

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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<i>Xenopus tropicalis</i>	MAHFS ¹ SPWY ² FICMLMS ³ LWR ⁴ YLCVCS ⁵ GS ⁶ MEGS ⁷ SAFHLD ⁸ SE ⁹ GSTS ¹⁰ IPSG ¹¹ QDMVQL ¹² OHV ¹³ ---YIP ¹⁴		57
<i>Rhinatrema bivittatum</i>	MALIP ¹⁵ PAGPS ¹⁶ FLLFLFVLS ¹⁷ GRVSI ¹⁸ GTAS ¹⁹ SEGS ²⁰ AEDES ²¹ ESEQ ²² -----QW ²³ QQT ²⁴ --LLP ²⁵		46
<i>Pavo muticus</i>	MALIS ²⁶ AWPLVF ²⁷ PILFF ²⁸ SRCSF ²⁹ SS ³⁰ TASS ³¹ SAGGV ³² FLFEIEG ³³ SSAVST ³⁴ Q ³⁵ EATVIRG ³⁶ QQ ³⁷ QSVATG ³⁸		40
<i>Pavo cristatus</i>	MALIS ³⁹ AWPLVF ⁴⁰ PILFF ⁴¹ SRCSF ⁴² SS ⁴³ TASS ⁴⁴ SAGGV ⁴⁵ FLFEIEG ⁴⁶ SSAVST ⁴⁷ Q ⁴⁸ EATVIRG ⁴⁹ QQ ⁵⁰ QSVATG ⁵¹		60
<i>Gallus gallus</i>	MALIS ⁵² AWPLVF ⁵³ PILFF ⁵⁴ SRCSF ⁵⁵ SS ⁵⁶ TASS ⁵⁷ SAGGV ⁵⁸ FLFDIEG ⁵⁹ SSAVST ⁶⁰ Q ⁶¹ EATVIRG ⁶² QQ ⁶³ QSVATG ⁶⁴		60
<i>Anas platyrhynchos</i>	MALIS ⁶⁵ AWPLFF ⁶⁶ PILFF ⁶⁷ LRCSF ⁶⁸ SS ⁶⁹ TASS ⁷⁰ SGGAF ⁷¹ QFDIEG ⁷² SSAVSVHEAT ⁷³ VIRG ⁷⁴ QQ ⁷⁵ QAVATG ⁷⁶		60
<i>Chelonia mydas</i>	MALIS ⁷⁷ AWPLVF ⁷⁸ PILFF ⁷⁹ LCFFS ⁸⁰ SS ⁸¹ TASS ⁸² EGSV ⁸³ FHF ⁸⁴ FDIEG ⁸⁵ SSAVSN ⁸⁶ Q ⁸⁷ ESAVIRG ⁸⁸ QQ ⁸⁹ QSVATG ⁹⁰		60
<i>Homo sapiens</i>	MALSS ⁹¹ AWRSVL ⁹² PLWLLWSAACS ⁹³ SRAAS ⁹⁴ GDDNA ⁹⁵ FPFDIEG ⁹⁶ SSAVGR ⁹⁷ QDPPETSEPR ⁹⁸ --VALG ⁹⁹		58
<i>Pan troglodytes</i>	MALSS ¹⁰⁰ AWRSVL ¹⁰¹ PLWLLWSAACS ¹⁰² SRAAS ¹⁰³ GDDNA ¹⁰⁴ FPFDIEG ¹⁰⁵ SSAVGR ¹⁰⁶ QDPPETSEPR ¹⁰⁷ --VALG ¹⁰⁸		58
<i>Macaca mulatta</i>	MALSS ¹⁰⁹ AWRSVL ¹¹⁰ PLWLLWSAACS ¹¹¹ SRAAS ¹¹² GDDNA ¹¹³ FPFDIEG ¹¹⁴ SSAVGR ¹¹⁵ QDPPETSEPR ¹¹⁶ --VALG ¹¹⁷		58
<i>Callithrix jacchus</i>	MALSS ¹¹⁸ AWRSVL ¹¹⁹ PLWLLWGAACS ¹²⁰ SRAAS ¹²¹ GDDHAF ¹²² FPFDIEG ¹²³ SSAVGR ¹²⁴ QDPPETSEPR ¹²⁵ --VALG ¹²⁶		58
<i>Bos taurus</i>	MALSS ¹²⁷ AWCAVL ¹²⁸ PLWLLCGAACS ¹²⁹ SRAAS ¹³⁰ GD ¹³¹ SAFF ¹³² FDIEG ¹³³ SSAFGR ¹³⁴ LDPPETSEPR ¹³⁵ --VAPG ¹³⁶		58
<i>Equus caballus</i>	MALSS ¹³⁷ AWRSVL ¹³⁸ PLWLLWGAACS ¹³⁹ SRAAS ¹⁴⁰ GDDAALAF ¹⁴¹ FDIEG ¹⁴² SSAVGR ¹⁴³ QDPPETSEPR ¹⁴⁴ --VAPG ¹⁴⁵		58
<i>Pteropus alecto</i>	MALSS ¹⁴⁶ AWCSVL ¹⁴⁷ PLWLLWGAACS ¹⁴⁸ SPAAS ¹⁴⁹ GNDNT ¹⁵⁰ FPFDIEG ¹⁵¹ SSAVGR ¹⁵² QDPPETSEPR ¹⁵³ --VAPG ¹⁵⁴		58
<i>Mus musculus</i>	MGWST ¹⁵⁵ AWCSVL ¹⁵⁶ ALWLLWCAVCS ¹⁵⁷ NAAAS ¹⁵⁸ GDDNA ¹⁵⁹ FPFDIEG ¹⁶⁰ SSAVGR ¹⁶¹ QDPPETSEPR ¹⁶² --VAPG ¹⁶³		58
<i>Ornithorhynchus anatinus</i>	MALMS ¹⁶⁴ IW ¹⁶⁵ W ¹⁶⁶ PV ¹⁶⁷ I ¹⁶⁸ PL ¹⁶⁹ LL ¹⁷⁰ LR ¹⁷¹ CF ¹⁷² SS ¹⁷³ SGKPS ¹⁷⁴ MEGS ¹⁷⁵ SAFHFD ¹⁷⁶ VEGNS ¹⁷⁷ SVASN ¹⁷⁸ QDSTGTR ¹⁷⁹ -----G ¹⁸⁰		52
<i>Latimeria chalumnae</i>	MALIS ¹⁸¹ FRPC ¹⁸² LFY ¹⁸³ LTFF ¹⁸⁴ SGFF ¹⁸⁵ CPAIS ¹⁸⁶ RRGRS ¹⁸⁷ GF ¹⁸⁸ PLAIED ¹⁸⁹ GLNNPS ¹⁹⁰ VSSSSAVFGG ¹⁹¹ QYPV ¹⁹² VPA ¹⁹³		60
	1.....10.....20.....30.....40.....50.....60		

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Xenopus_tropicalis	ARLVPPAQRCHMGFFYYSVSGECLPCNCNGNAQKCLDGSGECLDCQRNTTGKQCDCRCPGGY	117
Rhinatrema_bivittatum	V---PKQRCVSGYFYSTSGRCLPCNCNGNSDKCLDGSACVECRHNTMGQHCHERCPCDGY	102
Pavo_muticus	SWVPFA-EGCQEGFYRTSSGKCSPCNCNGNANRLDGSIGICVDCQRNTTGEHCEECPDGF	119
Pavo_cristatus	SWVPFA-EGCQEGFYRTSSGKCSPCNCNGNANRLDGSIGICVDCQRNTTGEHCEECPDGF	119
Gallus_gallus	SWVPFA-EECQEGFYRTSSGKCSPCNCNGNANRLDGSIGICVDCQRNTTGEHCECPDGF	119
Anas_platyrhynchos	SWVPFA-EGCQEGFYRTTFGKCSPCNCNGNANRLDGSIGICVGCQRNTTGEHCDQCPDGF	119
Chelonia_mydas	SWVPFA-EKQCEGFYQTASGDCSRNCNCNGNANRLDGSIGICVDCQRNTTGKHCEKCLDGY	119
Homo_sapiens	RLPPAA-EKCNAGFFHILSGECVPCDCNGNSNECLDGSIGYCVHCQRNTTGEHCEKCLDGY	117
Pan_troglodytes	RLPPAA-EKCNAGFFRILSGECVPCDCNGNSNECLDGSIGYCVHCQRNTTGEHCEKCLEGY	117
Macaca_mulatta	RLPPAA-EKCNAGFFRILSGECVPCDCNGNSNECLDGSIGYCVHCQRNTTGEHCEKCLDGY	117
Callithrix_jacchus	RLPPAA-EKCDAGFFHILSGECVPCDCNGNSNECLDGSIGYCVHCQRNTTGEHCEKCLDGY	117
Bos_taurus	SLPPAP-KKCDAGFFFYAYSEELPCDCNGNSNECLDGSGLCVHCQRNTTGEHCEKCLDGY	117
Equus_caballus	RLPPAAAEKCDAGYFRAQSGECLPCDCNGNANECLDGSGLCVHCQRNTTGEHCEKCLDGY	118
Pteropus_alecto	RLPPTA-EKCGAGFFFLQSGECLPCDCNGNSNECMDGSGFCVHCQRNTTGEHCDKCVDGY	117
Mus_musculus	RLPPAA-ERCDAGFFRILSGECAPDCNGNSHECLDGSIGFCLHCQRNTTGEHCEKCLDGY	117
Ornithorhynchus_anatinus	QQSPLA-SKCEGTGYFYASGECLPCNCNGNSDGCLDGSIGICVGCQRNTTGEHCEKCVDGF	111
Latimeria_chalumnae	AWTPTST-EECSPGFFLSDSGCLLSCNNGHSASCLPRSGVICNCRHNTAGDHCHERCLEGF	119
70.....80.....90.....100.....110.....120	

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Xenopus_tropicalis	LGNVVRGVPKS	CLPCPCPLPFS	NNFAIAC	GVKSGSVRCIC	CKDNYAGP	NCERCAP	GGYYGN			177
Rhinatrema_bivittatum	IGDATRGVPRFC	QPCPCPLPFS	NNFAIAC	CIRKSGAVRCV	CKENYAGTS	NCERCAP	GGYYGN			162
Pavo_muticus	VGDVVGGAFTFC	QPCPCPLPEAAN	-FAVS	CYRKNGNVR	CVCKENYAGP	NCERCAP	GGYYGN			178
Pavo_cristatus	VGDVVGGAFTFC	QPCPCPLPEAAN	-FAVS	CYRKNGNVR	CVCKENYAGP	NCERCAP	GGYYGN			178
Gallus_gallus	VGDVVGGAFTFC	QPCPCPLPEAAN	-FAVS	CYRKNGNVR	CVCKENYAGP	NCERCAP	GGYYGN			178
Anas_platyrhynchos	IGDVVRGVPTFC	QPCPCPLPGIAN	-FADS	SCYRKNGSV	RCVCKENYAGP	NCERCAP	GGYYGN			178
Chelonia_mydas	IGDIVRGVPTFC	QPCPCPLPLVAN	-FAVS	CHRKSGVVR	CVCKENYAGP	NCERCAP	GGYYGN			178
Homo_sapiens	IGDSIRGAPQFC	QPCPCPLPHLAN	-FAES	CYRKNGAVRCI	CNENYAGP	NCERCAP	GGYYGN			176
Pan_troglodytes	IGDSIRGAPQFC	QPCPCPLPHLAN	-FAES	CYRKNGAVRCI	CNENYAGP	NCERCAP	GGYYGN			176
Macaca_mulatta	IGDSIRGAPRFC	QPCPCPLPHLAN	-FAES	CYRKNGAVRCI	CNENYAGP	NCERCAP	GGYYGN			176
Callithrix_jacchus	IGDSIRGPPRFC	QPCPCPLPHLAN	-FAES	CYRKNGAVRCI	CNENYAGP	NCERCAP	GGYYGN			176
Bos_taurus	IGDAIRGPPRFC	QPCPCPLPHVAN	-FAES	CYRKNGAVRCI	CNENYAGP	NCERCAP	GGYYGN			176
Equus_caballus	IGDSIRGAPRFC	QPCPCPLPHLAN	-FAES	CYRKNGAVRCI	CNENYAGP	NCERCAP	GGYYGN			177
Pteropus_alecto	IGDSIRGPPQFC	QPCPCPLPHVAN	-FAES	CYRKNGAVRCV	CKENYAGP	NCERCAP	GGYYGN			176
Mus_musculus	IGDSIRGTPRFC	QPCPCPLPHLAN	-FAES	CYRKNGAVRCI	CNENYVGP	NCERCAP	GGYYGN			176
Ornithorhynchus_anatinus	FGDVVRGAPTGC	QPCPCPLPYLAN	-FADS	CYKKS	GAVRCVCKEEYAGP	NCERCAP	GGYYGN			170
Latimeria_chalumnae	IALVWS--T	SCEPCPCPLS	INNNFAVS	CANRG	GTVR	CVCKDNYAGP	NCERCAP	GGYYGN		176
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Xenopus_tropicalis	PLLKGSTCKKCDSCGNSDPNLFIFEDCNELTIGQCNMCMRNTTGfNCERCALGYYGdARVAK	237
Rhinatrema_bivittatum	PLLTGSTCRKCDSCGNSDPNLFIFEDCDEVTGQCRNCLHNTTGfKCERCAPGYYGdARVSK	222
Pavo_muticus	PLLIGSACKKCDSCGNSDPNLFIFEDCDEVTGQCRNCLRHNTTGfKCERCAPGYYGdAIYAK	238
Pavo_cristatus	PLLIGSACKKCDSCGNSDPNLFIFEDCDEVTGQCRNCLRHNTTGfKCERCAPGYYGdAIYAK	238
Gallus_gallus	PLLIGSTCKKCDSCGNSDPNLFIFEDCDEVTGQCRNCLHHTTGfKCEQCAPGYYGdAIFAK	238
Anas_platyrhynchos	PLLIGSTCKKCDSCGNSDPNLFIFEDCDEVTGQCRNCLRNTTGfNCERCSPGYYGdARFAK	238
Chelonia_mydas	PLLIGSTCKKCDSCGNSDPNLFIFEDCDEVTGQCRNCLRNTTGfKCEQCAPGYYGdARTAK	238
Homo_sapiens	PLLIGSTCKKCDSCGNSDPNLFIFEDCDEVTGQCRNCLRNTTGfKCERCAPGYYGdARIAK	236
Pan_troglodytes	PLLIGSTCKKCDSCGNSDPNLFIFEDCDEVTGQCRNCLRNTTGfKCERCAPGYYGdARIAK	236
Macaca_mulatta	PLLIGSTCKKCDSCGNSDPNLFIFEDCDEVTGQCRNCLRNTTGfKCERCAPGYYGdARIAK	236
Callithrix_jacchus	PLLIGSTCRKCDSCGNSDPNLFIFEDCDEITGQCRNCLRNTTGfNCERCAPGYYGdARIAK	236
Bos_taurus	PLLIGSTCKKCDSCGNSDPNLFIFEDCDEVTGQCRNCLRNTTGfKCERCAPGYYGdARRAK	236
Equus_caballus	PLLIGSTCKKCDSCGNSDPNLFIFEDCDEVTGQCRNCLRNTTGfKCERCAPGYYGdARIAK	237
Pteropus_alecto	PLLIGNTCKKCDSCGNSDPNLFIFEDCDEITGQCRNCLRNTTGfKCERCAPGYYGdARIAK	236
Mus_musculus	PLLIGSTCKKCDSCGNSDPNLFIFEDCDEITGQCRNCLRNTTGfKCERCAPGYYGdARTAK	236
Ornithorhynchus_anatinus	PLLVGSTCRKCDSCGNSDPNLFIFEDCDEVTGECRSCFRNTTGfKCERCAPGYYGdARVAK	230
Latimeria_chalumnae	PLLIGNSCQKCNCGNSDPNLFIFDDCEVSGHCRNCLRNTTGvNCERCATGYYGdAIYAK	236
190.....200.....210.....220.....230.....240	

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Xenopus_tropicalis	NCKECRC	SKCGTETCNDITGT	CQCKPGVTGVFCDHCEAGYYGYTSCLGCQKCMCSPASLD	297
Rhinatrema_bivittatum	NCTVCR	CAMCGTEACDGISGRCHCKAGVTGPLCSRCEVGYYGYDS	CAGCQKCACGLASHD	282
Pavo_muticus	NCTAC	-	-	243
Pavo_cristatus	NCTAC	-	-	243
Gallus_gallus	NCTAC	-	-	243
Anas_platyrhynchos	NCTEC	-	-	243
Chelonia_mydas	NCTEC	-	-	243
Homo_sapiens	NCAVC	-	-	241
Pan_troglodytes	NCAVC	-	-	241
Macaca_mulatta	NCAVC	-	-	241
Callithrix_jacchus	NCAVC	-	-	241
Bos_taurus	NCAAC	-	-	241
Equus_caballus	NCAVC	-	-	242
Pteropus_alecto	NCAVC	-	-	241
Mus_musculus	NCAVC	-	-	241
Ornithorhynchus_anatinus	NCTVC	-	-	235
Latimeria_chalumnae	NCTECIC	-	-	243
	250.....	260.....270.....280.....290.....300	

310.....320.....330.....340.....350.....360	
<i>Xenopus_tropicalis</i>	NNCDPETRQCNCKPGAGGLKCE	350
<i>Rhinatrema_bivittatum</i>	GS	335
<i>Pavo_muticus</i>	-----NCSGRMCD	257
<i>Pavo_cristatus</i>	-----NCSGRMCD	257
<i>Gallus_gallus</i>	-----NCGGRMCD	257
<i>Anas_platyrhynchos</i>	-----NCGGRMCD	257
<i>Chelonia_mydas</i>	-----NCRGGP	257
<i>Homo_sapiens</i>	-----NCGGGP	255
<i>Pan_troglodytes</i>	-----NCGGGP	255
<i>Macaca_mulatta</i>	-----NCGGGP	255
<i>Callithrix_jacchus</i>	-----NCGGGP	255
<i>Bos_taurus</i>	-----NCGGGP	255
<i>Equus_caballus</i>	-----SCGGGP	256
<i>Pteropus_alecto</i>	-----NCGGGP	255
<i>Mus_musculus</i>	-----NCGGGP	255
<i>Ornithorhynchus_anatinus</i>	-----DCRGGP	249
<i>Latimeria_chalumnae</i>	-----EKCGTAS	265

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Xenopus_tropicalis      -----LLEDPESPSSDCS-----FCDKCIWDLI 375
Rhinatrema_bivittatum  -----VAEDLDSPAGTHCTL-----ITCDKCIWDLI 361
Pavo_muticus            -----LADSPVVSTGTDCPT-----ISCDKCIWDLT 283
Pavo_cristatus          -----LADSPVVSTGTDCPT-----ISCDKCIWDLT 283
Gallus_gallus           -----LADSPVLVSTGTDCPT-----ISCDKCIWDLT 283
Anas_platyrhynchos      -----LADSPVVSTGTDCPT-----ISCDKCIWDLT 283
Chelonia_mydas          -----LAEG--PTGTDCPT-----ISCDKCIWDLT 280
Homo_sapiens            -----LEEGFEPPTGMDCT-----ISCDKCVWDLT 281
Pan_troglodytes         -----LEEGFEPPTGMDCT-----ISCDKCVWDLT 281
Macaca_mulatta          -----LEEGLEPPTGTDCST-----ISCDKCVWDLT 281
Callithrix_jacchus      -----LEEGFEPPTGMDCT-----ISCDKCIWDLT 281
Bos_taurus              -----LEEGFESPTGTDCPT-----ISCDKCIWDLT 281
Equus_caballus          -----LEG-FEAPTGTDCPT-----ISCDKCIWDLT 281
Pteropus_alecto         -----LEEGFEPPTGMDCT-----ISCDKCIWDLT 281
Mus_musculus            -----LEEGFEVPTG-----CDKCVWDLT 274
Ornithorhynchus_anatinus -----LAENLKDPTGTDCPA-----LNCDCIWDLT 275
Latimeria_chalumnae     GPLCDRCKVGYHGYDSCLGCRCEGLASVDDVCDPVTQQCKCRFGAIGLYCECCQYSEW 325
                        .....370.....380.....390.....400.....410.....420

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Xenopus_tropicalis      DD-----LRIAALLGDETKITALNISTGVAAHKHLNYINSTLFLHTEMLE 420
Rhinatrema_bivittatum  DD-----LRLSGVSLSESRSLSVSTGVAAHRLNDVNATISLLMLKLT 406
Pavo_muticus            DD-----IRLAVLAIDESKSTLLSISTGVAAQKRLNDLNLTTTHLQAAMS 328
Pavo_cristatus          DD-----IRLAVLAIDESKSTLLSISTGVAAQKRLNDLNLTTTHLQAAMS 328
Gallus_gallus           DD-----IRLAVLAIDESKSTLLSISTGVAAQKRLNDLNLTTTHLQAAMS 328
Anas_platyrhynchos      DD-----IQLAVLAIDESKSTLLSISTGVAAQKRLNDLNLATYLLQAAMS 328
Chelonia_mydas          DD-----IRLAISLIDESKSTLLSISGGVAAQRHLNELNSTVSFLKMKLS 325
Homo_sapiens            DD-----LRLAALSIEEGKSGVLSVSSGAAAHHRVNEINATIIYLLKTKLS 326
Pan_troglodytes         DD-----LRLAALSIEEGKSGVLSVSSGAAAHHRVNEINATIIYLLKTKLS 326
Macaca_mulatta          DD-----LRLAALSIEEGKSGVLSVSSGAAAHHRVNEINATIIYLLKTKLS 326
Callithrix_jacchus      DD-----LRLAALSIEEGKSGVLSVSSGAAAHKHMNEINTTIYLLKTKLS 326
Bos_taurus              DD-----LRLAALSIEESKSGLLSVSSGAAAHHRVNEINSTIYLLKTKLS 326
Equus_caballus          DD-----LRLAALSIEESKSGLLSVSSGAAAHHRVNEINSTIYLLKTKLS 326
Pteropus_alecto         DD-----LRLAALSIEESKSGLLSVSSGAAAHHRVNEINSTIYLLKTKLS 326
Mus_musculus            DD-----LRLAALSIEESKSGLLSVSSGAAAHHRVNTDMNSTIHLRLTRL 319
Ornithorhynchus_anatinus DD-----LRLAGLSIDDSKSNVLTVSSGVAAHRVNEINSTISLTKTKLS 320
Latimeria_chalumnae     NYGPHGCRCDCCGGGPCNSRTGECLPDETPATTDCTVVSKEGENISHLLTNGKETQIP 385
                        .....430.....440.....450.....460.....470.....480

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Xenopus_tropicalis      DKNNGSIFTDLMIDNAESKVEALQTKVNLADKGNLAEMKGSRFHKETMETMKRAKMTAG 480
Rhinatrema_bivittatum  EKQHHLAQSRLEIANAETKVS SVRAEVDTVQCKGDELSSQGLQVQRTLENLERAKDTTR 466
Pavo_muticus            KKKDHSILWTIQVDDAADDMDNLLRETNLDDQGNQASSKGLLVQKETMETNNRATQLVQ 388
Pavo_cristatus          KKKDHSILWTIQVDDAADDMDNLLRETNLDDQGNQASSKGLLVQKETMETNNRATQLVQ 388
Gallus_gallus           KKKDHSILWTIQVDDAADDMDNLLRETNLDDQGNQASSKGLLVQKETMETNNRATQLVQ 388
Anas_platyrhynchos      EKKNHSVTWTFQVDDAADDMDNLLRETNLDDQGNQASSKGLLVQKETMETNNRATQLVQ 388
Chelonia_mydas          EKENHSLVRKIHIIDYSETETANLLEIEALEEQGNQASSKGLLVQKETMATINHATQLVQ 385
Homo_sapiens            ERENQYALRKIQINNAENTMKSLLSDVEELVEKENQASRKQQLVQKESMDTINHASQLVE 386
Pan_troglodytes         ERENQYALRKIQINNAENTMKSLLSDVEELVEKENQASRKQQLVQKESMDTINHASQLVE 386
Macaca_mulatta          ERENQYALRKIQINNAENTMKSLLSDVEELVEKENQASRKQQLVQKESMDTIKHASQLVE 386
Callithrix_jacchus      ERENQYALRKIQINNAENTMKSLLSDVEELVEKENQASRKQQLVQKESMDTINHASQLVE 386
Bos_taurus              ERENQYVLRKIQINNAENTMKSLLSDVEELVEKENQASRKQQLVQKESMDTINHATQLAE 386
Equus_caballus          ERENQYVLRKIQINNAENTMKSLLSDVEELVAGRSQASRKSEQAQKESMDTINHATQLVE 386
Pteropus_alecto         ERENQYVLRKIQINNAENTMKSLLSDVEELVAGRSQASRKQQLVQKESMDTINHATQLVE 386
Mus_musculus            ERENQYTLRKIQINNSENTLRLSLPDVEGLHEKGSQASRKGMVKEKESMDTIDQATHLVE 379
Ornithorhynchus_anatinus ERENRYILRKIQVGSANETMKILLSDMEELEKGSQASTKGQLVHKETVVTKSRAILLVE 380
Latimeria_chalumnae     EWINSSVYRKQFQVVEVETKITTLQSLDLTLEKQESSTLTGKRNVERKTLETVRHAEQIVK 445
                        .....490.....500.....510.....520.....530.....540

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Xenopus_tropicalis  QVNDIEDGIQELLGKLEYYESLGDLAADRVSVKQAEQMLKEMEELD-FSTORIALEE 539
Rhinatrema_bivittatum LVDDVWDSIQETLDKLYYYETLE-EVSPGDILPKLAQAQIILEEMKALE-LTYQGLKLAQE 524
Pavo_muticus          KLSNMRDNIQEISSKMKYYAIQ-ELSPEEIAQKLSVAEEMLKEIKRRKPFPTNERQLADE 447
Pavo_cristatus        KLSNMRDNIQEISSKMKYYAIQ-ELSPEEIAQKLSVAEEMLKEIKRRKPFPTNERQLADE 447
Gallus_gallus         KLSNMRDNIQEISSKMKYYAIQ-ELSPEEIAQKLSVAEEMLKEIKRRKPFPTNERQLADE 447
Anas_platyrhynchos    QLHNMKDNIQEISSKMKYYAIQ-ELSPEEIAQKLSVAEEMLKEIKRRKPFPTNHRQLAAE 447
Chelonia_mydas        QLGNMARDNIQEISSKMKYYGIQH-ELSTEDIIQKLNLAEMLEIRIQRKPFPTNRLRLADD 444
Homo_sapiens          QAHDMRDKIQEINNKMYYGEEH-ELSPKEISEKLVLAQKMLEEIRSRQPFFTQRELVD 445
Pan_troglodytes       QAHDMRDKIQEINNKMYYGEEH-ELSPKEISEKLVLAQKMLEEIRSRQPFFTQRELVD 445
Macaca_mulatta        QAHDMRDKIQEINNKMYYGEEH-ELSPKEISEKLVLAQKMLEEIRRRQPFFTQRELVD 445
Callithrix_jacchus    QAHDMRDKIQEINNKMYYGEEH-ELSPKEISEKLVLAQKMLEEIRRRQPFFTQRELVD 445
Bos_taurus            QAHDMRDKIQEINNKMYYGEEH-ELSPKEISEKLVLAQKMLEEIRRRQPFFTQRELVD 445
Equus_caballus        QAHDMRDKIQEINNKMYYGEEH-ELSPKEISEKLVLAQKMLEEIRRRQPFFTQRELVD 445
Pteropus_alecto       QAHDMRDKIQEINNKMYYGEEH-ELSPKEISEKLVLAQKMLEEIRRRQPFFTQRELVD 445
Mus_musculus          QAHDMRDKIQEINNKMYYGEEH-ELSPKEISEKLVLAQKMLEEIRRRQPFFTQRELVD 445
Ornithorhynchus_anatinus RARDMADEIQEINDKLYYGIQ-ELSPKEISEKLVLAQKMLEEIRRRQPFFTQRELVD 438
Latimeria_chalumnae   QASSINTSIQEIITQLKFGYMAH-ELSPKEISEKLVLAQKMLEEIRRRQPFFTQRELVD 439
                        .....550.....560.....570.....580.....590.....600

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Xenopus_tropicalis  EEEYVEELLREILDEWQVQNNTRSLLENVLEKIAEHDDDELADLYEALLEARHDINQTR 599
Rhinatrema_bivittatum EADQAQELLRLVSEDFQLVQNETLAFPLIQEEFDKLSAKLRDLQDALEQALTRIEETQE 584
Pavo_muticus          EEHAAEDLLQRV-EEFHRYNDTRSLFSDVMEQLSEHNMKLSDLLEALQALDYVIQTEA 506
Pavo_cristatus        EEHAAEDLLQRV-EEFHRYNDTRSLFSDVMEQLSEHNMKLSDLLEALQALDYVIQTEA 506
Gallus_gallus         EEHAAEDLLQRV-EEFHRYNDTRSLFSDVMEQLSEHNMKLSDLLEALQALDYVIQTEA 506
Anas_platyrhynchos    EEDAEDLLQRV-EEFHRYNDTRSLFSDVMEQLSEHNMKLSDLLEALQALDYVIQTEA 506
Chelonia_mydas        EADAAQELLRRV-EEWELRYNDTRSLFPIVLDQLSDYNMKLSDLQALDQALDYVRQTEA 503
Homo_sapiens          EADEAYELLQA-ESWQRLHNETRTLFPVVLEQLDDYNKLSDLQALDQALNYVRDAED 504
Pan_troglodytes       EADEAYELLQA-ESWQRLHNETRTLFPVVLEQLDDYNKLSDLQALDQALNHVRDAED 504
Macaca_mulatta        EADEAHELLQA-ESWQRLHNETRTLFPVVLEQLDDYNKLSDLQALDQALNHVRDAED 504
Callithrix_jacchus    EADEAHELLQA-ESWQRLHNETRTLFPVVLEQLDDYNKLSDLQALDQALNHVRDAED 504
Bos_taurus            EADEAHELLQA-ESWQRLHNETRTLFPVVLEQLDDYNKLSDLQALDQALNHVRDAED 504
Equus_caballus        EADEAHELLQA-ESWQRLHNETRTLFPVVLEQLDDYNKLSDLQALDQALNHVRDAED 504
Pteropus_alecto       EADEAHELLQA-ESWQRLHNETRTLFPVVLEQLDDYNKLSDLQALDQALNHVRDAED 504
Mus_musculus          EADEAHELLQA-ENWQRLHNETRTLFPVVLEQLDDYNKLSDLQALDQALNHVRDAED 497
Ornithorhynchus_anatinus EADEAHELLQA-ENWQRLHNETRTLFPVVLEQLDDYNKLSDLQALDQALNHVRDAED 498
Latimeria_chalumnae   ESKGADKLLDHV-QQFEFWHNGTRSLIPSLLSQLSEYSTNLSDVKELLQEAANKNIKEAD 562
                        .....610.....620.....630.....640.....650.....660

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      *  . :  : : : : : : : : : : : : : : : * * : *
Xenopus_tropicalis  KKNKANIACLHMSNIQTVKLTKEVENVSELTQANITLNGTHMLISDISDITKNMSGHHAE 659
Rhinatrema_bivittatum KNLNAGILEEMEIQENLEEELETFTNETLLMAQATVMDLHLAIDEINYVIKNGSELYAE 644
Pavo_muticus          INKENTANLQEREKQHETLEEQADEVNSIVLSATAILAEQKISSELSEVIKNGSGFYAE 566
Pavo_cristatus        INKENTANLQEREKQHETLEEQADEVNSIVLSATAILAEQKISSELSEVIKNGSGFYAE 566
Gallus_gallus         LNKENTANLQEREKQHETLEEQADEVNSIVLSATAILAEQKISSELSEVIKNGSGFYAE 566
Anas_platyrhynchos    MNQENTANLQEREKQHETLEEQADEVNSIVLSATAILAEQKISSELSEVIKNGSGFYAE 566
Chelonia_mydas        TNKKNAGKLQENEKQKEKVKEQTDVNSILLSARDTLVKPQQFSTELSDVIKNGSGFYAE 563
Homo_sapiens          MNRATAARQRDHEKQQERVREQMEVVMNSLSTADSLSLTPRLTLSELDDIKNASGIYAE 564
Pan_troglodytes       MNRATAARQRDHEKQQERVREQMEVVMNSLSTADSLSLTPRLTLSELDDIKNASGIYAE 564
Macaca_mulatta        MNRATAARQRDHEKQQERVREQMEVVMNSLSTADSLSLTPRLTLSELDDIKNASGIYAE 564
Callithrix_jacchus    MNRATAARQRDHEKQQERVREQMEVVMNSLSTADSLSLTPRLTLSELDDIKNASGIYAE 564
Bos_taurus            MNRATAARQRDHEKQQERVREQMEVVMNSLSTADSLSLTPRLTLSELDDIKNASGIYAE 564
Equus_caballus        MNRATAARQRDHEKQQERVREQMEVVMNSLSTADSLSLTPRLTLSELDDIKNASGIYAE 564
Pteropus_alecto       MNRATAARQRDHEKQQERVREQMEVVMNSLSTADSLSLTPRLTLSELDDIKNASGIYAE 564
Mus_musculus          MNRATAARQRDHEKQQERVREQMEVVMNSLSTADSLSLTPRLTLSELDDIKNASGIYAE 557
Ornithorhynchus_anatinus ANRATAARQRDHEKQQERVREQMEVVMNSLSTADSLSLTPRLTLSELDDIKNASGIYAE 558
Latimeria_chalumnae   KKNKDIARVRFREHENAKSELEEQAASEIKNMAEVMVLVDTELAVAEMDNMIQNVSEFHAA 622
                        .....670.....680.....690.....700.....710.....720

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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      :***:  *:      ***      .::  .*  .:  *:  .  :  *.  *  .*:  *:  **
Xenopus_tropicalis  VDGAYTGLKERLENLSRNVENIVEEVAHSLTLOREASGLTSDLKGIDANGFVQKALDAS  719
Rhinatrema_bivittatum  IDGAKKELQESQVNMSQYDDELVRRAAEHAKELQROVEELQRILESKDTNGLVMKALNAS  704
Pavo_muticus  IDGAKKELQEKIANLSLFDDELEEKAMQHAHNLRLRLADELDRNLHGVDTNGLVQRAINAS  626
Pavo_cristatus  IDGAKKELQEKIANLSLFDDELEEKAMQHAHNLRLRLADELDRNLHGVDTNGLVQRAINAS  626
Gallus_gallus  IDGAKKELQEKIANLSLFDDELEEKAMQHAHNLRLRLADELDRNLHGVDTNGLVQRAINAS  626
Anas_platyrhynchos  IDGAKKELQEKIANLSLFDDELVEKAMHHAHNLRLGLADELDRNLHGVDTNGLVQRAINAS  626
Chelonia_mydas  IDGAKKELQEKLANLSRFDDDLVQQAAMEYAQELQRIADELDRNLHSDVTNGLVQKALNAS  623
Homo_sapiens  IDGAKSELQVKLSNLSNLSHDLVQEAIDHAQDLQQAANELSRKLHSSDMNGLVQKALDAS  624
Pan_troglodytes  IDGAKSELQVKLSNLSNLSHDLVQEAIDHAQDLQQAANELSRKLHSSDMNGLVQKALDAS  624
Macaca_mulatta  IDGAKNELQVKLSNLSNLSHDLVQEAIDHAQDLQQAANELSRKLHSSDMNGLVQKALDAS  624
Callithrix_jacchus  IDGAKNELQVKLSNLSNLSHDLVQEAIDHAQDLQQAANELSRKLHSSDMNGLVQKALDAS  624
Bos_taurus  IDGAKNELQVKLSNLSNLSHDLVQEAIDHAQDLQQAANELSRKLHSSDMNGLVQKALDAS  624
Equus_caballus  IDGAKNELQVKLSNLSNLSHDLVQEAIDHAQDLQQAANELSRKLHSSDMNGLVQKALDAS  624
Pteropus_alecto  IDGARSELQVKLANLSNLSHDLVQEAIDHAQDLQQAANELSRKLHSSDMNGLVQKALDAS  624
Mus_musculus  IDGAKNELQVKLSNLSNLSHDLVQEAIDHAQDLQQAANELSRKLHSSDMNGLVQKALDAS  617
Ornithorhynchus_anatinus  IDGAKAELQVKLGNSLNLNEDLVQRAHEHAKDLQGHADLRRNLHGADASGLVQKALAAS  618
Latimeria_chalumnae  IDGSIKLLRRLRLTNLSTYDKDLVLRADFQAKELQSLAAKMESHLKKIDTNGFVQKAINAS  682
      .....730.....740.....750.....760.....770.....780

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      **:*.*.  .:  ***::  *:  :  *  **  *::*:  :  .*:.*  *  :
Xenopus_tropicalis  NVHESIVNMIEAANETSFIALSIAERVIDATDGMNDQIKYQMTSEKLLVQAKELKGASD  779
Rhinatrema_bivittatum  NVHENIVKFVEEANETSSEALSTAYRVSDAVEGINTQISYHOERSDQLLQDAIYLOKTLN  764
Pavo_muticus  NVYENIAGYIEEANKAALLALNTTNRINDAAVGIDTQIIYHRSKSEELLSRAMELQQTAA  686
Pavo_cristatus  NVYENIAGYIEEANKAALLALNTTNRINDAAVGIDTQIIYHRSKSEELLSRAMELQQTAA  686
Gallus_gallus  NVYENIAGYIEEANKAALLALNTTNRINDAAVGIDTQIIYHRSKSEELLRRAMELQQTAA  686
Anas_platyrhynchos  NVYENIASYIEEANKAALLALNTTNRINDAAVGIDTQVIYHKGKSEELLRRAMQLQQTAD  686
Chelonia_mydas  NVYENIATYIEEANETALLALNTTNRINDAAVGIDTQIIYHKDESERLLNQAKELQETAD  683
Homo_sapiens  NVYENIVNVVSEANETAFAFALNTTDRIYDAVSGIDTQIIYHKDESENLLNQARELQAKAE  684
Pan_troglodytes  NVYENIVNVVSEANETAFAFALNTTDRIYDAVSGIDTQIIYHKDESENLLNQARELQAKAE  684
Macaca_mulatta  NVYENIVNVVSEANETAFAFALNTTDRIYDAVSGIDTQIIYHKDESENLLNQARELQAKAE  684
Callithrix_jacchus  NVYENIVNVVSEANETAFAFALNTTDRIYDAVSGIDTQIIYHKDESENLLNQARELQAKAE  684
Bos_taurus  NVYENIANVYVSEANETAFAFALNTTDRIYDAVSGIDTQIIYHKDESENLLNQARELQARAD  684
Equus_caballus  NVYENIANVYVSEANETAFAFALNTTDRIYDAVSGIDTQIIYHKDESENLLHQARELRARAD  684
Pteropus_alecto  NVYENIANVYVSEANETAFAFALNTTDRIYDAVSGIDTQIIYHKDESEHLLNQARELQTRAD  684
Mus_musculus  NVYENIANVYVSEANETAFAFALNTTDRIYDAVSGIDTQIIYHKDESENLLNQARELQAKAD  677
Ornithorhynchus_anatinus  NVYENIANVYVSEANETAFAFALNTTDRIYDAVSGIDTQIIYHRSDESENLLNQARELQEAAD  678
Latimeria_chalumnae  NVYENIATYIEEANKTALFTLSAANRTKDAITGISTQLGFLKDKSERLLNQAKASQESAE  742
      .....790.....800.....810.....820.....830.....840

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Xenopus_tropicalis  SSKDLGISETKQHVNSATLRKDALSDKIENAIHQIEVHED-ENTRKRLEKSKLDAAFEALN  838
Rhinatrema_bivittatum  GSEDLGVNETHQWLTTVLLRKNSLDQLKSAMKKLRMIDQ-GGTGGRMEQVKLMAAFEALN  823
Pavo_muticus  YSNDLTIADTSRHVNGTAARMHAVQSKLMRAITKMQAELGLEARQRLQAKQKTAEAVS  746
Pavo_cristatus  YSNDLTIADTSRHVNGTAARMHAVQSKLMRAITKMQAELGLEARQRLQAKQKTAEAVS  746
Gallus_gallus  YSNDLTIADTSRHVNGTAARMHAVQSKLMRAITKMQAELGLEARERLEQAKQKTAEAVS  746
Anas_platyrhynchos  YSNDLTVADTSRHVNGTLARMNALRGQLMRAITKMQAEP-VEARQRLQAKQKTAEAVS  745
Chelonia_mydas  ASNDLTVADTSRRIAGTIARKDALKSRLMKAMQIQSVEK-GDIRQHLDQFKLITQEAVN  742
Homo_sapiens  SSSDEAVADTSRRVGGALARKSALKTRLSDAVKQLQAAER-GDAQORLGQSRLITEEANK  743
Pan_troglodytes  SSSDEAVADTSRRVGGALARKSALKTRLSDAVKQLQAAER-GDAQORLGQSRLITEEANK  743
Macaca_mulatta  SSSDEAVADTSRRVGGALARKSALKTRLSDAVKQLQAAER-GDAQORLGQSRLITEEANK  743
Callithrix_jacchus  SSSDEAVADTSRRVGGALARKSALKTRLSDAVKQLQAAER-GDAQORLGQSRLITEEANK  743
Bos_taurus  SSSDEAVADTSRRVGGALARKSALKTRLSDAVKQLQAAER-GDAQORLGQSRLITEEANK  743
Equus_caballus  SSNEEAVADTSRRVGGALARKSALKTRLSDAVKQLQAAER-GDAQORLGQSRLITEEANK  743
Pteropus_alecto  SSNDEAVADTSRRVGGALARKSALKTRLSDAVKQLQAAER-GDAHQRLGQSRLITEEANK  743
Mus_musculus  SSNDEAVADTSRRVGGALARKSALKTRLSDAVKQLQAAER-GDAHQRLGQSRLITEEANK  736
Ornithorhynchus_anatinus  SSNDPAVADTSRRVGGALARKSALKTRLSDAVKQLQAAER-GDAEQRLEQSRLITEEANK  737
Latimeria_chalumnae  ARKALTVEDTRNRLKGVINKKDELKGLSKAIGQLQLLQ-GNTREQSERASLIAEEANS  801
      .....850.....860.....870.....880.....890.....900

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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:  : ... *:      * :.: . . * . : : * : * : * : * : * :
Xenopus_tropicalis      ITAIIISKVTDPM SKNAKIWSENLSNITDFDASAYNKVVNSAGEAVRNLT EVVPLLNLKLR 898
Rhinatrema_bivittatum  TTTMITIEVTDPM SQNINSWKDSLKSP EYDKSAYNRVLSTAGDAVRNLT EVVPRLLSKLHT 883
Pavo_muticus            ATVTVTQATTPMD ENVRLWSQNLQDFQHD SAAYDS AVHSAGDAVKKLT EVFPOLLDKLRK 806
Pavo_cristatus          ATVTVTQATTPMD ENVRLWSQNLQDFQHD SAAYDS AVHSAGDAVKKLT EVFPOLLDKLRK 806
Gallus_gallus           TTVTVTQATTPMD ENVRLWSQNLQDFQHD SAAYDS AVHSAGDAVKKLT EVFPOLLDKLRK 806
Anas_platyrhynchos      TTTTVNQATTPMD ENVRLWSQNMQDFQHSS AAYKSAMHSAGDAVQKLEEVFPOLLNKLHT 805
Chelonia_mydas           ATMAVTQTTPMAKN LKNWSENLFQHDVAVD SAVDSAGDAVKNLT EVIPOLLDKLRT 802
Homo_sapiens             TTMEVQQATAPMAN NLTNWSQNLQHFDS --AYNTAVNSARDAVRNLT EVVPOLLQDLRT 801
Pan_troglodytes          TTMEVQQATAPMAN NLTNWSQNLQHFDS --AYNTAVNSARDAVRNLT EVVPOLLQDLRT 801
Macaca_mulatta           TTMEVQQATAPMAN NLTNWSQNLQHFDS --AYNTAVDSARDAVRNLT EVVPOLLQDLRT 801
Callithrix_jacchus       TTMEVQQATAPMAN NLTNWSQNLQHFDS --AYNTAVDSARDAVRNLT EVVPOLLQDLRT 801
Bos_taurus               TTMEVQQATAPMAN NLTNWSQNLQSFDS --AYNTAVDSARDAVGNLT EVVPOLLQDLRT 801
Equus_caballus           TTMEVQRATAPMAG NLTNWSQNLQNFDS --AYNTAVDSARDAVRNLT EVVPOLLQDLRT 801
Pteropus_alecto          TTVEVQQATAPMAN NLTNWSQNLQNFDS --AYNTAVDSARDAVRNLT EVVPOLLQDLRT 801
Mus_musculus             TTAAVQQTTPMAN NLSNWSQNLQTFDS --AYNTAVDSARDAVRNLT EVVPOLLQDLRT 794
Ornithorhynchus_anatinus RTSGVDRATEPMAT NLTHTWSQSLRDFDS --AYDTVVDSARDAVKNLT EVVPOLLQDLRT 795
Latimeria_chalumnae      TSALVTQTVPAPIN KYVNEWAQNLED SKDDISDYSKAVKAAGDTVNNLT EIVPOLLDKLRI 861
.....910.....920.....930.....940.....950.....960

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Xenopus_tropicalis      VDYKWP-TNNISSS ILRIRELIAQTRSVASKVQVSMRFGGKSAVDVNLKTN AADLNAFSS 957
Rhinatrema_bivittatum  VEMKQP-AANVSASI QRIRELIAQTRSVASKVQVSMTFEGQSAVEVNP KIDLSELKAFSS 942
Pavo_muticus            VEQKAP-ANNISSS IQRIRNLIAQTRSVASKVQVSMFMFGGESAVEVNP KINVEELKSFTS 865
Pavo_cristatus          VEQKAP-ANNISSS IQRIRNLIAQTRSVASKVQVSMFMFGGESAVEVNP KINVEELKSFTS 865
Gallus_gallus           VEQKAP-ANNISSS IQRIRDLIAQTRSVASKVQVSMFMFGGESAVEVNP KINVEELKSFTS 865
Anas_platyrhynchos      VEQKAP-ANNISSS IRRIRELIAQTRSVASKVQVSMTFGGQSAVEVNP KINVEELKSFTS 864
Chelonia_mydas          VDQKLP-ANNISASI QRIRELIAQTRSIASKVQVSMKFEGRS AVEVNP KTSLLDCLKAFTS 861
Homo_sapiens            VEQKRP-ASNVSASI QRIRELIAQTRSVASKIQVSMFMFDGQSAVEVH SRTSMDDLKAFTS 860
Pan_troglodytes         VEQKRP-ASNVSASI QRIRELIAQTRSVASKIQVSMFMFDGQSAVEVH SRTSMDDLKAFTS 860
Macaca_mulatta          VEQKRP-ASNVSASI QRIRELIAQTRSVASKIQVSMFMFDGQSAVEVH SRTSMDDLKAFTS 860
Callithrix_jacchus      VEQKRP-ASNVSASI QRIRELIAQTRSVASKIQVSMFMFDGQSAVEVH SRTSMDDLKAFTS 860
Bos_taurus              VEQKRP-ASNVSASI QRIRELIAQTRSVASKIQVSMFMFDGQSAVEVH PRASMDLKTFTS 860
Equus_caballus          VEQKRP-ASNVSASI QRIRELIAQTRSVASKIQVSMFMFDGQSAVEVH PKTSMDDLKTFTS 860
Pteropus_alecto         VEQKRP-ASNVSASI QRIRELIAQTRSVASKIQVSMFMFDGQSAVEVH PKTSVDDLKTFTS 860
Mus_musculus            VEQKRP-ASNISASI QRIRELIAQTRSVASKIQVSMFMFDGQSAVEVH PKVSDVDDLKAFTS 853
Ornithorhynchus_anatinus VEQKRP-ASNVSASI QRIRELIAQTRSVASKIQVSMTFDGESAVQVNP KTHVDDLKAFTS 854
Latimeria_chalumnae     IEQKQPHASNL SVNILRIRELIAQTRSVASKVQVAMKFQDGSSVEVR PKINLEDLKASSS 921
.....970.....980.....990.....1000.....1010.....1020

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Xenopus_tropicalis      ISLYLN-PI----AHQEKPHDKFIMYFGNKNSTSDYMG LAIKSNL VVYVNLGSGDVEIP 1012
Rhinatrema_bivittatum  MSLFMKLPP----KDPGQ GKDRFIMYLGSRKAGGDYMG LAIKADNL VVYVNLGSEHVEIP 998
Pavo_muticus            MSLYIKLQK--DNPH LAASPDRFILYLG NKNVKN-YMGLAIKNDNL VYIYNLGDQDVEIP 922
Pavo_cristatus          MSLYIKLQK--DNPH LAASPDRFILYLG NKNVKN-YMGLAIKNDNL VYIYNLGDQDVEIP 922
Gallus_gallus           MSLYIKLQK--DNPQ LAASPDRFILYLG NKNVKN-YMGLAIKNDNL VYTYN LGGQDVEIP 922
Anas_platyrhynchos      MSLYIKLQK--DNPQ LAASPDRFILYLG NKNVKN-YMGLAIKNDNL VYIYN LGGQDVEIP 921
Chelonia_mydas          MSLYMKLQK--DHPQ LVASPD RFVLYLG NKNAKD-YMGLAIKNDNL VYIYN LGGRDVEIP 918
Homo_sapiens            LSLYMKPP--VKRPE LTETADQFILYLG SKNAKKEYMGLAIKNDNL VYVYN LGTKDVEIP 918
Pan_troglodytes         LSLYMKPP--VKQPE LTETADQFILYLG SKNAKKEYMGLAIKNDNL VYVYN LGTKDVEIP 918
Macaca_mulatta          LSLYMKPP--VRQPE LTETADQFILYLG SKNAKKEYMGLAIKNDNL VYIYN LGTKDVEIP 918
Callithrix_jacchus      LSLYMKPP--VKQPE LTETADQFILYLG SKNAKKEYI GLAIKNDNL VYVYN LGTKDVEIP 918
Bos_taurus              LSLYMKPPP-VKQSE LAVTADQFILYLG SKNAKKEYMGLAIKNDNL VYVYN LGTKDVEIP 919
Equus_caballus          LSLYMKPPP-VKQPE LAGTADQFILYLG SKNAKKEYMGLAIKNDNL VYVYN LGTKDVEIP 919
Pteropus_alecto         LSLYIKPPS-VKQSE LAGTADQFILYLG SKNAKKEYMGLAIKNDNL VYVYN LGTKDVEIP 919
Mus_musculus            ISLYMKPPP KPAEPTGAWADQFVLYLG SKNAKKEYMGLAIKNDNL VYVYN LGMKDVEIL 913
Ornithorhynchus_anatinus MSLYAKPP--AKGAEP SGPSDRFILYLG SRNGKSDYMG LAIKNDNL VYIYN LGHKDVEIP 912
Latimeria_chalumnae     LSLYMKPSP-ANQPVQTS TQDRCVLYLG SKNAQRDYMG LAIKNDNL VYIYN LGSGDVEIP 980
.....1030.....1040.....1050.....1060.....1070.....1080

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Xenopus_tropicalis	LDSKPVNSWPGYFSLIKIERLGRHGKVVLLTVPSPSSTAEEKFIKKGEATGRDVSLLDLDPs	1072
Rhinatrema_bivittatum	LDSKPVSSWPAYFSLVKIERVGRHGKVVLLTVPSPSSTAEEKFIKKGEVPGNDSLLDLPPE	1058
Pavo_muticus	LDSKPVSTWPSYFSIVKIERIGRHGKMFLTIPSLSSTSEEKFIKTGETILGPSILLNLEPE	982
Pavo_cristatus	LDSKPVSTWPSYFSIVKIERIGRHGKMFLTIPSLSSTSEEKFIKTGETILGPSILLNLEPE	982
Gallus_gallus	LDSKPVSTWPSYFSIIKIERIGRHGKMFLTIPSLSSTSEEKFIKTGESLGPSILLNLEPE	982
Anas_platyrhynchos	LDSKPVSTWPSYFSIIKIERIGRHGKILLTVPSLSSTAEEKFIKTGETILGPSSLNLEPE	981
Chelonia_mydas	LDSKPISSWPAYFSSIIVERVGKHGKVFLTVPSPSSTAEEKFIKKGEVPGADSLLDLEPK	978
Homo_sapiens	LDSKPVSSWPAYFSLVKIERVGKHGKVFLTVPSLSSTAEEKFIKKGEFGSDSLLDLDPE	978
Pan_troglodytes	LDSKPISSWPAYFSLVKIERVGKHGKVFLTVPSLSSTAEEKFIKKGEFGSDSLLDLDPE	978
Macaca_mulatta	LDSKPVSSWPAYFSLVKIERVGKHGKVFLTVPSLSSTAEEKFIKKGEFGSDSLLDLDPE	978
Callithrix_jacchus	LDSKPVSSWPAYFSLVKIERVGKHGKVFLTVPSLSSTAEEKFIKKGEFGSDSLLDLDPE	978
Bos_taurus	LDSKPVSTWPAYFSLVKIERVGKHGKVFLTVPSLSSTAEEKFIKKGEFAGDDSLLDLDPE	979
Equus caballus	LDSKPVSSWPAHFSIVKIERVGKHGKVFLTVPSLSSTAEEKFIKKGEFAGDDSLLDLDPE	979
Pteropus_alecto	LDSKPVSSWPAYFSLVKIERVGKHGKVFLTVPSLSSTAEEKFIKKGEFAGDDSLLDLDPE	979
Mus_musculus	LDSKPVSSWPAYFSLVKIERVGKHGKVFLTVPSLSSTAEEKFIKKGEFAGDDSLDLTPPE	973
Ornithorhynchus_anatinus	LDSKPFSSWPAYFSSIIKIERVGKHGKVFLTVPSLSSTAEEKFIKKGEVSGDDSLDLKPE	972
Latimeria_chalumnae	LSSKPISTWPAFYTLVKIERVGKYGVFLTVPNPSSSTAEEKFKGTGKAPGVDSLLDLPD	1040
1090.....1100.....1110.....1120.....1130.....1140	

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Xenopus_tropicalis	SMVFYVGGVPSGFOLPASLDLPGFVGCLELSTVNDDVVSlyNFKNiYnLNtATAPPcARN	1132
Rhinatrema_bivittatum	DSVFYVGGVPEDFOLPASLNLPGFQGCLLAtlNDdVIsLYNFRdIYnIDtVtVPPcARN	1118
Pavo_muticus	NTVFYIGGAPDFKLPPSLDLPGFIGCLELAtLNDDVIsLYNFkHAYnIDtTtSPpCARN	1042
Pavo_cristatus	NTVFYIGGAPDFKLPPSLDLPGFIGCLELAtLNDDVIsLYNFkHAYnIDtTtSPpCARN	1042
Gallus_gallus	NTVFYIGGAPDFKLPPSLDLPGFIGCLELAtLNDDVIsLYNFkHAYnIDtTtSPpCARN	1042
Anas_platyrhynchos	NTVFYVGGVPSDFKLPPSLDLPGFIGCLELAtLNDDVIsLYNFRnVYnIDtTtSPpCARN	1041
Chelonia_mydas	NTVFYVGGVPSNFKLPPSLNLPGFVGCLELAtLNDDIIsLYNFkHiYnMnTtASppcARN	1038
Homo_sapiens	DTVFYVGGVPSNFKLPTSLNLPGFVGCLELAtLNDDVIsLYNFkHiYnMDPStSVpCARD	1038
Pan_troglodytes	DTVFYVGGVPSNFKLPTSLNLPGFVGCLELAtLNDDVIsLYNFkHiYnMDPStSVpCARD	1038
Macaca_mulatta	DTVFYVGGVPSNFKLPNSLNLPGFVGCLELAtLNDDVIsLYNFkHiYnMDPStSVpCARD	1038
Callithrix_jacchus	DTVFYVGGVPSNFKLPASLNLPGFVGCLELAtLNDDVIsLYNFkHiYnMDPStSVpCARD	1038
Bos_taurus	DTVFYVGGVPSNFKLPASLNLPGFVGCLELAtLNDDVIsLYNFkHiYnMDPStSVpCARD	1039
Equus_caballus	DTVFYVGGVPSNFKLPASLNLPGFVGCLELAtLNDDVIsLYNFkHiYnMDPStSVpCARD	1039
Pteropus_alecto	DIVFYVGGVPSNFKPPASLNLPGFAGCLELAtLNDDVIsLYNFkNiYnMDPStSVpCARD	1039
Mus_musculus	DTVFYVGGVPANFKLPASLNLPSYSgCLELAtLNDDVIsLYNFkHiYnMDPStSVpCARD	1033
Ornithorhynchus_anatinus	DTVFYVGGVPPNFKLPPSLNLPGFVGCLELAtLNDDVIsLYNFkHiFNLDPtKAtPCARD	1032
Latimeria_chalumnae	NTVFYVGGVPSDFRLPVSlnLpNyVGdIElAtLNdNIIsLYNFkQLHnMDtAAtpPSARY	1100
1150.....1160.....1170.....1180.....1190.....1200	

	.*.....***.:*.::***:* *****:***. :*.*:***:**: :*	
Xenopus_tropicalis	KLAFTQSRRAASYFFDGTGYAVIRNMERRGRFTQVTRFDIEVRTPVDNALIFLMVNGTKFFF	1192
Rhinatrema_bivittatum	KLVFTQSRAVSYYFDDSGYGAVKNLERRGRFSQVTRFDVEVRTPAENALVFLMVNGSKFFF	1178
Pavo_muticus	KLAFTQSRAVSYYFDDSGYAVARNIERRGRFSQVTRFDIEVRTPTDNGLILLMVNGSMFFF	1102
Pavo_cristatus	KLAFTQSRAVSYYFDDSGYAVARNIERRGRFSQVTRFDIEVRTPIDNGLILLMVNGSMFFF	1102
Gallus_gallus	KLAFTQSRAVSYYFDDSGYAVARNIERRGRFSQVTRFDIEVRTPSDNGLILLMVNGSMFFF	1102
Anas_platyrhynchos	KLAFTQSRAVSYYFDDSGYAVARNIERRGRFSQVTRFDIEVRTPIDNGLILLMVNGSMFFF	1101
Chelonia_mydas	KLAFTQSRAVSYYFDDSGYGLVRNIERRGRFSQVTRFDIEVRTPIDNGLIFLMINGSMFFF	1098
Homo_sapiens	KLAFTQSRRAASYFFDGSYAVVRDITRRGKFGQVTRFDIEVRTPADNGLILLMVNGSMFFF	1098
Pan_troglodytes	KLAFTQSRRAASYFFDGSYAAVRDITRRGKFGQVTRFDIEVRTPADNGLILLMVNGSMFFF	1098
Macaca_mulatta	KLAFTQSRRAASYFFDGSYAAVRDITKRKGKFGQVTRFDIEVRTPADNSLILLMVNGSMFFF	1098
Callithrix_jacchus	KLAFTQSRRAASYFFDGSYAIVRNIERRGKFGQVTRFDIEVRTTADNGLILLMINGSMFFF	1098
Bos_taurus	KLAFTQSRRAASYFFDGSYAIVRDIERRGKFGQVTRFDIEVRTPADNGLVLLMVNGSMFFF	1099
Equus caballus	KLAFTQSRRAASYFFDGSYAVVRDITRRGKFGQVTRFDIEVRTPADNGLILLMVNGSMFFF	1099
Pteropus_alecto	KLAFTQSRRAASYFFDGSYAVVKDITRRGKFGQVTRFDIEVRTPADNGLVLLMVNGSMFFF	1099
Mus_musculus	KLAFTQSRRAASYFFDGSYAVVRDITRRGKFGQVTRFDIEVRTPADNGLVLLMVNGSMFFF	1093
Ornithorhynchus_anatinus	KLAFTQSRRAASYFFDGSYAVVRDITRRGKFGQVTRFDIEVRTPTDNGLVLLMVNGTAFFF	1092
Latimeria_chalumnae	KLAFTQSRRAANYFFDGSYALVSNIERRGKFSQVTRFDVEVRTPADNALLLLVMNGSMYFF	1160
1210.....1220.....1230.....1240.....1250.....1260	

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      : ::*: * : *****: * *** ** :.***: ***:***** **:*****:
Xenopus_tropicalis  SMELQDGYLRRLHYDFGFAKGPVLLDSAKKFOVNDARYHEISVIYHNSKKMILVDDRHHV 1252
Rhinatrema_bivittatum SLEIQDGFRLRLLYDFGFSKGPVLLDSLKALISDARSHEVSVIYHNFKKMILVDDRHHV 1238
Pavo_muticus        SLEMHNGFLYLRDYDFGFSSTGPVLLDSMKKAQINDAKFHEISIIYHNSKKMILVDDRHHI 1162
Pavo_cristatus      SLEMHNGFLYLRDYDFGFSSTGPVLLDSMKKAQINDAKFHEISIIYHNSKKMILVDDRHHI 1162
Gallus_gallus       SLEMHNGFLYLRDYDFGFSSTGPVLLDSMKKAQINDAKFHEISIIYHNSKKMILVDDRHHI 1162
Anas_platyrhynchos  SLEMHNGFLYLRDYDFGFSSTGPVLLDSMKKAQINDAKFHEISIIYHNSKKMILVDDRHHI 1161
Chelonia_mydas      SLVMQNGFLYLRDYDFGFSSTPMLLEDSSMKKAQINDAKFHEISVIYHNSKKMILVDDRHHI 1158
Homo_sapiens        RLEMRNGYLHVFDYDFGFSGGPVHLEDTLKKAQINDAKYHEISIIYHNDKKMILVDDRHHV 1158
Pan_troglodytes     RLEMRNGYLHVFDYDFGFSGGPVHLEDMLKKAQINDAKYHEISIIYHNDKKMILVDDRHHV 1158
Macaca_mulatta      RLEMRNGYLHVFDYDFGFSGGPVHLEDTLKKAQINDAKYHEISIIYHNDKKMILVDDRHHV 1158
Callithrix_jacchus  RLEMRNGYLHVFDYDFGFSGGPVHLEDTLKKAQINDAKYHEISIIYHNDKKILVDDRHHV 1158
Bos_taurus          SLEMRSGYLHVFDYDFGFSNGPVHLEDTLKKAQINDAKYHEISIIYHNDKKMILVDDRHHV 1159
Equus_caballus      SLEMRNGYLHVFDYDFGFSNGPVHLEDTLKKAQINDAKYHEISIIYHNDKKMILVDDRHHV 1159
Pteropus_alecto     SLEMRSGYLHVFDYDFGFSNGPVHLEDTLKKAQINDAKYHEISIIYHNDKKMILVDDRHHV 1159
Mus_musculus        SLEMRNGYLHVFDYDFGFSNGPVHLEDTLKKAQINDAKYHEISIIYHNDKKMILVDDRHHV 1153
Ornithorhynchus_anatinus SLEMRNGFLHVFDYDFGFSNGPVHLEDTLKKAQINDAKYHEISVIYHNDKKMILVDDRHHV 1152
Latimeria_chalumnae SLQMDDGYLIVHYDFGFAKGPVLLDNLKKQINDAKYHEISVIYHNSKKMILVDDRHHV 1220
      .....1270.....1280.....1290.....1300.....1310.....1320

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      *: ::*: *****: * * . .:* * :*****:*****:
Xenopus_tropicalis  KSVDNKTSIPFSDIYIGGAPSLVLSV--KSHLGADIAFKGCIKGFQFQKKDFNLLLEP 1310
Rhinatrema_bivittatum KTVENDKMSMPFSDIYIGGAPSELLYSV--RSHLAVNVNFKGCMKSFQFQKKDFNLLLEP 1296
Pavo_muticus        KSVDNERTAMPFTDIYIGGAPAEILQSS--ISSHLAGIIGFKGCMKGFQFQKKDFNLLLEP 1221
Pavo_cristatus      KSVDNERTAMPFTDIYIGGAPAEILQSS--ISSHLAGIIGFKGCMKGFQFQKKDFNLLLEP 1221
Gallus_gallus       KSIDNERTAMPFTDIYIGGAPAEVLQSS--ISSHLAGIIGFKGCMKGFQFQKKDFNLLLEP 1221
Anas_platyrhynchos  KSVDNERTAMPFTDIYIGGAPAEILQSS--ISSHLAGSIGFKGCMKGFQFQKKDFNLLLEP 1220
Chelonia_mydas      KSVENKKAAMPFTDIYIGGAPSEILKSNVSPHLTVNTGFKGCMKGFQFQKKDFNLLLEP 1218
Homo_sapiens        KSMDNKMKIPFTDIYIGGAPPEILQSRALRAHLPLDINFRGCMKGFQFQKKDFNLLLEQ 1218
Pan_troglodytes     KSMDNKMKIPFTDIYIGGAPPEILQSRALRAHLPLDINFRGCMKGFQFQKKDFNLLLEQ 1218
Macaca_mulatta      KSMDNKMKIPFTDIYIGGAPPEILQSRALRAHLPLDINFRGCMKGFQFQKKDFNLLLEQ 1218
Callithrix_jacchus  KSMDNKMKIPFTDIYIGGAPPEILQSRALRAHLPLDINFRGCMKGFQFQKKDFNLLLEQ 1218
Bos_taurus          KSMDNKMKIPFTDIYIGGAPPEILQSRALRAHLPLDINFRGCMKGFQFQKKDFNLLLEQ 1219
Equus_caballus      KSMDNKMKIPFTDIYIGGAPPEILQSRALRAHLPLDINFRGCMKGFQFQKKDFNLLLEQ 1219
Pteropus_alecto     KSMDNKMKIPFTDIYIGGAPSEILHSRTLKAHLPLDINFRGCMKGFQFQKKDFNLLLEQ 1219
Mus_musculus        KSTDNEKKIPFTDIYIGGAPQEVLSRTLKAHLPLDINFRGCMKGFQFQKKDFNLLLEQ 1213
Ornithorhynchus_anatinus KSVDNKMKIPFTDIYIGGAPSDILRSRTLKAHLPLDINFRGCMRGFQFQKKDFNLLLEQ 1212
Latimeria_chalumnae KSVSEKKAAMPFTDIYIGGVPSSELLTPS--LRSNLAVDVGFRGCIKGFQFQKKDFNLLLEP 1279
      .....1330.....1340.....1350.....1360.....1370.....1380

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      **: . ** *: **** :*****:***: * : . ** ***:***: *.****:
Xenopus_tropicalis  DTLGISYGCPEESLMSRRAYFNGQSFIASSQKLAPFDSFEGGFSFKTLQPSGLLLYHSEG 1370
Rhinatrema_bivittatum GSLGISYGCLEESLMSRRAFFNGESFIASSQKLSLSNAFEVGFSSFRSLVPTGLLLYHAEK 1356
Pavo_muticus        GTLGISYGCPEEDSLISRKAYFNGESFIASSQKVSLLSEFEGGFNFRTLQPNGLLFYYSEG 1281
Pavo_cristatus      GTLGISYGCPEEDSLISRKAYFNGESFIASSQKVSLLSEFEGGFNFRTLQPNGLLFYYSEG 1281
Gallus_gallus       GTLGISYGCPEEDSLISRKAYFNGESFIASSQKVSLLSEFEGGFNFRTLQPNGLLFYYSEG 1281
Anas_platyrhynchos  GTLGISYGCPEEDSLMSRKAYFNGESFIASSQKVSLLSEFEGGFNFRTLQPNGLLFYYSEG 1280
Chelonia_mydas      GTLGISYGCPEESLMSRRAYFNGESYISSSQKMSLFDEFEGGFNFRTLQPNGLLFHYAEG 1278
Homo_sapiens        ETLGVGYGCPEDSLISRRAFYNGQSFIASIQKISFFDGFEGGFNFRTLQPNGLLFYYASG 1278
Pan_troglodytes     ETLGVGYGCPEDSLISRRAFYNGQSFIASIQKISFFDGFEGGFNFRTLQPNGLLFYYASG 1278
Macaca_mulatta      ETLGVGYGCPEDSLISRRAFYNGQSFIASIQKISFFDGFEGGFNFRTLQPNGLLFYYASG 1278
Callithrix_jacchus  ETLGVGYGCPEDSLISRRAFYNGQSFIASIQKISFFDGFEGGFNFRTLQPNGLLFYYASG 1278
Bos_taurus          ETLGVGYGCPEDSLISRRAFYNGQSYIASSQKISFFDGFEGGFNFRTLQPNGLLFYYASG 1279
Equus_caballus      ETLGVGYGCPEDSLISRRAFYNGQSFIASIQKISFFDGFEGGFNFRTLQPNGLLFYYASG 1279
Pteropus_alecto     ETLGVGYGCPEDYLISRRAFYNGQSFIASIQKISFFDGFEGGFNFRTLQPNGLLFYYASG 1279
Mus_musculus        ETLGVGYGCPEDSLISRRAFYNGQSFIASIQKISFFDGFEGGFNFRTLQPNGLLFYYTSG 1273
Ornithorhynchus_anatinus ETLGIGYGCPEDSLISRRAFYNGQSFIASSQKISFFDGFEGGFNFRTLQPNGLLFYYASG 1272
Latimeria_chalumnae GSLGISSGCPEDSLMSRTAYFNGESFIASSQKIFPFENFEGGFNFRTLQPSGLLFHYDEG 1339
      .....1390.....1400.....1410.....1420.....1430.....1440

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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Xenopus_tropicalis	A	D	V	F	S	V	S	M	D	K	G	S	V	V	L	R	I	K	D	I	K	V	O	S	K	N	R	K	Y	S	D	G	Q	S	H	F	V	V	A	S	V	S	P	T	R	Y	Q	L	L	V	D	-E	T	D--ASV	1427					
Rhinatrema_bivittatum	D	E	N	F	T	I	A	L	E	E	G	S	V	V	L	S	V	T	G	T	R	V	O	S	T	G	R	H	Y	N	D	G	H	N	H	F	V	I	T	S	V	A	P	T	G	Y	E	L	L	V	D	-E	E	R--KTS	1413					
Pavo_muticus	S	D	V	L	S	I	S	M	D	R	G	A	V	L	N	A	S	G	I	K	I	Q	S	P	D	R	N	Y	N	D	G	K	T	H	F	I	I	T	S	V	T	P	E	R	Y	E	L	S	V	D	-D	K	K	Q	S	K	K	N	1340	
Pavo_cristatus	S	D	V	L	S	I	S	M	D	R	G	A	V	L	N	A	S	G	I	K	I	Q	S	P	D	R	N	Y	N	D	G	K	T	H	F	I	I	T	S	V	T	P	E	R	Y	E	L	S	V	D	-D	K	K	Q	S	K	K	N	1340	
Gallus_gallus	S	D	V	L	S	I	S	M	D	R	G	A	V	L	N	A	S	G	I	K	I	Q	S	P	D	R	N	Y	N	D	G	K	T	H	F	I	I	T	S	V	T	P	E	R	Y	E	L	S	V	D	-D	K	K	Q	S	K	K	N	1340	
Anas_platyrhynchos	S	D	V	L	S	I	S	M	D	R	G	A	V	L	N	A	S	G	I	K	I	Q	S	P	D	R	N	Y	N	D	G	K	T	H	F	I	I	T	S	V	T	P	E	R	Y	E	L	S	V	D	-D	K	K	Q	S	K	K	N	1339	
Chelonia_mydas	P	D	M	F	S	I	S	M	N	D	G	A	V	L	N	A	M	G	T	E	V	O	S	K	E	T	R	Y	N	D	G	K	T	H	F	I	I	T	S	V	S	Q	E	R	Y	E	L	I	V	D	-D	K	K	Q	S	K	K	N	1337	
Homo_sapiens	S	D	V	F	S	I	S	L	D	N	G	T	V	I	M	D	V	K	G	I	K	V	O	S	V	D	K	Q	Y	N	D	G	L	S	H	F	V	I	S	S	V	S	P	T	R	Y	E	L	I	V	D	-K	S	R	V	G	S	K	N	1337
Pan_troglodytes	S	D	V	F	S	I	S	L	D	N	G	T	V	I	M	D	V	K	G	I	K	V	O	S	V	D	K	Q	Y	N	D	G	L	S	H	F	V	I	S	S	V	S	P	T	R	Y	E	L	I	V	D	-K	S	R	V	G	S	K	N	1337
Macaca_mulatta	S	D	V	F	S	I	S	L	D	N	G	T	V	V	M	D	V	K	G	I	K	V	E	S	V	D	K	Q	Y	N	D	G	L	S	H	F	V	I	T	S	V	S	P	T	R	Y	E	L	I	V	D	-K	S	R	V	G	S	K	N	1337
Callithrix_jacchus	S	D	V	F	S	I	S	L	D	N	G	T	V	V	M	N	V	K	G	I	K	V	O	S	V	D	K	Q	Y	N	D	G	L	S	H	F	V	I	T	S	V	S	P	T	R	Y	E	L	I	V	D	-K	S	R	L	G	S	K	N	1337
Bos_taurus	S	D	M	F	S	I	S	L	N	N	G	T	V	I	M	D	V	K	G	I	K	V	O	S	A	D	K	Q	Y	N	D	G	L	S	H	F	I	I	T	S	V	S	P	A	R	Y	E	L	I	V	D	-K	S	R	L	G	S	K	N	1338
Equus caballus	S	D	V	F	S	V	S	L	D	N	G	T	V	I	M	D	V	K	G	I	K	V	O	S																																				

	*****:	*****:***: :*:*:*****:*.***:	
Xenopus_tropicalis	QDRQKPGASSLVARTFYFGGTPVGISQANFTGCI	SNAYFTRVDRDVEVEDFQKYTEKVQS	1487
Rhinatrema_bivittatum	PAREHLNPTPMNAMKFYFGGALAGVPYTNFTGCI	SNAYFTRMDRDRDVDEDFORYTEKVQA	1473
Pavo_muticus	PVKDRAGKSPDSIKKFYFGGSLKTTQANFTGCI	SNAYFTRLRDREVEVEDFORYSEKVQT	1400
Pavo_cristatus	PVKDRAGKSPDSIKKFYFGGSLKTTQANFTGCI	SNAYFTRLRDREVEVEDFORYSEKVQT	1400
Gallus_gallus	PVKDRAGKSPDSIKKFYFGGSLKTTQANFTGCI	SNAYFTRLRDREVEVEDFORYSEKVQT	1400
Anas_platyrhynchos	PAKDRAGKSPDSIKKFYFGGSLKTTQANFTGCI	SNAYFTRLRDREVEVEDFORYSEKVQT	1399
Chelonia_mydas	PARDKTEQKPASAKKFYFGGSPIGTQYANFTGCI	SNAYFIRLDRDREVEVEDFORYPEKVQT	1397
Homo_sapiens	PTKGKIEQTQASEKKFYFGGSPISAQYANFTGCI	SNAYFTRVDRDVEVEDFORYTEKVHT	1397
Pan_troglodytes	PTKGKIEQTQASEKKFYFGGSPISAQYANFTGCI	SNAYFTRVDRDVEVEDFORYTEKVHT	1397
Macaca_mulatta	PTKGKIEQTQAGEKKFYFGGSPISAQYANFTGCI	SNAYFTRVDRDVEVEDFORYTEKVHT	1397
Callithrix_jacchus	PTKGKVEQTQAGEKKFYFGGSPISAQYANFTGCI	SNAYFTRVDRDVEVEDFORYTEKVHT	1397
Bos_taurus	PTKGKVEQTQADEKKFYFGGSPITPOYANFTGCI	SNAYFTRLDRDREVEVEDFORYSEKVHT	1398
Equus_caballus	PTKGKAEQTQAGEKKFYFGGSPISPOYANFTGCI	SNAYFTRLDRDREVEVEDFORYSEKVHT	1398
Pteropus_alecto	PTKGKSEQAQADEKKFYFGGSPISPOYANFTGCI	SNAYFTRLDRDREVEVEDFORYSEKVHT	1398
Mus_musculus	PTKGKAEQTQTTEKKFYFGGSPISPOYANFTGCI	SNAYFTRLDRDREVEVEDFORYSEKVHT	1392
Ornithorhynchus_anatinus	PAKGKAEPASGSESRFYFGGSPVSPQANFTGCI	SDAYFSRLDRDREVEVEDFORYPEKVHT	1391
Latimeria_chalumnae	PTSGKREONPATNNKFYFGGSPS-SQYSNFTGCI	SNAYLTKVDRDREVEVEDFORYTEKVQV	1458
1510.....1520.....1530.....1540.....1550.....1560		

Xenopus_tropicalis	SLYGCVPVESPPVALFQKNGKNSSSKDKGKLRRKSVGMDDTTLES---	HAAFGSKETEEEDSEEV	1544
Rhinatrema_bivittatum	NLDGCPVEPPPALLDGDGQKISKAKGRLLNKGRRKDQESAAPLLTTGYRSEQRKMKSHTD		1533
Pavo_muticus	SFYGCPVESPPVALLHKKGRNSSKAKGNRNKKVGRDKDKASQP-STGLKKLYQEVNMOKD		1459
Pavo_cristatus	SFYGCPVESPPVALLHKKGRNSSKAKGNRNKKVGRDKDKASQP-STGLKKLYQEVNMOKD		1459
Gallus_gallus	SFYGCPVESPPVALLHKKGRNSSKAKGNRNKKVGRDKDKASQP-STGLKKLYQEVNMOKD		1459
Anas_platyrhynchos	SFYGCPVESPPVALLHKKGKNSSKAKGNRNKKVGRDKDKISQP-STGLKKMYQEVNMOKD		1458
Chelonia_mydas	SLYGCPVDSPPVALLHKKGKNSSKAKGSHNKKVGREKERTSK--ATGLKNLDDQEMSVDQ		1455
Homo_sapiens	SLYECPIESSPLFLHLHKKGKLNLSKP KASONKKGGKSKDAPSWD-PVALK--LPERNTPRN		1454
Pan_troglodytes	SLYECPIESSPLFLHLHKKGKLNLSKP KASONKKRGKSKDAPSWD-PVALK--LPERNTPRN		1454
Macaca_mulatta	SLYECPIESSPLFLHLHKKGKLNLSKP KASONKKGGKSKDAPSWD-PVALK--FPERNTPRN		1454
Callithrix_jacchus	SLFECPIESSPLFLHLHKKGKLNLSKP KTS ONKKGGKSKDAPSWD-PVGLK--FPQNTPRN		1454
Bos_taurus	SLYECPIESSPLFLHLHKGRNSSKPKTSONKKGEKSKDAPSWD-PVGLK--FLERNIPRD		1455
Equus caballus	SLYECPIESSPLFLHLHKKGKNSKP KTS ONKKGGKSKDAPSWD-PAGLK--FLERNAPRD		1455
Pteropus_alecto	SLYECPIESSPLFLHLHKKGKNSKP KTS ONKKGEKSKDSPWD-PVGLK--FLERNAPRD		1455
Mus_musculus	SLYECPIESSPLFLHLHKKGKNSKP KT--NKQGEKSKDAPSWD-PIGLK--FLEQKAPRD		1447
Ornithorhynchus_anatinus	SLYDCPIESSPPVSLHKKKEKNSSRPKYONVKGGKNKESLSRF-PTGPK--SLEQDAPRE		1448
Latimeria_chalumnae	SLHDGPVEKPPAALVSKHERNSVKSGEGRKRKAGRAKNIPQL-PVGLKHVYEGSNP KEL		1517
1570.....1580.....1590.....1600.....1610.....1620		

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Xenopus_tropicalis	TLCSLS SRPKAARQAHLVGGIANSRQEFNHIPNGFNEKSELFVRLKTHSSNGMIFVYVSDK	1604
Rhinatrema_bivittatum	PACYLPSPKPKATENAWQYGGIANSRQEYFPHIPANFTERAHLSLSLRTHLSSGMIFVYVSDK	1593
Pavo_muticus	PQCLLPMPNPKATEHAYQFGGTANSRQEFDHIPKDFSERAQFSISLKHSSHGIMIFYVSDQ	1519
Pavo_cristatus	PQCLLPMPNPKATEHAYQFGGTANSRQEFDHIPKDFSERAQFSISLKHSSHGIMIFYVSDQ	1519
Gallus_gallus	PQCHLPMPNPKATEHAYQFGGTANSRQEFDHLPKDFSERAQFSISLKHSSHGIMIFYVSDQ	1519
Anas_platyrhynchos	PQCQLPMPNPKATENAYQFGGTANSRQEFDHIPKDLSERAQFSISLKHSSHGIMIFYVSDQ	1518
Chelonia_mydas	PGCQLSKNPATAIEHANQFGGIANSRQEFDHIPKNFSDRSQFSISLKHSSHGIMIFYASDQ	1515
Homo_sapiens	SHCHLSNSPRAIEHAYQYGGTANSRQEFEHLKGDFGAKSQFSIRLRLTRSSHGMIFYVSDQ	1514
Pan_troglodytes	SHCHLSNSPRAIEHAYQYGGTANSRQEFEHLKGDFGAKSQFSIRLRLTRSSHGMIFYVSDQ	1514
Macaca_mulatta	SHCHLSNSPRAIEHAYQYGGTANSRQEFEHLKGDFGAKSQFSIRLRLTRSSHGMIFYVSDQ	1514
Callithrix_jacchus	SHCHLSNSPRAIEHAYQYGGTANSRQEFEHLKEDFGAKSQFSIRLRLTRSSHGMIFYVSDQ	1514
Bos_taurus	SHCQLNSPRAIEHAYQYGGTANSRQEFEHLKRDFGKESQFSIRLKLTRSSHGMIFYVSDQ	1515
Equus_caballus	SHCQLNSRPRRAIEHAYQYGGTANSRQEFEHLKGDFGKESQFSIRLKLTRSSHGMIFYVSDQ	1515
Pteropus_alecto	SHCRLNSPRAIEHAYQYGGTANSRQEFEHLNGDFGKESQFSIRLKLTRSSHGMIFYVSDQ	1515
Mus_musculus	SHCHLSSSPRAIEHAYQYGGTANSRQEFEEHQGDFGKESQFAIRLKLTRSSHGMIFYVSDQ	1507
Ornithorhynchus_anatinus	SYCRLSKSPQAIAHAYQYGGTANSRQEFEYILKGDFGKRSQFSRLKLKLTRSSHGMIFYVSDQ	1508
Latimeria_chalumnae	SQCYLSLRPTATQHAYQYGGTIPNSRQEFNSIPESFSERSHFSISLRLTRSSHSLIFYVADE	1577
1630.....1640.....1650.....1660.....1670.....1680	

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Xenopus_tropicalis	EEDNFMFTLFLSHGRLTFMFNNGQQKLRIKSQEKYNDGLWHSVLCIREKNKGRLIINGLRV	1664
Rhinatrema_bivittatum	EEENFLTTLFLAQGKLNLFVNFGPKKLKIKSQEKYSDDLWHNVIFTRERNKGRLIIDGLRM	1653
Pavo_muticus	KETNFMTLFLVAHGRLIFMFNAGHQKIRIKSQEKYNDGLWNNVIFIRGKNIGRLIIDGLRV	1579
Pavo_cristatus	KETNFMTLFLVAHGRLIFMFNAGHQKIRIKSQEKYNDGLWNNVIFIRGKNIGRLIIDGLRV	1579
Gallus_gallus	KETNFMTLFLVAHGRLIFMFNAGHQKIRIKSQEKYNDGLWNNVIFIRGKNIGRLIIDGLRV	1579
Anas_platyrhynchos	KETNFMALFLVAHGRLIFMFNAGHQKIRIKSQEKYNDGLWNNVIFIRGKNIGRLIIDGLRV	1578
Chelonia_mydas	EENNFTITLFLVAHGRLIFMNVGHQKLRIKSQEKYNDGLWNNVIFVREKDTGRLIIDGLRV	1575
Homo_sapiens	EENDFMTLFLAHGRLVFMFNVGHKKLKIRSQEKYNDGLWHDVIFIRERSSGRLVIDGLRV	1574
Pan_troglodytes	EENDFMTLFLAHGRLVFMFNVGHKKLKIRSQEKYNDGLWHDVIFIRERSSGRLVIDGLRV	1574
Macaca_mulatta	EENDFMTLFLAHGRLVFMFNVGHKKLKIRSQEKYNDGLWHDVVIFIRERSSGRLVIDGLRV	1574
Callithrix_jacchus	EENDFMTLFLAHGRLVFMMFNVGHKKLKIRSQEKYNDGQWHDVIFIREKSSGRLVIDGLRV	1574
Bos_taurus	EENNFMFTLFLAHGRLVFMMFNVGHKKLKIRSQEKYNDGLWHDVIFIREKSSGRMIIDGLRV	1575
Equus caballus	EENDFMTLFLAHGRLVFMMFNVGHKKLKIRSQEKYNDGLWHDVIFIREKSSGRLIIDGLRV	1575
Pteropus_alecto	EENDFMTLFLAHGRLVFMMFNVGHKKLKIRSQEKYNDGLWHDVIFIREKSSGRLIIDGLRV	1575
Mus_musculus	EENDFMTLFLAHGRLVFMMFNVGHKKLKIRSQEKYNDGLWHDVIFIREKSSGRLVIDGLRV	1567
Ornithorhynchus_anatinus	EENDFMTLFLVAHGRLVFVNFGHRKVKLRSQEKYNDGLWHDVIFVRGVNSGRLTIDGLRV	1568
Latimeria_chalumnae	WEDNFMALFLAHGRIVFMFNVGHQKLRIKTQEKYNDGLWNAIFMREKNKGRLIVDGIKV	1637
1690.....1700.....1710.....1720.....1730.....1740	

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<i>Xenopus_tropicalis</i>	LEDSISA	--AAVTWTVDAPFY	LGGVAPG	RAIKNVQ	INSAYSF	NGCLSNLQ	LN	GRALTSPS
<i>Rhinatrema_bivittatum</i>	QEKIFPI	--SAFPWHIQGPLY	LGGVAPG	KASKHIQ	STSMDSFT	GCLSR	LHVNEQ	VIPAA
<i>Pavo_muticus</i>	LEEPFNG	--NANTWQVTEPLY	IGGVAPG	KAVKNIQ	INSVVSF	SGCLSNLQ	LN	GRSITSAS
<i>Pavo_cristatus</i>	LEEPFNG	--NANTWQVTEPLY	IGGVAPG	KAVKNIQ	INSVVSF	SGCLSNLQ	LN	GRSITSAS
<i>Gallus_gallus</i>	LEETFNV	--NANTWQVTEPLY	IGGVAPG	KAVKNIQ	INSVVSF	SGCLSNLQ	LN	GRSITSAS
<i>Anas_platyrhynchos</i>	LEEPFSG	--NTNTWQVTEPLY	IGGVAPG	KAVKNIQ	INSVVSF	SGCLSNLQ	LN	GRSITSAS
<i>Chelonia_mydas</i>	LEESLPS	--VDNTWQVSGPLY	IGGVAPG	KAVKNIQ	INSVVSF	NGCLSNLQ	LN	GRSITSAS
<i>Homo_sapiens</i>	LEESLPP	--TEATWKIKGPIYL	GGVAPG	KAVKNVQ	INSIYSF	SGCLSNLQ	LN	GASITSAS
<i>Pan_troglodytes</i>	LEESLPP	--TEATWKIKGPIYL	GGVAPG	KAVKNVQ	INSIYSF	SGCLSNLQ	LN	GASITSAS
<i>Macaca_mulatta</i>	LEESLPP	--TEATWKIKGPIYL	GGVAPG	KAVKNVQ	INSIYSF	SGCLSNLQ	LN	GASITSAS
<i>Callithrix_jacchus</i>	LEESLPP	--TGVTWKIKGPIYL	GGVAPG	KAVKNVQ	INSIYSF	SGCLAH	LN	GASITSAS
<i>Bos_taurus</i>	LEESLPP	--TGADWKIRGPIYL	GGVAPG	RAVKNVQ	INSVVSF	SGCLSNLQ	LN	GASITSAS
<i>Equus_caballus</i>	LEESLPP	--TGAAWKIKGPIYL	GGVAPG	RAVKNVQ	INSVVSF	SGCLSNLQ	LN	GASIASAS
<i>Pteropus_alecto</i>	LEESLPS	--TGAAWKIKGPIYL	GGVAPG	RAVKNVQ	INSVVSF	SGCLSNLQ	LN	GASITSAS
<i>Mus_musculus</i>	LEERLPP	--SGAAWKIKGPIYL	GGVAPG	RAVKNVQ	ITSVVSF	SGCLGNLQ	LN	GASITSAS
<i>Ornithorhynchus_anatinus</i>	LEESVPVP	ASAIWDKIRSF	IFLGGVAPG	RAVKNVQ	INSVVSF	SGCLSD	LN	QNGTSVTSAS
<i>Latimeria_chalumnae</i>	LEQSLDVN	--DAPWHVRKPFY	VGVP	PRKAVKNIQ	LSNVQS	FSGCLRN	FD	LGQWISSAS
1750.....	1760.....	1770.....	1780.....	1790.....	1800		

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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Xenopus_tropicalis	QTFSVTPCFEGPMESGTYISSEGGYVILDDSFSTGLTFEFALEVRPRNNSGVLIHIQNVN	1782
Rhinatrema_bivittatum	RTFSVTPCFEGPTEVGTYFSAEGGYVVLDESITLGQ--KLELEVRPRSRSGVLVHAHSMN	1769
Pavo_muticus	QTFSVTPCFEGPSEAGTYFSSEGGYVVLDESFSLGLKFEVVFIEIRPRSSSGILLHGHSVN	1697
Pavo_cristatus	QTFSVTPCFEGPSEAGTYFSSEGGYVVLDESFSLGLKFEVVFIEIRPRSSSGILLHGHSVN	1697
Gallus_gallus	QTFSVTPCFEGPSEAGTYFSSEGGYVVLDESFSLGLKFEVVFIEIRPRSSSGILLHGHSVN	1697
Anas_platyrhynchos	QTFSVTPCFEGPSEAGTYFSSEGGYVVLDESFSLGLKFEVVFIEIRPRSSSGILLHGHSVN	1696
Chelonia_mydas	QTFSVTPCFEGPSEAGTYFSSEGGYVILDESFSLGLKFEVVFIEIRPRSSSGILMHGHSVN	1693
Homo_sapiens	QTFSVTPCFEGPMETGYTFSTEGGYVVLDESFNIGLKFIEIAFEVRPRSSSGITLVHGHSVN	1692
Pan_troglodytes	QTFSVTPCFEGPMETGYTFSTEGGYVVLDESFNIGLKFIEIAFEVRPRSSSGITLVHGHSVN	1692
Macaca_mulatta	QTFSVTPCFEGPMETGYTFSTEGGYVVLDESFNIGLKFIEIAFEVRPRSSSGITLVHGHSVN	1692
Callithrix_jacchus	QTFSVTPCFEGPMETGYTFSTEGGYVVLDESFNIGLKFIEIAFEVRPRSSSGILVHGHSVN	1692
Bos_taurus	QTFSVTPCFEGPMETGYTFSTEGGYVVLDESFNIGLKFIEIAFEVRPRSSSGITLVHGHSVN	1693
Equus_caballus	QTFSVTPCFEGPMETGYTFSTEGGYVVLDESFNIGLKFIEIAFEVRPRSSSGITLVHGHSVN	1693
Pteropus_alecto	QTFSVTPCFEGPMETGYTFSTEGGYVVLDESFNIGLKFIEIAFEVRPRSSSGITLVHGHSVN	1693
Mus_musculus	QTFSVTPCFEGPMETGYTFSTEGGYVVLDESFNIGLKFIEIAFEVRPRSSSGITLVHGHSVN	1685
Ornithorhynchus_anatinus	QTFSVTPCFEGPMETGYTFSEGGYVVLDESFNIGLTFEIAFEVRPRNSGILFHHGHSVN	1688
Latimeria_chalumnae	QAFGVTPCFEGAMELGTYFSAEGGYVLDDSFNGLGLKFELVFVRSRNSGILLHVRSPN	1755
1810.....1820.....1830.....1840.....1850.....1860	

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Xenopus_tropicalis	GEYLNLMHKQGQVIVKVNNGNREFSTRVIPKQSLCDGQWHRIAVIRDGNNVQLDVDSEIN	1842
Rhinatrema_bivittatum	GEYLSVYMRGQIIIHANITANGFSTSVTPKQSLCDGQWHRITVIRDSNNVQLGVDSEMS	1829
Pavo_muticus	GEYLNMMHRNGQVTVKLNNGIRDFTSVTLKQSLCDGRWHRIAVIRDANVVQLDVDSEVN	1757
Pavo_cristatus	GEYLNMMHRNGQVTVKLNNGIRDFTSVTLKQSLCDGRWHRIAVIRDANVVQLDVDSEVN	1757
Gallus_gallus	GEYLNMMHRNGQVTVKLNNGIRDFTSVTLKQSLCDGRWHRIAVIRDANVVQLDVDSEVN	1757
Anas_platyrhynchos	GEYLNMMHRNGQVTVKLNNGIRDFTSVTLKQSLCDGRWHRIAVIRDANVVQLDVDSEVN	1756
Chelonia_mydas	GEYLNMMHKQGQVIVKLNNGIRHFTSVTPKQSLCDGMWHRIAVIRASNNVQLDVDSEVN	1753
Homo_sapiens	GEYLNVMHKNGQVIVKVNNGIRDFTSVTPKQSLCDGRWHRITVIRDSNNVQLDVDSEVN	1752
Pan_troglodytes	GEYLNVMHKNGQVIVKVNNGIRDFTSVTPKQSLCDGRWHRITVIRDSNNVQLDVDSEVN	1752
Macaca_mulatta	GEYLNVMHKNGQVIVKVNNGIRDFTSVTPKQSLCDGRWHRITVIRDSNNVQLDVDSEVN	1752
Callithrix_jacchus	GEYLNVMHKNGQVIVKVNNGLRDFTSVTPKQSLCDGRWHRITVIRDSNNVQLDVDSEVN	1752
Bos_taurus	GEYLNVMHKNGQVIVKVNNGIRDFTSVTPKQSLCDGRWHRITVIRDSNNVQLDVDSEVN	1753
Equus_caballus	GEYLNVMHKNGQVIVKVNNGIRDFTSVTPKQSLCDGRWHRITVIRDSNNVQLDVDSEVN	1753
Pteropus_alecto	GEYLNVMHKNGQVIVKVNNGIRDFTSVTPKQGLCDGRWHRITVIRDSNNVQLDVDSEVN	1753
Mus_musculus	GEYLNVMHRNGQVIVKVNNGVRDFTSVTPKQNLCDGRWHRITVIRDSNNVQLDVDSEVN	1745
Ornithorhynchus_anatinus	GEYLNVMHKQGQVIVKVNNGVKDFSTSVTPKQSLCDGRWHRITVIRRLNNVQLDVDSEVN	1748
Latimeria_chalumnae	SEYINLHMKGQVVEVYNGMHEFATVTPKQSLCDGKWHRIAVIRDSNNVQLDVDSEVN	1815
1870.....1880.....1890.....1900.....1910.....1920	

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Xenopus_tropicalis	HVVGPI	NTKVL	DLKEP	VFGV	PGSLL	GPTLT	TTRNS	FTGCI	RNFV	IDERA	VSN	KASL	VS	1902																																																																																																																																																																																																																																																								
Rhinatrema_bivittatum	HVVGPT	ISS--	MNLTE	PLFV	GSVP	ESLLS	ANFKA	PGIF	IGCM	RLSM	IDHR	VVSF	SRAAL	VS	1887																																																																																																																																																																																																																																																							
Pavo_muticus	HVVGGL	PLNPK	ATDH	REP	VFIG	GVPE	SLLT	SSLT	TTRNS	FIGCI	RNFMI	DEKTV	SFSKA </tr <tr> <td>Pavo_cristatus</td> <td>HVVGGL</td> <td>PLNPK</td> <td>ATDH</td> <td>REP</td> <td>VFIG</td> <td>GVPE</td> <td>SLLT</td> <td>SSLT</td> <td>TTRNS</td> <td>FIGCI</td> <td>RNFMI</td> <td>DEKTV</td> <td>SFSKA<!--</td--> <td>VS</td> <td>1817</td> </td></tr> <tr> <td>Gallus_gallus</td> <td>HVVGGL</td> <td>PLNPK</td> <td>ATDH</td> <td>REP</td> <td>VFIG</td> <td>GVPE</td> <td>SLLT</td> <td>SSLT</td> <td>TTRNS</td> <td>FIGCI</td> <td>RNFMI</td> <td>DEKTV</td> <td>SFSKA<!--</td--> <td>VS</td> <td>1817</td> </td></tr> <tr> <td>Anas_platyrhynchos</td> <td>HVVGGL</td> <td>PLNPK</td> <td>ATDH</td> <td>REP</td> <td>VFIG</td> <td>GVPE</td> <td>SLLT</td> <td>SSLT</td> <td>TTRNS</td> <td>FIGCI</td> <td>RNFMI</td> <td>DEKTV</td> <td>SFSKA<!--</td--> <td>VS</td> <td>1817</td> </td></tr> <tr> <td>Chelonia_mydas</td> <td>HVVGGL</td> <td>PLNPK</td> <td>ATDH</td> <td>REP</td> <td>VFIG</td> <td>GVPE</td> <td>SLLT</td> <td>SSLT</td> <td>TTRNS</td> <td>FIGCI</td> <td>RNFMI</td> <td>DEKTV</td> <td>SFSKA<!--</td--> <td>VS</td> <td>1816</td> </td></tr> <tr> <td>Homo_sapiens</td> <td>HVVGGL</td> <td>PLNPK</td> <td>ATDH</td> <td>REP</td> <td>VFIG</td> <td>GVPE</td> <td>SLLT</td> <td>SSLT</td> <td>TTRNS</td> <td>FTGCI</td> <td>RNFV</td> <td>IDGK</td> <td>PVSF</td> <td>SKAAL</td> <td>VS</td> <td>1813</td> </tr> <tr> <td>Pan_troglodytes</td> <td>HVVGGL</td> <td>PLNPK</td> <td>ATDH</td> <td>REP</td> <td>VFIG</td> <td>GVPE</td> <td>SLLT</td> <td>SSLT</td> <td>TTRNS</td> <td>FTGCI</td> <td>RNFV</td> <td>IDGK</td> <td>PVSF</td> <td>SKAAL</td> <td>VS</td> <td>1812</td> </tr> <tr> <td>Macaca_mulatta</td> <td>HVVGGL</td> <td>PLNPK</td> <td>ATDH</td> <td>REP</td> <td>VFIG</td> <td>GVPE</td> <td>SLLT</td> <td>SSLT</td> <td>TTRNS</td> <td>FTGCI</td> <td>RNFV</td> <td>IDGK</td> <td>PVSF</td> <td>SKAAL</td> <td>VS</td> <td>1812</td> </tr> <tr> <td>Callithrix_jacchus</td> <td>HVVGGL</td> <td>PLNPK</td> <td>ATDH</td> <td>REP</td> <td>VFIG</td> <td>GVPE</td> <td>SLLT</td> <td>SSLT</td> <td>TTRNS</td> <td>FTGCI</td> <td>RNFV</td> <td>IDGK</td> <td>PVSF</td> <td>SKAAL</td> <td>VS</td> <td>1812</td> </tr> <tr> <td>Bos_taurus</td> <td>HVVGGL</td> <td>PLNPK</td> <td>ATDH</td> <td>REP</td> <td>VFIG</td> <td>GVPE</td> <td>SLLT</td> <td>SSLT</td> <td>TTRNS</td> <td>FTGCI</td> <td>RNFV</td> <td>IDGK</td> <td>PVSF</td> <td>SKAAL</td> <td>VS</td> <td>1813</td> </tr> <tr> <td>Equus_caballus</td> <td>HVVGGL</td> <td>PLNPK</td> <td>ATDH</td> <td>REP</td> <td>VFIG</td> <td>GVPE</td> <td>SLLT</td> <td>SSLT</td> <td>TTRNS</td> <td>FTGCI</td> <td>RNFV</td> <td>IDGK</td> <td>PVSF</td> <td>SKAAL</td> <td>VS</td> <td>1813</td> </tr> <tr> <td>Pteropus_alecto</td> <td>HVVGGL</td> <td>PLNPK</td> <td>ATDH</td> <td>REP</td> <td>VFIG</td> <td>GVPE</td> <td>SLLT</td> <td>SSLT</td> <td>TTRNS</td> <td>FTGCI</td> <td>RNFV</td> <td>IDGK</td> <td>PVSF</td> <td>SKAAL</td> <td>VS</td> <td>1813</td> </tr> <tr> <td>Mus_musculus</td> <td>HVVGGL</td> <td>PLNPK</td> <td>ATDH</td> <td>REP</td> <td>VFIG</td> <td>GVPE</td> <td>SLLT</td> <td>SSLT</td> <td>TTRNS</td> <td>FTGCI</td> <td>RNFV</td> <td>IDGK</td> <td>PVSF</td> <td>SKAAL</td> <td>VS</td> <td>1805</td> </tr> <tr> <td>Ornithorhynchus_anatinus</td> <td>HVVGPI</td> <td>NP</td> <td>PKPTD</td> <td>QREP</td> <td>VFGV</td> <td>GPES</td> <td>LLT</td> <td>PSLA</td> <td>SGKP</td> <td>PFTGC</td> <td>IRHF</td> <td>VIDER</td> <td>SPVS</td> <td>SKAAL</td> <td>VS</td> <td>1808</td> </tr> <tr> <td>Latimeria_chalumnae</td> <td>HVVGGL</td> <td>PLSP</td> <td>RAIHD</td> <td>KEP</td> <td>VFIG</td> <td>GVPE</td> <td>SLLS</td> <td>SRLE</td> <td>IRNS</td> <td>FTGCI</td> <td>RNFII</td> <td>DESP</td> <td>VVSF</td> <td>SKAAL</td> <td>VS</td> <td>1875</td> </tr> <tr> <td></td> <td>.....</td> <td>1930</td> <td>.....</td> <td>1940</td> <td>.....</td> <td>1950</td> <td>.....</td> <td>1960</td> <td>.....</td> <td>1970</td> <td>.....</td> <td>1980</td> <td></td> <td></td> </tr>	Pavo_cristatus	HVVGGL	PLNPK	ATDH	REP	VFIG	GVPE	SLLT	SSLT	TTRNS	FIGCI	RNFMI	DEKTV	SFSKA </td <td>VS</td> <td>1817</td>	VS	1817	Gallus_gallus	HVVGGL	PLNPK	ATDH	REP	VFIG	GVPE	SLLT	SSLT	TTRNS	FIGCI	RNFMI	DEKTV	SFSKA </td <td>VS</td> <td>1817</td>	VS	1817	Anas_platyrhynchos	HVVGGL	PLNPK	ATDH	REP	VFIG	GVPE	SLLT	SSLT	TTRNS	FIGCI	RNFMI	DEKTV	SFSKA </td <td>VS</td> <td>1817</td>	VS	1817	Chelonia_mydas	HVVGGL	PLNPK	ATDH	REP	VFIG	GVPE	SLLT	SSLT	TTRNS	FIGCI	RNFMI	DEKTV	SFSKA </td <td>VS</td> <td>1816</td>	VS	1816	Homo_sapiens	HVVGGL	PLNPK	ATDH	REP	VFIG	GVPE	SLLT	SSLT	TTRNS	FTGCI	RNFV	IDGK	PVSF	SKAAL	VS	1813	Pan_troglodytes	HVVGGL	PLNPK	ATDH	REP	VFIG	GVPE	SLLT	SSLT	TTRNS	FTGCI	RNFV	IDGK	PVSF	SKAAL	VS	1812	Macaca_mulatta	HVVGGL	PLNPK	ATDH	REP	VFIG	GVPE	SLLT	SSLT	TTRNS	FTGCI	RNFV	IDGK	PVSF	SKAAL	VS	1812	Callithrix_jacchus	HVVGGL	PLNPK	ATDH	REP	VFIG	GVPE	SLLT	SSLT	TTRNS	FTGCI	RNFV	IDGK	PVSF	SKAAL	VS	1812	Bos_taurus	HVVGGL	PLNPK	ATDH	REP	VFIG	GVPE	SLLT	SSLT	TTRNS	FTGCI	RNFV	IDGK	PVSF	SKAAL	VS	1813	Equus_caballus	HVVGGL	PLNPK	ATDH	REP	VFIG	GVPE	SLLT	SSLT	TTRNS	FTGCI	RNFV	IDGK	PVSF	SKAAL	VS	1813	Pteropus_alecto	HVVGGL	PLNPK	ATDH	REP	VFIG	GVPE	SLLT	SSLT	TTRNS	FTGCI	RNFV	IDGK	PVSF	SKAAL	VS	1813	Mus_musculus	HVVGGL	PLNPK	ATDH	REP	VFIG	GVPE	SLLT	SSLT	TTRNS	FTGCI	RNFV	IDGK	PVSF	SKAAL	VS	1805	Ornithorhynchus_anatinus	HVVGPI	NP	PKPTD	QREP	VFGV	GPES	LLT	PSLA	SGKP	PFTGC	IRHF	VIDER	SPVS	SKAAL	VS	1808	Latimeria_chalumnae	HVVGGL	PLSP	RAIHD	KEP	VFIG	GVPE	SLLS	SRLE	IRNS	FTGCI	RNFII	DESP	VVSF	SKAAL	VS	1875		1930	1940	1950	1960	1970	1980		
Pavo_cristatus	HVVGGL	PLNPK	ATDH	REP	VFIG	GVPE	SLLT	SSLT	TTRNS	FIGCI	RNFMI	DEKTV	SFSKA </td <td>VS</td> <td>1817</td>	VS	1817																																																																																																																																																																																																																																																							
Gallus_gallus	HVVGGL	PLNPK	ATDH	REP	VFIG	GVPE	SLLT	SSLT	TTRNS	FIGCI	RNFMI	DEKTV	SFSKA </td <td>VS</td> <td>1817</td>	VS	1817																																																																																																																																																																																																																																																							
Anas_platyrhynchos	HVVGGL	PLNPK	ATDH	REP	VFIG	GVPE	SLLT	SSLT	TTRNS	FIGCI	RNFMI	DEKTV	SFSKA </td <td>VS</td> <td>1817</td>	VS	1817																																																																																																																																																																																																																																																							
Chelonia_mydas	HVVGGL	PLNPK	ATDH	REP	VFIG	GVPE	SLLT	SSLT	TTRNS	FIGCI	RNFMI	DEKTV	SFSKA </td <td>VS</td> <td>1816</td>	VS	1816																																																																																																																																																																																																																																																							
Homo_sapiens	HVVGGL	PLNPK	ATDH	REP	VFIG	GVPE	SLLT	SSLT	TTRNS	FTGCI	RNFV	IDGK	PVSF	SKAAL	VS	1813																																																																																																																																																																																																																																																						
Pan_troglodytes	HVVGGL	PLNPK	ATDH	REP	VFIG	GVPE	SLLT	SSLT	TTRNS	FTGCI	RNFV	IDGK	PVSF	SKAAL	VS	1812																																																																																																																																																																																																																																																						
Macaca_mulatta	HVVGGL	PLNPK	ATDH	REP	VFIG	GVPE	SLLT	SSLT	TTRNS	FTGCI	RNFV	IDGK	PVSF	SKAAL	VS	1812																																																																																																																																																																																																																																																						
Callithrix_jacchus	HVVGGL	PLNPK	ATDH	REP	VFIG	GVPE	SLLT	SSLT	TTRNS	FTGCI	RNFV	IDGK	PVSF	SKAAL	VS	1812																																																																																																																																																																																																																																																						
Bos_taurus	HVVGGL	PLNPK	ATDH	REP	VFIG	GVPE	SLLT	SSLT	TTRNS	FTGCI	RNFV	IDGK	PVSF	SKAAL	VS	1813																																																																																																																																																																																																																																																						
Equus_caballus	HVVGGL	PLNPK	ATDH	REP	VFIG	GVPE	SLLT	SSLT	TTRNS	FTGCI	RNFV	IDGK	PVSF	SKAAL	VS	1813																																																																																																																																																																																																																																																						
Pteropus_alecto	HVVGGL	PLNPK	ATDH	REP	VFIG	GVPE	SLLT	SSLT	TTRNS	FTGCI	RNFV	IDGK	PVSF	SKAAL	VS	1813																																																																																																																																																																																																																																																						
Mus_musculus	HVVGGL	PLNPK	ATDH	REP	VFIG	GVPE	SLLT	SSLT	TTRNS	FTGCI	RNFV	IDGK	PVSF	SKAAL	VS	1805																																																																																																																																																																																																																																																						
Ornithorhynchus_anatinus	HVVGPI	NP	PKPTD	QREP	VFGV	GPES	LLT	PSLA	SGKP	PFTGC	IRHF	VIDER	SPVS	SKAAL	VS	1808																																																																																																																																																																																																																																																						
Latimeria_chalumnae	HVVGGL	PLSP	RAIHD	KEP	VFIG	GVPE	SLLS	SRLE	IRNS	FTGCI	RNFII	DESP	VVSF	SKAAL	VS	1875																																																																																																																																																																																																																																																						
	1930	1940	1950	1960	1970	1980																																																																																																																																																																																																																																																										

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /home/ceglab2/Desktop/ajinkya/pavo/MSData/MSData.ms Date: Nov 15 16:05:49 2022

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***** :**.
Xenopus_tropicalis  GAVSINSCPAA 1913
Rhinatrema_bivittatum GAVSIASCPAA 1898
Pavo_muticus       GAVSINTCPAA 1828
Pavo_cristatus     GAVSINTCPAA 1828
Gallus_gallus      GAVSINTCPAA 1828
Anas_platyrhynchos GAVSINSCPAA 1827
Chelonia_mydas     GAVSINTCPTA 1824
Homo_sapiens       GAVSINSCPAA 1823
Pan_troglodytes    GAVSINSCPAA 1823
Macaca_mulatta     GAVSINSCPAA 1823
Callithrix_jacchus GAVSINSCPAA 1823
Bos_taurus         GAVSINSCPAA 1824
Equus_caballus     GAVSINSCPAA 1824
Pteropus_alecto    GAVSINSCPAA 1824
Mus_musculus       GAVSINSCPTA 1816
Ornithorhynchus_anatinus GAVSINSCPVA 1819
Latimeria_chalumnae GAVSINSCPAA 1886
.....1990.
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