQIDSLLDVSPAYSQLOKIRGKSTVNEEVTANT      120
Anas_platyrhynchos LRDLEYFVLPDCISDAPKGELSGFYSLQIDSLLDVSPAYSQLOKIRGKSTVNEEVTAST      120
Chelonia_mydas    LRDLDYFVLPDGLDAPKGELNGFYSLQIDSLLDVSPAYSQLOKIRGKSTVNEEVTANT      119
Rhinatrema_bivittatum LRDLEFVLPDGLDAPKGELNGFYSLQIDSLLDVSPAYSQLOKIRGKSTVNEEVTANT      120
Mus_musculus      LRDLEHPLLPDDILEIPKGELNGFYALQINSLVDVSPAYSQIQKLRGKNTTNDLVSAET      120
Rattus_norvegicus LRDLEHPLLPDDILEIPKGELNGFYALQINSLVDVSPAYSQIQKLRGKSTTNDLVSAET      120
Bos_taurus        LRDLEHRLLPDGLDAPKGELNGFYALQINSLVDVSPAYAQIQKLRGKNTTNDLITAET      120
Canis_lupus_familiaris LRDLEHPLLPDGLDAPKGELNGFYALQINSLVDVSPAYSQIQKLRGKNTTNDLITAET      120
Homo_sapiens      LRDLEHPLLPDGLDAPKGELNGFYALQINSLVDVSPAYSQIQKLRGKNTTNDLVTAEA      120
Pan_troglodytes   LRDLEHPLLPDGLDAPKGELNGFYALQINSLVDVSPAYSQIQKLRGKNTTNDLVTAEA      120
Macaca_mulatta    LRDLEHPLLPDGLDAPKGELNGFYALQINSLVDVSPAYCQIQKLRGKNTTNDLVTAET      120
Callithrix_jacchus LRDLEHPLLPDGLDAPKGELNGFYALQINSLVDVSPAYSQIQKLRGKNTTNDLVTAET      120
Heterocephalus_glaber LRDLEHRLLPDDILEIPKGELNGFYALQINSLVDVSPAYSQIQKLRGKNTTNDLVTAET      120
Xenopus_tropicalis LRDLEFVLPANLSDSLKFEINNGFYALQIDSLVDVSPAYSQHOKLKGKDTNEQVICTT      120
Latimeria_chalumnae LRDLECFVLPNDISGSLKIELKGFYCVQIDFLVDVSLPAYSQLQKLRGRENPNQITATM      120
.....70.....80.....90.....100.....110.....120

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*      :*:::..*: :*** **.* :*: :*:::..* : :      * : :      ****
Pavo_muticus      QSFQKPWEAKPTRMLMLQLTDGIHQIQGMEYQPVPLHSNLP PGTKITVHGNVAYRLGVL      180
Pavo_cristatus    QSFQKPWEAKPTRMLMLQLTDGIHQIQGMEYQPVPLHSNLP PGTKITVHGNVAYRLGVL      180
Gallus_gallus     QAFQKPWEAKPTRMLMLQLTDGIHQIQGMEYQPVPLHSNLP PGTKITVHGNVAYRLGVL      180
Anas_platyrhynchos QAFQKPWEAKPTRMLMLQLTDGIHQIQGMEYQPVPLHSNLP PGTKITVHGNVAYRLGVL      180
Chelonia_mydas    QAPQKSWEAKPTRMLMLQLTDGIHQIQGMEYQPIPLHSNLP PGTKITVHGNVAYRLGVL      179
Rhinatrema_bivittatum QKSQKPWEAKPTRMLMLQLTDGMQRIQGMEYQPIPLHSNLP SPGKIMLQKGIACRLGVL      180
Mus_musculus      QSTPKPWEPVPSRMLMLQLTDGVTHIQGMEYQSIPLHSGLPPGKTIILVRGCILFRLGVL      180
Rattus_norvegicus QTAPEPWQVRPSRMLMLQLTDGVTVQIQGMEYQSIPLHSGLPPGKTIILVHGHILFRLGVL      180
Bos_taurus        QVTPKPWEAKPSRMLMLQLTDGIVQIQGMEYQSIPLHSGLPPGKTIILYGNISFRLGVL      180
Canis_lupus_familiaris QVTPKPWEAKPSRMLMLQLTDGIVQIQGMEYQSIPLHSGLPPGKTIILYGNISFRLGVL      180
Homo_sapiens      QVTPKPWEAKPSRMLMLQLTDGIVQIQGMEYQSIPLHSGLPPGKTIILYGNISFRLGVL      180
Pan_troglodytes   QVTPKPWEAKPSRMLMLQLTDGIVQIQGMEYQSIPLHSGLPPGKTIILYGNISFRLGVL      180
Macaca_mulatta    QVTPKPWEAKPSRMLMLQLTDGIVQIQGMEYQSIPLHSGLPPGKTIILYGNISFRLGVL      180
Callithrix_jacchus QVTLKSWEAKPSRMLMLQLTDGIVQIQGMEYQSIPLHSGLPPGKTIILYGNISFRLGVL      180
Heterocephalus_glaber QVTPKPWEAKPSRMLMLQLTDGVVQIQGMEYQSIPLHSGLPPGKTIILYGNISFRLGVL      180
Xenopus_tropicalis QISQKPWEAKPTRMLMLQLTDGTQHIQGMEYRPIQVNLNANLSPGKTMLLQGSIVCRLGVL      180
Latimeria_chalumnae QVAQKPWEAKPTRMLMLQLTDGIQIQGMEYQPVPLHSNLP PGTKITVHGNVAYRLGVL      180
.....130.....140.....150.....160.....170.....180

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***.*****:*****: * : :* ::*: * : : *
Pavo_muticus      LLKPENVKLLGGEVDALLEEYSQERVLARLLGEAENPDSVGQPGHEQIVPGPVDELGQAL 240
Pavo_cristatus    LLKPENVKLLGGEVDALLEEYSQERVLARLLGEAENPDSVGQPGHEQIVPGPVDELGQAL 240
Gallus_gallus     LLKPENVKLLGGEVDALLEEYSQERVLARLLGEAENPDSVRQPGHEQIVPGPVDELGQTL 240
Anas_platyrhynchos LLKPENVKLLGGEVDALLEEYSQERVLARLLGEAENPNSVGQPGHEQIVLSPMDEVEQTL 240
Chelonia_mydas    LLKSENVKLLGGEVDALLEEYQERVLARLLGEAENPNPVKQHDHEQIGILGAVDELGQTL 239
Rhinatrema_bivittatum LLKPENVKVLGGEVETLVDEYSQKVLARLLIGEEEKTPPIQPINPVQSALEPVDEIGQSL 240
Mus_musculus      LLKPENVKVLGGEVDGLSEENAQEKVLARLLIGELDPTVPVIPNNSIHNVPKVSGLDAVL 240
Rattus_norvegicus LLKAENVKVLGGEVDGLAEYYAQEKILARLLIGEPDPTVSVIPNNSNPSPRVSGLDAAL 240
Bos_taurus        LLKPENVKMLGGEVDALLEEYQEKVLARLLIGEPDPIVSVIPNNSNQCIPRITDVLDPAL 240
Canis_lupus_familiaris LLKPENVKLLGGEVDALLEEYQEKVLARLLIGEPDPIVSVIPNNSNPQSIPIGITDVLDPAL 240
Homo_sapiens      LLKPENVKVLGGEVDALLEEYQEKVLARLLIGEPDLVSVIPNNSNENIPRVTDVLDPAL 240
Pan_troglodytes   LLKPENVKVLGGEVDALLEEYQEKVLARLLIGEPDLVSVIPNNSNENIPRVTDVLDPAL 240
Macaca_mulatta    LLKPENVKVLGGEVDALLEEYQEKVLARLLIGEPDVLVSVIPNNSNENIPRVTDVLDPAL 240
Callithrix_jacchus LLKPENVKVLGGEVDALLGEYQEKVLARLLIGEPDPIVSVIPNNSNQNISRVTDVLDPAL 240
Heterocephalus_glaber LLKPENVKVLGGEVDALLEEYQEKVLARLLIGESDPIASVIPNNSNQNISKVIDVLDPVL 240
Xenopus_tropicalis LLKPENVKVLGGEVEALVEEYEQAKVLSRLIGVEDNTSVQHSNVQEQTAGVAVGELGQAL 240
Latimeria_chalumnae LLKPENVKVLGGEVEALVEENAQERILARHIGEPDGASALQDNCNQCTPHNAEEELGQAL 240
.....190.....200.....210.....220.....230.....240

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***::*:*:*.:.
Pavo_muticus      GPSDEELLASLDENNDFILNNETSLESGYCSRSNNFSTASGSLTTYNT-----LQCESA 296
Pavo_cristatus    GPSDEELLASLDENNDFILNNETSLESGYCSRSNNFSTASGSLTTYNT-----LQCESA 296
Gallus_gallus     GPSDEELLASLDENNDFILNNETSLESGYCSRSNNFSAATSCSLTTYNTTGFPLQCESV 300
Anas_platyrhynchos GPSDEELLASLDENNGVILNNESSLESGYWSRSNNFNTVSGSLPTRNT-----LQQVSV 296
Chelonia_mydas    GPSDEELLASLDENDEFTINHEVPLESGYCSRSNNNTATHLLSSNENYS---QQEFGI 296
Rhinatrema_bivittatum GPSDEELLASLDENVEFTIMNNEISSESGYCSRSNDHSAATPSAALPSNGIDVQ---QSSGV 296
Mus_musculus      GPSDEELLASLDSEESAANNNDVAMERSCFSTGTSSNTTPTNPSG-----FEPGC 290
Rattus_norvegicus GPSDEELLASLDSEEPAAASDDVTVGRLSFTGTGPSSDTAPTITGT-----FEPGC 290
Bos_taurus        GPSDEELLASLDENDELAANNNTSLERSCFIGNSS-NTVPIRQSD-----FETEL 289
Canis_lupus_familiaris GPSDEELLASLDEN-EFAAINDTSLDRRFFSTDSSNTITTRQSS-----FEEQR 289
Homo_sapiens      GPSDEELLASLDENDELTAANDTSSER-CFTTGSSSNTIPTROSS-----FEPEF 289
Pan_troglodytes   GPSDEELLASLDENDELTAANDTSSER-CFTTGSSSNTIPTROSS-----FEPEF 289
Macaca_mulatta    GPSDEELLASLDENDELTAANDTSSER-CFTMGSSSNTIPTROSS-----FEPEF 289
Callithrix_jacchus GPSDEELLASLEENDELAANNGTSSER-CFTTGSSSNAIPRQSS-----FEPES 289
Heterocephalus_glaber GPSDEELLASLDENDELAANNNT-LER-CINTGSSLNTVSVRQSD-----FEPG- 287
Xenopus_tropicalis GPSDEDLLASLEENEFFSVNNGVPSSESGYYSRSNENSISSFTQLQTQ-----NSRVR 292
Latimeria_chalumnae GPSNEELIAALEEDDQFIINDETDLSEGYGSRNSSSNALSYLLPESTLPRNRSQS FENL 300
.....250.....260.....270.....280.....290.....300

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Pavo_muticus      NLLPHSDEQTPP--PMEYDDAFLSDFP-----LEDDILLEEEIQRELEEVPSVARNGNVN 349
Pavo_cristatus    NLLPHSDEQTPP--PMEYDDAFLSDFP-----LEDDILLEEEIQRELEEVPSVARNGNVN 349
Gallus_gallus     NLLPRSDEQTPP--SVEYNDAFLNDFP-----LEDDILLEEEIQRELEEVPSVARNGNVN 353
Anas_platyrhynchos S--SHSREQTP-----VELNDFP-----LEDDILLEEEIQRELEEVPPVVTNRSID 340
Chelonia_mydas    LLPGANEEQSVF--AVEDVDGLDDDFS-----LEDDLFLLEEIQEEIQTMQSPVINKIID 349
Rhinatrema_bivittatum IFQGGMRTIHTDDGPLEDSVIDLDDFLGDECDLLDDLFLLEEIQKELEEF-----G 347
Mus_musculus      NISSRPKEKPPNQ-PHTFTDGEFDDFS-----LEEALLLEETVQKEQMETKASOPLTLKE 344
Rattus_norvegicus NISSRPKEKLPNQ-PVHFTDGEFDDFS-----LEEALLLEETVQKEKMEAKASOPLSLKE 344
Bos_taurus        VISPRPKERPNQ-SMLFTDEELDDFS-----LEEALLLEAVQKEQMETKELOPLTLNR 343
Canis_lupus_familiaris IISPKPKKEKPPDP-SMCFTDGEELDDFS-----LEEALLLEETVQKEQMETEELOPLTLNR 343
Homo_sapiens      VISPRPKKEPSNL-SIHVMDGELDDFS-----LEEALLLEETVQKEQMETKELOPLTFNR 343
Pan_troglodytes   VISPRPKKEPSNL-SMHVMDGELDDFS-----LEEALLLEETVQKEQMETKELOPLTFNR 343
Macaca_mulatta    VISPRPKKEPSNL-SMHVMDGELDDFS-----LEEALLLEETVQKEQMETKELOPLTFNR 343
Callithrix_jacchus VISPRPKEDPLNL-SMPFEDGELDDFS-----LEEALLLEETVQKEQVETKELOPLTFNR 343
Heterocephalus_glaber FSSRPKEKPPNQ-FLYFTDGEELDDFS-----LEEALLLEETVQKEQMKTKESOPLTLNK 341
Xenopus_tropicalis QASFPTSDQTVVSVDVENNHTIEDQYD-----IDDDLFLLEEIQRELEEMSMQAVMPRG 347
Latimeria_chalumnae VPHIDISSKRTRGPSVQFSDTNFDDFP---IDDLDEMILLEQDLEEVVVEAVANNINHEA 357
.....310.....320.....330.....340.....350.....360

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Pavo_muticus          LTAER-----IPHTDRSSCGSSSLNETSEKDDGYEREK 381
Pavo_cristatus       LTAER-----IPHTDRSSCGSSSLNETSEKDDGYEREK 381
Gallus_gallus        LSTER-----IPHTYRSSCGSSSLNETSEKDDGCGSEK 385
Anas_platyrhynchos   LTTER-----IPQTYRNSCNSSSLNGTSGRDERPERDK 372
Chelonia_mydas       VITQR-----FSHMPR-----SSLSYVTSSEKDDRGQ--- 374
Rhinatrema_bivittatum MCQPQ-----IMNGNR----- 358
Mus_musculus         NTGK-----CMEIFSHKPSLNLHTALIHKQNSNFDEK-T 378
Rattus_norvegicus    SVGKR-----VEEAFSPRPGLNHTASTHKQNSHFSEK-T 379
Bos_taurus           TTDES-----IEKFSHRSNTLNNFSFICKNGNWNWSEKNL 378
Canis_lupus_familiaris TPDESIEIVSQMETEELQPLTLNRTPEDESTIERVSHKPNLTGNFSLTCKSRNNWNWKKNL 403
Homo_sapiens         NADRS-----IERFSHNPNTTNNFSLTCKNGNWNWSEKNV 378
Pan_troglodytes      NADRS-----IERFSHNPNTTNNFSLTCKNGNWNWSEKNV 378
Macaca_mulatta       NADRS-----IERFSHNPNTTNNFSLTCKNGNWNWSEKNV 378
Callithrix_jacchus   NTSRS-----LETFSHNPNTTNNFSLTCKNGNWNWGEKKV 378
Heterocephalus_glaber NTDKS-----MERFSHKTTTLNDFSLICKQGISNSNENIL 376
Xenopus_tropicalis   STALP----- 352
Latimeria_chalumnae  HLNRETES-----ATCKAELCASSAWPLNSSSNHVPKESINIKNTL 398
.....370.....380.....390.....400.....410.....420

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Pavo_muticus          SVEVISKQKNLGRARSTGGGTGASGF-LQCNSVSQACSSAVALLN-----PHEERLDDV 435
Pavo_cristatus       SVEVISKQKNLGRAQSTGGGTGASGF-LQCNSVSQACSSAVALLN-----PHEERLDDV 435
Gallus_gallus        PVEVTSKQKNLARTVSTGDGTSTGGG-LQCNSVSQACSSAIVLLKN-----PHEERRNDL 439
Anas_platyrhynchos   PIEATSKQKTFTGRITVSAGDGNSTKGF-POHNTAHQACSSAFFSLEN-----PREERQNNK 426
Chelonia_mydas       -LDSVSKEKSCGREL SVGDESSTSNFSLHNNIQHSKSFNTNDFSLEN-----VLEQKCNKI 428
Rhinatrema_bivittatum -----DM 360
Mus_musculus         SEQMIHEDKFFDCASTRN-----HHKRFSAHDFTNDSKISEVD-----DAAQOTLSS 425
Rattus_norvegicus    SEQMIHEDTLFDCSSSTRH-----HRKRLLAHDFTKDSKISEVD-----DVAQOTTNS 426
Bos_taurus           SEQMTSEDKSLSCPSTRDQNSSLSVHNNVPLPHDFTNKGKSET-----YKIKQIS-S 431
Canis_lupus_familiaris SEQMINEGKSFCSPSAGDQNSSVFSVHNNVPLPHDFTNKDSEIDN-----KIKQTFSS-S 456
Homo_sapiens         SEQMTNEDKSFQCPSSVRDQNSIFSVHCVNPLAHDFTNKEKNLETD-----NKIKQTS-S 432
Pan_troglodytes      SEQMTNEDKSFQCPSSVRDQNSIFSVHCVNPLAHDFTNKEKNLETD-----NKIKQTS-S 432
Macaca_mulatta       SEQMTNEDKSFQCPSSVRDQNSIFSVHCVNPLAHDFTNKDKNLETD-----NKIKQTS-S 432
Callithrix_jacchus   SEQLTINEDKSFQCPSSARDNRNSIFSVHNNVPLAHDFTNEDTNLETD-----NKIKQTS-S 432
Heterocephalus_glaber PEQMTHEDRSL---SATDQNSSVFSGHRNVPLAHNFTNKDKNSEAD-----NKVKQTS-S 427
Xenopus_tropicalis   ----- 352
Latimeria_chalumnae  SVAYQSKENEPMGKGMVLVRNKNVTICDPQTEPQPQNTLRNSESNNVVFQCGQKIDTNAV 458
.....430.....440.....450.....460.....470.....480

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Pavo_muticus          RLDESSICQSRHAPGSRQLNRDPVSFSK-----TGPEGGQ-----QAILCRPENAC 480
Pavo_cristatus       RLDESSCQSRHAPGSRQLNRDPVSFSK-----TGPEGGQ-----QAILCRPENAC 480
Gallus_gallus        GPDESSCQSRHAPDSRQLNKDPVSSSK-----TDPEADQ-----QAILCRPGNAC 484
Anas_platyrhynchos   DTDESRCCKSHHASDSRQLHSDPVSFSK-----TDPEADQPKRDMQTI PCRAVEAR 476
Chelonia_mydas       DVVKSSQKNCFSFGSRLLNKRPVNFSSK-----TDSEINKQNYCVQTFYRTTEKC 478
Rhinatrema_bivittatum PTAEFITDLSLVSHDSPLCS--PVLQIR-----GQNDMHK 392
Mus_musculus         SNVHCLRNKI---LNRKLDLSEKSSQ-----ISKENGHPFQACSSRSFENNTYL 471
Rattus_norvegicus    SDVHCLSNKM---LNRKPDLEKSSQ-----HSKGNHHPFQTCSSRSFENNTNL 472
Bos_taurus           SDGHSLNNKM---FNGELVSNVPKRSSD-----VPNENEHHLQTCSLQLSENSTGL 479
Canis_lupus_familiaris IDGHSLNNKISISNGELVNYVPKSSSH-----ISNENDHHLQTCSSRSSEYSTPL 505
Homo_sapiens         SDSHSLNNKI---LNREVVNYVQKRNSQ-----ISNENDCNLQSCSLRSSSENSINL 480
Pan_troglodytes      SDGHSLNNKI---LNREVVNYVQKRNSQ-----ISNENDCNLQSCSLRSSSENSINL 480
Macaca_mulatta       SDGHSLNSKI---LDREVNYVQKRNSQ-----ISNENDHHLQTCSLRLPENSINF 480
Callithrix_jacchus   SGGHFLNNKI---ISREAVNCVPPKSSQ-----ISNTSDHNLQTCSLRSSSENSINL 480
Heterocephalus_glaber LDGHSLNDKI---LNSEPVKSLQ-----VSNERGHHLQVCSLRSSERN-TDL 469
Xenopus_tropicalis   -----TTSQIRSHASA-----TSCTSDQ 370
Latimeria_chalumnae  GCASGKNKVKLIKACEPLNRRPLDIGRTVFKNEIISGASNSSSCIDWMPSSREEDRKRGLS 518
.....490.....500.....510.....520.....530.....540

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Pavo_muticus	N--LDLDS	SPPFTYISLLLAKKPETVIVVKVKCFIVTLTGNLTSSNGSWGIAKAKVSDGSAY	538
Pavo_cristatus	N--LDLDS	SPPFTYISLLLAKKPETVIVVKVKCFIVTLTGNLTSSNGSWGIAKAKVSDGSAY	538
Gallus_gallus	D--LDLDS	SPPFTYISLLLAKKPETITLVKVKCFIVTLTGNLTSSNGSWGIAKAKVSDGSAY	542
Anas_platyrhynchos	D--LDLDS	SPPFTYLSLLLAKKPEAVTVVKVKCFIVTLTGNLSSNGSWGIAKAKISDGSAY	534
Chelonia_mydas	KS--LELDS	SPPFTYISVLLANTAEVTVVKVKAFIVTLTGNLTSSSGFWNIMAKISDGTAY	537
Rhinatrema_bivittatum	----NLD	SPPFTYLSVLLARNINTVKIVQIKSFIVTLNGLNSNSGFWSIKAKISDGTAY	448
Mus_musculus	SIGMDLHS	SPPFYILSVLMARKPKEVTTTVKVKAFIVTLTGNLSSSGFWGVTAKVS DGTAY	531
Rattus_norvegicus	SIGMDLHCP	PFYILSVLMARKPKEVTVKVKAFIVTLTGNLSSSGFWCVTAKVS DGTAY	532
Bos_taurus	PITMDLYS	SPPFYILSVLMASKPKEVTVKVKAFIVTLTGNLSSSGGIWSVRAKISDGTAY	539
Canis_lupus_familiaris	SAMDLYS	SPPFYILSVLMASKPKEVTVKVKAFIVTLTGNLSSSGGIWSITAKISDGTAY	565
Homo_sapiens	SIAMDLYS	SPPFVYLSVLMASKPKEVTVKVKAFIVTLTGNLSSSGGIWSITAKVS DGTAY	540
Pan_troglodytes	SIAMDLYS	SPPFVYLSVLMASKPKEVTVKVKAFIVTLTGNLSSSGGIWSITAKVS DGTAY	540
Macaca_mulatta	SIAMDLYS	SPPFYILSVLLASKPKEVTVKVKAFIVTLTGNLSSSGGIWSITAKVS DGTAY	540
Callithrix_jacchus	SVAMDLYS	SPPFYILSVLMASKPKEVTVKVKAFIVTLTGNLSSSGGIWSITAKVS DGTAY	540
Heterocephalus_glaber	SVGTDLYS	SPPFTYLSVLMASKPKEVTVKVKAFIVTLTGNLSSSGGIWSITAKIS DGTGY	529
Xenopus_tropicalis	-----NIP	PFTYLSITLAKSKDITCIKLKSFIVTLTGNLSSSGGLWNIAKAKIS DGTGY	424
Latimeria_chalumnae	STKIAMYIP	HFYILSVLLAKKSVLLEVIQVKAFIVTLTGNLTSGGFWNIAKAKIS DGTAY	578
550.....560.....570.....580.....590.....600		

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Pavo_muticus	LEVDFADDILTSLIGFSVPEMHILRKDPALQPKLKDGLERCOKQLIDLCCCLMTIEFNPFQ	598			
Pavo_cristatus	LEVDFADDILTSLIGFSVPEMHILRKDPALQPKLKDGLERCOKQLIDLCCCLMTIEFNPFQ	598			
Gallus_gallus	LEVDFADDILTSLIGFSVPEMHTLRKDPALQPKLKDGLERCOKQLIDLCCCLMTIEFNPFQ	602			
Anas_platyrhynchos	LEVNFADDILTSLIGFSVLEMNTLRKHPALHGKIKDGLEKCOKQLIDLCCCLMTIEFNPFQ	594			
Chelonia_mydas	LEVDFIADEILTSLIGFSVPEMKLLRKPILHKKDKDLGLOKCORELIDLCCLMTIEFNPFQ	597			
Rhinatrema_bivittatum	LDVDKFDEVLTKLIGFSVSDMKRLKKDPNQHQOLTAGLOKCORELIDLCCLMTITFNPSPH	508			
Mus_musculus	LDVDFFIDEILTSMIGYSVPEMKQLRKDPLKYKTFLEGLOKCORDLIDLCCLMTISYDPSS	591			
Rattus_norvegicus	LDVDFFIDEILTSMIGYSVPEMKQLKKDPLKYKKFLEGLOKCORDLIDLCCLMTIVSYDPSS	592			
Bos_taurus	LDVDVFDEILTSLIGFSVSEMKRLKKDPCKYQKFLEGLOKCORELIDLCCLMTISFNPSL	599			
Canis_lupus_familiaris	LDVDFADEILTSLIGFSVPEMKQSKKDPLQYQKFLDGLQKCORDLIDLCCLMTISFNPSL	625			
Homo_sapiens	LDVDVFDEILTSLIGFSVPEMKQSKKDPLQYQKFLEGLOKCORDLIDLCCLMTISFNPSL	600			
Pan_troglodytes	LDVDVFDEILTSLIGFSVPEMKQSKKDPLQYQKFLEGLOKCORDLIDLCCLMTISFNPSL	600			
Macaca_mulatta	LDVDVFDEILTSLIGFSVPEMKQLKKDPLQYQKFLEGLOKCORDLIDLCCLMTISFNPSL	600			
Callithrix_jacchus	LDVDVFDEILTSLIGFSVPEMKQLKKDPPQYQKFLEGLOKCORDLIDLCCLMTISFNPSL	600			
Heterocephalus_glaber	LDVDVFDEILTSLIGFSVLEMKQLKKDPPKYQKFLEGLOKCORDLIDLCCLMTISFNPSL	589			
Xenopus_tropicalis	LNVEFSDNVLTKLIGFSVPEMKRLKKDPSQQNTLMEGLRQCMMTLDFCGIMTISYNPAK	484			
Latimeria_chalumnae	LDVELVDEILISFIGFTVAETIAMKKDKSQROKVIAGLHCQKRLIDLCCLMTIEFNPTT	638			
610.....620.....630.....640.....650.....660				

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Pavo_muticus	SKATVLILQD TDARHLEQLKKRLNK-	623
Pavo_cristatus	SKATVLILQD TDARHLEQLKKRLNK-	623
Gallus_gallus	SKATVLILQD TDARHLEQLKKRLNK-	627
Anas_platyrhynchos	SKATVLFLOD VDT RHLEQLKKRLNK-	619
Chelonia_mydas	SKATVLILQD VDAVDLENLKKRLDK-	622
Rhinatrema_bivittatum	SSATVLSLQD VNMFEAEDLKKRLNTY	534
Mus_musculus	CKGVVLELQD VGM EHVENLKKRLNK-	616
Rattus_norvegicus	CKGMVLELQD VGV EHLENLKKRLNK-	617
Bos_taurus	SKAMVLALQD VNTD HLENLKKRLKK-	624
Canis_lupus_familiaris	SKAMVLALQD VKTEHLENLKKRLNK-	650
Homo_sapiens	SKAMVLALQD VNM EHLENLKKRLNK-	625
Pan_troglodytes	SKAMVLALQD VNM EHLENLKKRLNK-	625
Macaca_mulatta	SKAMVLALQD VNTD HLENLKKRLNK-	625
Callithrix_jacchus	SKAMVLALQD VNM EHLENLKKRLNK-	625
Heterocephalus_glaber	YKAVVLALQD VNM EHLENLKKRLNK-	614
Xenopus_tropicalis	EEAVVLSLQD VTTEEIMQSLRLLHS-	509
Latimeria_chalumnae	STGVVLAHDV GIEILWSLEERINK-	663