

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/NOI Date: Tue Feb 14:10:00 2022

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Mus_musculus          -----MPSAGERPAVKMGPAPAGEQHR--RATEDPEVMELAFEGMDKE--KAPSRK  47
Rattus_norvegicus     -----MGPAPAGQQQRGSTSTGEPEVMELALEGLGKE--KASSRK  38
Homo_sapiens          -----MGPAPAGEQLRG--ATGEPEVMEPALEGTGKEGKKASSRK  38
Pan_troglodytes       MMHNIIVKELIVTFFLGITVVQMLISVTGLKG--VKKLRMVMEPALEGTGKEGKKASSRK  58
Macaca_mulatta        -----MMGPAPTGEQLCG--AIGEPEVMEPALEGTGKEGKKASSRK  39
Callithrix_jacchus    -----MDPAPAGKQLRG--ATGGPEVMEPTLEGKGKEGKKASSRK  38
Bos_taurus            -----MGPAPARAEHRG--TAGEPEVMESALEGTGKEGKKESLKK  38
Equus_caballus        -----MGPAPAGAQVRG--AAGEPEVMEPALEGTGKKGKGGSSKK  38
Canis_lupus_familiaris -----MGPAPAGAQRG--GAGEPEVMELALEGTGKEGKKESLKK  38
Latimeria_chalumnae   -----MKRKVKAEAVPRPQEEQAQAEAGVEEEGKDDENLEKENVRGPKSKKKGKFL  50
Rhinatrema_bivittatum -----MKRRAGNCS---DVDKAELEAEFESESEDE---ENRALGEGEKKARAT  42
Xenopus_tropicalis    -----MQKKRNRAQ---PPQEEAASDDGEMSDSS---DKMEVAQKGKSAVK  41
Pavo_muticus          -----G-----FKEPAEAAAEAEFEVQSPHTPGRGAARGKKRK---  32
Pavo_cristatus        -----G-----FKEPAEAAAEAEFEVQSPHTPGRGAARGKKRK---  32
Gallus_gallus         -----MAG-----FKEPAEAAAEAEFEVQGLHTPAPGATRGKKRK---  34
Anas_platyrhynchos    -----MMAG-----FKEPAEAAAEAEQGSQ---PPGRGAARGKKRP---  32
Chelonia_mydas        -----MKLEPRAAAGGGGERVFDNAEGDMETEEENQ--DLPKKGKAQGRKRA---  45
1.....10.....20.....30.....40.....50.....60

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Mus_musculus          RARTEPPAEGLLQPVNLSREELYKEPTNEELNRLRETEILFHSTLLRLQVEELLKEVRLS  107
Rattus_norvegicus     RAQAEAPAEGLPQPVKLSREELYKEPTNEELNRLRETEILFHSSLLRLQVEELLKEVRLS  98
Homo_sapiens          RTLAEPAPAKGLLQPVKLSRAELYKEPTNEELNRLRETEILFHSSLLRLQVEELLKEVRLS  98
Pan_troglodytes       RTLAEPAPAKGLLQPVKLSRAELYKEPTNEELNRLRETEILFHSSLLRLQVEELLKEVRLS  118
Macaca_mulatta        RTLAEPAPAKGLLQPVKLSRAELYKEPTNEELNHLRETEILFHSSLLRLQVEELLKEVRLS  99
Callithrix_jacchus    RTLAEPVVKGLLQPVKLSRAELYKEPTNEELNRLRETEILFHSSLLRLQVEELLKEVRLS  98
Bos_taurus            RKMAGSPGEGLLQPVKLSRAELYKEPTNEELSRLRETESLFHSSLLRLQVEELLKEVRLS  98
Equus_caballus        RTVAGSPGEGLLQPVKLSRAELYKEPTNEELNRLRETESLFHSSLLRLQVEELLKEVRLS  98
Canis_lupus_familiaris HTLSGSPVEGLLQPVKLSQAELYKEPTNEELNRLRETESLFHSSLLRLQVEELLKEVRLP  98
Latimeria_chalumnae   RENEEAG-EGILKPVTLSKKDLYKPTNEELNQLKETENLFHSSLLRLQ-----  98
Rhinatrema_bivittatum GKNEAAPFDGVLRLPVKLSRADLYKPTNEELNQLKETENLFHSSLLRLQIEELLKEVRLK  102
Xenopus_tropicalis    R---APDADEVLRPVKLSKSDLYKPTNDELNRLKETEHFHTNLLRMOIEELLQEVKVK  98
Pavo_muticus          --AAAPAPAPALQPVKLSRAELYKPPTSEELNQLKETEDLFHSSLLRLQIEELLKEVTLK  90
Pavo_cristatus        --AAAPAPAPALQPVKLSRAELYKPPTSEELNQLKETEDLFHSSLLRLQIEELLKEVTLK  90
Gallus_gallus         --VAAPVPAPALQPVKLSRAELYKPPTNEELNQLKETEDLFHSSLLRLQIEELLKEVTLK  92
Anas_platyrhynchos    --APAPAPAPSGR---LSRAELYEPPSSEELNRLKETEDLFHSSLLRLQIEELLKEVTLK  87
Chelonia_mydas        --SAAEG---VVKQVKLSRADLYKLPTNEELNQLKETENLFHSSLLRLQIEELLKEVVKLK  100
.....70.....80.....90.....100.....110.....120

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Mus_musculus          EKKKERIDNFLKEVTKRIQKVPVPEAELTDQSWLPAGVRVPLHQVPYAVKGSGFRFRPPS  167
Rattus_norvegicus     EKKKERIDAFLEKVIKRIQKVPVPEAELTDQSWLPAGVRVPLHQVPYAVKGSGFRFLPPS  158
Homo_sapiens          EKKKDRIDAFLEVNQRVVRVPSVPETELTDQAWLPAGVRVPLHQVPYAVKGCFRFLPPA  158
Pan_troglodytes       EKKKDRIDAFLEVNQRVVRVPSVPETELTDQAWLPAGVRVPLHQVPYAVKGCFRFLPPA  178
Macaca_mulatta        EKKKDRIDAFLEVNQRVVRVPSVPETELTDQAWLPAGVRVPLHQVPYAVKGCFRFLPPA  159
Callithrix_jacchus    EKKKDRIDAFLEVNQRVVRVPSVPETELTDQSWLPAGVRVPLHQVPYAVKGCFRFLPPA  158
Bos_taurus            EKKKERIDAFLEVNQRIMRVPSTPETELTNQAWLPDGVQVPIHQVPYTVKGRFHFLLPPA  158
Equus_caballus        EKKKERIDAFLEVNQRIMRVPSTPETELTDQAWLPAGVQVPLHQVPYAVKGCFRFLPPA  158
Canis_lupus_familiaris EKKKERIDAFLEVNQRVLRVPSVTPKRELTDQTLWLPAGVRVPLHQVPYTVKGCFCFLPPS  158
Latimeria_chalumnae   -----  98
Rhinatrema_bivittatum EKKRKSIDAFLEHDLNALLSRVPETQETEIAEQSWLPKGVKVPFLQVPHRVKGRFCFLPPA  162
Xenopus_tropicalis    EKRRKTIDGFLREINTLLGTIPETPQTDLTQTLWLPDSIKVPILQVPYQVKGKFCFLPPS  158
Pavo_muticus          ETKKKKIDAFLEHINSLLSAIPETPETDITDQTLWLPQGVKVPFLQVPPFNVGKGRFLPPD  150
Pavo_cristatus        ETKKKKIDAFLEHINSLLSAIPETPETDITDQTLWLPQGVKVPFLQVPPFNVGKGRFLPPD  150
Gallus_gallus         ETKKKKIDAFLEHINSLLSAIPETPETDITDQTLWLPKDVKVPFLQVPPFNVGKGRFLPPD  152
Anas_platyrhynchos    ETKKKKIDAFLEHINSLLSAIPETSESDLTQSWLPDGVKVPFLQVPPFDVGKGRFLPPA  147
Chelonia_mydas        EKKKQKIDAFLEHINTLLSAVPETLETDLADQSWLPKDVKVPFLQVPSVVGKGRFLPPA  160
.....130.....140.....150.....160.....170.....180

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	..*.:*		..*.:*
Mus_musculus	QITVVGSYLLDTCMRPDINVDVAVTMPREILQDKDGLNQRYFRKRALYLAHLAYHLAQDP	227	
Rattus_norvegicus	QITIVGSYPLGTCMRPDINVDVVLTMPREILQDKDGLNQRYFRKRALYLTHLAYHLARDP	218	
Homo_sapiens	QVTVVGSYLLGTCIRPDINVDVALTMPREILQDKDGLNQRYFRKRALYLAHLAHLAQDP	218	
Pan_troglodytes	QVTVVGSYLLGTCIRPDINVDVALTMPREILQDKDGLNQRYFRKRALYLAHLAHLAQDP	238	
Macaca_mulatta	QVTVVGSYLLGTCIRPDINVDVALTMPREILQDKDGLNQRYFRKRALYLAHLAYHLAQDP	219	
Callithrix_jacchus	QVVVVGSYLLGTCIRPDVNVVDVALTMPREILQDKDGLNQRYFRKRALYLAHLAHLAQDP	218	
Bos_taurus	QVTVVGSYLLGTCIRPDINVDVALTIPREILQDKDGLNQRYFRKRALYLAHVAAHLAKDP	218	
Equus_caballus	QVTVVGSYLLGTCIRPDVNVVDVALTMPREILQDKDGLNQRYFRKRALYLAHLAHLAQDP	218	
Canis_lupus_familiaris	QVTVVGSYLLGTCVVRPDINVDMAVTMPREILQDKDGLNQRYFRKRALYLAHLAHLSDQP	218	
Latimeria_chalumnae	-----KLLVKLIAISPPP-----FLGGAGYSLSISST	124	
Rhinatrema_bivittatum	CIKVVGSYLLGTCIKPDINVDLVVTMPQETLQAKDHLNQRYLRKRALYLAHAAHHLAQSE	222	
Xenopus_tropicalis	SIKVVGSYLLGTCIKPEINVDLAVTMPQETLQAKDNLNQRYSRKRALYLAHIAHSHLANNE	218	
Pavo_muticus	ELSVVGSYLLGTCIKPEINVDVAVTMPREIFQDKDNLNQRYHRKRALYLAHIAQHLSKEN	210	
Pavo_cristatus	ELSVVGSYLLGTCIKPEINVDVAVTMPREIFQDKDNLNQRYHRKRALYLAHIAQHLSKEN	210	
Gallus_gallus	ELSVVGSYLLGTCVKPEINVDVVVTMPREIFQDKDNLNQRYHRKRALYLAHIAQHLSKEN	212	
Anas_platyrhynchos	QLSVVGSYLLGTCIKPEINVDVAVTMPREVFQDKDNLNQRYHRKRALYLSHIAHHSKEK	207	
Chelonia_mydas	TVTVVGSYLLGTCIKPEINVDLAVTMPRAILLQDKDNLNQRYHRKRALYLAHIAQHLSKEK	220	
190.....200.....210.....220.....230.....240		

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Mus_musculus	LFSSVRFYSYMSGCHLKPS	LLLLRPHGKDERLVTVRLLP	CPPLDFFRPCRLLPTKNNVRS	SAW	287			
Rattus_norvegicus	LFGSVRFYSYPSGCHLKPS	LLLLRPHGKDERLVTVRLYP	CPPLDFFRPCRLLPTKNNVRS	SAW	278			
Homo_sapiens	LFGSVCFSYTNGCHLKPS	LLLLRPRGKDERLVTVRLHPC	PPPDFFRPCRLLPTKNNVRS	SAW	278			
Pan_troglodytes	LFGSVCFSYTNGCHLKPS	LLLLRPRGKDERLVTVRLHPC	PPPDFFRPCRLLPTKNNVRS	SAW	298			
Macaca_mulatta	LFGSVCFSYTNGCHLKPS	LLLLRPRGKDERLVTVRLHPC	PPPDFFRPCRLLPTKNNVRS	SAW	279			
Callithrix_jacchus	LFGSVRFYSYTNGCHLKPS	LLLLRPRGKDEHLVTVRLHPC	PPPDFFRPCRLLPTKNNVRS	SAW	278			
Bos_taurus	LFGSVRFYSYTNGCHLKPS	LLLLRPHGKDERLVTVRLHPC	PPPDFFRPCRLLPSKSNVRS	SAW	278			
Equus_caballus	LFGSVHFYSYTNGCHLKPS	LLLLRPHGKDERLVTVRLHPC	PPPDFFRPCRLLPSKNNVRS	SAW	278			
Canis_lupus_familiaris	LFGSVHFYSYTNGCHLKPS	LLLLRPRGKDERLVTVRLHPC	PPPDFFRPCRLLPSKNNVRS	SAW	278			
Latimeria_chalumnae	PS-----LPHNNFLFLSP	LPFGKDEKLVTVRLHVC	APPGFFFKPGRFHPSKNNV	RTAW	176			
Rhinatrema_bivittatum	LLGSVRFAYMNSNHLKP	VILLRLPQGD	DEKLVTVRLHACSPGFFR	PGRFHPSRNNV	RTAW	282		
Xenopus_tropicalis	LFSSVKFTYMN	SNHLKP	VILLRLPQGD	DEKLVTVRIHVC	PPPGFFFKISR	LYPNKNNV	RTAW	278
Pavo_muticus	LFGSVKFAYMNSNHLKP	PILLRLPQGD	DEKLVTVRLHAC	PAPNFFKPSRFYPS	SKNNV	RTAW	270	
Pavo_cristatus	LFGSVKFAYMNSNHLKP	PILLRLPQGD	DEKLVTVRLHAC	PAPNFFKPSRFYPS	SKNNV	RTAW	270	
Gallus_gallus	LFGSVKFAYMNSNHLKP	PILLRLPQGD	DEKLVTVRLHAC	PAPNFFKPSRFYPS	SKNNV	RTAW	272	
Anas_platyrhynchos	LFGSVKFAYMNSNHLKP	PILLRLPQGD	DEKLVTVRLHAC	PALGFFKLSRFHPS	SKNNV	RTAW	267	
Chelonia_mydas	LFGSVRFYTMNSNHLKP	IVLLPQGD	DEKLVTVRLYAC	PAPGFFFKPSR	LYPNKNNV	RTAW	280	
250.....	260.....	270.....	280.....	290.....	300		

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Mus_musculus	YRGS	CPDY---	EPP	TPHYNTWILQDVALETHMHLLASVLSA	AQGLKDG	VALLKVWL	R						344
Rattus_norvegicus	YRGS	CPDYASLEPPT	TPHYNTWILQDTALEAHMHLLSSVLASA	AQGLKDG	VALLKVWL	R							338
Homo_sapiens	YRGS	PAGDGSPEPPT	PRYNTWVLQDTVLESHLQLLSTILSSA	AQGLKDG	VALLKVWL	R							338
Pan_troglodytes	YRGS	PAGDGSPEPPT	PRYNTWVLQDTVLESHLQLLSTILSSA	AQGLKDG	VALLKVWL	R							358
Macaca_mulatta	YRGS	PAGDGSPEPPT	TPHYNTWVLQDTALESHLQLLSTMLGSA	AQGLKDG	VALLKVWL	R							339
Callithrix_jacchus	YRGS	PAGDGSPEPPT	TPHYNTWVLQDTALESHLQLLSTMLGSA	AQGLKDG	VALLKVWL	R							338
Bos_taurus	YQGS	SPSGDGSPEPPT	TPHYNTWLLQDTALESHVQLLSAVLGSAS	GLKDG	VALLKVWL	R							338
Equus_caballus	YRGS	PSPNGSPEPPT	TPHYNTWVLQDTALESHPQLLSTVLGSAL	GLKDG	VALLKIWL	R							338
Canis_lupus_familiaris	YRGS	PSPGDGSPEPPT	TPHYNTWVLQDMTLESHVQLLSTVLGSAF	GLKDG	VALLKVWL	R							338
Latimeria_chalumnae	FLED	SSQEGTVEPPT	PHYNNSVLCDLVMEPHLRFLFNAATDFPGMKHGI	IILLKVWL	R								236
Rhinatrema_bivittatum	FLED	SILDGAVEPPT	PHYNNNSILCDLVMEQHLLFLSSALVDSPGMKGIAI	LKVWL	RHR								342
Xenopus_tropicalis	YTEQ	ET--EGVNEPPT	PHYNNITLSDLTEHHHLHLSNCASDFPGMKDA	VALLKVWL	R								336
Pavo_muticus	FLEQ	STLKEGAPEPAT	PHYNNNSILCDTVLLSHLRFLSNVSTDFFPGMKDGL	LALLKVWL	NOR								330
Pavo_cristatus	FLEQ	STLKEGAPEPAT	PHYNNNSILCDTVLLSHLRFLSSVSTDFFPGMKDGL	LALLKVWL	NOR								330
Gallus_gallus	FLEQ	STPKEGAPEPAT	PHYNNNSILCDTVLLSHLHFLSSVSTDFFPGMKDGL	LALLKVWL	NOR								332
Anas_platyrhynchos	FMEQ	SAPKEGAPEPPT	PHYNNNSILCDTVLLSHLQFLSAAATDFPGMKDGI	LALLKVWL	NOR								327
Chelonia_mydas	FLEQ	GSPGEAAESP	TPHYNNNSILCTGLESNLLFLAGADFPGRDGV	TLLKVWL	R								340
	310.....	320.....	330.....	340.....	350.....	360						

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:.*.* * :.*.: :*.: :* .*: *****:***: .*:.. :
Mus_musculus      ELDKGLGGFNGFIISMLVAFLVSKRKIHTTMSGYQVLRSVLQFLATTDLTNGISFSLSS 404
Rattus_norvegicus ELDKGLGGFNGFLLSMLVAFLVSKRKIHTTMSGYQVLRSVLQFLATTDLTNGISFSLSS 398
Homo_sapiens       ELDKGQGGFTGFLVSMLVVFLVSTRKIHTTMSGYQVLRSVLQFLATTDLTNGISLCLSS 398
Pan_troglodytes    ELDKGHGGFTGFLVSMLVVFLVSTRKIHTTMSGYQVLRSVLQFLATTDLTNGISLCLSS 418
Macaca_mulatta     ELDKGQGGFTGFLVSMLVVFLVSTHKIHTTMSGYQVLRSVLQFLATTDLTNGISLCLSS 399
Callithrix_jacchus ELDKGQGGLTGFVVSMLVVFLVSTRKIHTTMSGYQVLRSVLQFLATTDLTNGISLCLSS 398
Bos_taurus         ELDKGLGGFSGFLVSMVVAFLVSTRKIHTTMSGYQVLRSTLQFLASTDLTVNGISLCFSS 398
Equus_caballus     ELDKGLGGFSGFLVSMVAFLVSTRKIHTTMSGYQVLRSVLQFLATTDLTNGISLCLSS 398
Canis_lupus_familiaris ELDKGLGGFSGFLVSMVAFLVSTRKIHTTMSGYQVLRSAQFLATTDLTNGISLCLSS 398
Latimeria_chalumnae NLDKGFGCFNGFLASMLVAYLVSKHKISKMMMSGYQVLRNVLQFLATTDLTSGITVSRCT 296
Rhinatrema_bivittatum QLDKGFGCFNGFVASMLVAYLHAKHKVSMMSGYQILRNALQFLASTDLTVNGITLAKAS 402
Xenopus_tropicalis QLDKGYGCFNGFLAAMLISYLLSKNKINKVMSGYQVLRNLTQFLATTDLTNGITMATST 396
Pavo_muticus       QLSKGLGCFSGFLVSMVAYLVMKRKIVKVMMSGYQVLRNVLQFLATTDLSVTGISLAKDT 390
Pavo_cristatus     QLSKGLGCFSGFLVSMVAYLVMKRKIVKVMMSGYQVLRNVLQFLATTDLSVTGISLAKDT 390
Gallus_gallus      QLSKGLGCFSGFLVSMVAYLVMKRKIVKVMMSGYQVLRNVLQFLATTDLSMTGISLAKET 392
Anas_platyrhynchos QLNKGLGCFSGFLVSMVGYLLMKRKIVRVMSGYQVLRNVLQFLATTDLSVTGISLAKDT 387
Chelonia_mydas     ELDKGLGCLNGFMASMLVAYLLAKHKISQGMMSGYQVLRSVLQFLATSDSLATGISLSKDS 400
.....370.....380.....390.....400.....410.....420

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Mus_musculus      DPSLPTLAEFHQLFVAVFVDP SGRLNLCADVASTYNOVQYEAELSMALLDSKADDGFQL 464
Rattus_norvegicus DPSLPSVADFHQLFVAVFVDP SGRLNLCADVASTYNOVQYEAELSMALLDSKADDGFQL 458
Homo_sapiens       DPSLPALADFHQAFSVVFLDS SGHLNLCADVASTYHQVQHEARLSMMLLDSRADDGFHL 458
Pan_troglodytes    DPSLPALADFHQAFSVVFLDS SGHLNLCADVASTYHQVQHEARLSMMLLDSRADDGFHL 478
Macaca_mulatta     DPSLPALADFHQAFSVVFLDS SGRLNLCADVASTYHQVQYEARLSMTLLDSRADDGFQL 459
Callithrix_jacchus DPSLPALADFHQAFSVVFLDS SGRLNLCADITASTYHQVQHEARLSMMLLDSKADDGFQL 458
Bos_taurus         DPSLPALADFHQAFFVVFLDS SGRLNLCADITTTSTYHQVQHEARLSMALLDSKADDGFQL 458
Equus_caballus     DPSLPALADFHQAFFVVFLDS SGRLNLCADVASTYHQVQHEARLSMMLLDSKADDGFQL 458
Canis_lupus_familiaris DPSLPALADFHQAFFVVFLDS SGYLNLCADVASTYHQVQHEARLSMALLDSRTDDGFQL 458
Latimeria_chalumnae DNS----- 299
Rhinatrema_bivittatum EVSQPTLEDFHQAFDVVFIDP SGFVNLCADMTASKYKEIQSEAKRSMEILLNDATLDGFGQ 462
Xenopus_tropicalis DSSLPSLHDFHEAFQVVFVDP LGLVNLCADMTTNKYHQIQFEARESILKVLDSDSADGFHL 456
Pavo_muticus       DTCLPALADFHHAFFVVFVDP SGLVNLCADMTASKYHQVQFEAKCSMEILDDRMDVDFQA 450
Pavo_cristatus     DTCLPALADFHHAFFVVFVDP SGLVNLCADMTASKYHQVQFEAKCSMEILDDRMDVDFQA 450
Gallus_gallus      DACLPTLDDFHHAFFVVFVDP SGLVNLCADMTASKYHQVQFEAKCSMEILDDRMDVDFQA 452
Anas_platyrhynchos DDSLPALADFHQAFFVVFVDP SGLVNLCADMTASKYHQVQFEAKRSMEILDDRMDVDFQA 447
Chelonia_mydas     DSSLPTLADFHQAFFVVFVDP SGLVNLCADMTASKYKQVQFEAKRSMEVLDDRTVDGFGQL 460
.....430.....440.....450.....460.....470.....480

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Mus_musculus      LLMTPKPMIAFDHVVHLHPLSRLOASCHOLKLWPELDNNGGDYVSAALGPLTNILVOGL 524
Rattus_norvegicus LLMTPKPMIAFDHVVHLRPLSRLOAACHOLKLWPELDNNGGDYVSAALGPLTNILVOGL 518
Homo_sapiens       LLMTPKPMIRAFDHVHLRPLSRLOAACHRLKLWPELDNNGGDYVSAALGPLTTLLEOGL 518
Pan_troglodytes    LLMTPKPMIRAFDHVHLRPLSRLOAACHRLKLWPELDNNGGDYVSAALGPLTTLLEOGL 538
Macaca_mulatta     LLMTPKPMIRAFDHVHLHPLSRLOAACHRLKLWPELDNNGGDYVSAALGPLTTLLEOGL 519
Callithrix_jacchus LLMTPKPMIRAFDHVHLRPLSRLOAACHRLKLWPELDNNGGDYVSAALGPLTTLLEOGL 518
Bos_taurus         LLMTPKPMIRAFDHVHLRPLSRLOAACHRLKLWPELDLGGDYVSAALGPLTTLLEOGL 518
Equus_caballus     LLMTPKPMIRAFDHVHLHPLSRLOAACHRLKLWPELDHGGDYVSAALGPLTTLLEOGL 518
Canis_lupus_familiaris LLMTPKPMIRAFDHVHLHPLSRLOAACHRLKLWPELDLGGDYVSAALGALTPLEOGL 518
Latimeria_chalumnae ----- 299
Rhinatrema_bivittatum LLLVSKPLIRTFDHVFHLKVNLSKLOGACRKMQLLNELMDRGGDYVATVLPFLLSLLTRGL 522
Xenopus_tropicalis LLMVPKPFVRTFDHVFHLTNVSKLOGTCKMKLLNLIDQGGDYIATSLPYVLSIILSKGL 516
Pavo_muticus       LLMTSKPMLRTFDHVFHLKHVSKLOSACKKMQLLNELMDRGGNYVAAALPFIVSLLTRGL 510
Pavo_cristatus     LLMTSKPMLRTFDHVFHLKHVSKLOSACKKMQLLNELMDRGGNYVAAALPFIVSLLTRGL 510
Gallus_gallus      LLMTSKPMLRTFDHVFHLKHVSKLOSACKKMQLLNELMDRGGNYVAAALPFIVSLLTRGL 512
Anas_platyrhynchos LLMTPKPMMLRTFDHVFHLKHVSKLOSACKKMQLLNELMDRGGNYVAAALPFVVSLLARGL 507
Chelonia_mydas     LLMTPKPLIRTFDHVFHLKHVSKLOGACKKMQLLNELMDRGGNYVAAALPFVTSLLARGL 520
.....490.....500.....510.....520.....530.....540

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Mus_musculus	G C R L H L L A H S R P P V P E W S I N D P P K H K D A G T I L T L G F L F R P E G L T S V I D L G P E A D K P E A A D	584
Rattus_norvegicus	G C R L H L L A H S R P P V P E W A I N D P P K H K D A G T I L T L G L L F R P E G L T S V I D L G P E A D R P E A A E	578
Homo_sapiens	G A R L N L L A H S R P P V P E W D I S D P P K H K D S G T I L T L G L L L R P E G L T S V L E L G P E A D Q P E A A K	578
Pan_troglodytes	G A R L N L L A H S R P P V P E W D I S D P P K H K D S G T I L T L G L L L R P E G L T S V L E L G P E A D Q P E A A K	598
Macaca_mulatta	G T R L K L L A H S R P P V P E W G I S D P P K H K G S G S L T L G L L L R P E G L T S V L E L G P E A D Q P E A A K	579
Callithrix_jacchus	G T R M H L L A H S R P P V P E W D I S D P P K H K D S G T I L T L G L L L R P E G L T S I L E L G P E A D Q P E A A E	578
Bos_taurus	G S R V Q L L A H S R P P V S E W D I S D E P P K H R D P G V L T L G L L L R P E G L T S V L E L G P E A D Q P E A A D	578
Equus_caballus	G S R L H L L A H S R P P V S E W D I S D P P K H R D S G T I L T L G L L L R P E G L T S V L E L G P E A D Q P E A A D	578
Canis_lupus_familiaris	G S R L H L L A H S R P P V S E W D I S D P P K H R D S G T I L T L G L L L R P E G L T S V L E L G P E A N Q P E A A D	578
Latimeria_chalumnae	-----A W P I G A D P P K H K D I G H L S F G L L L D S E F A A D V L D K G P A D Q P E A A E	344
Rhinatrema_bivittatum	G Q R V L M L T H S L P L T P E W C L E D E P P K H K D I G L L S F G L L L S P E G S L G I L D K G P E A D S P E A V E	582
Xenopus_tropicalis	G P R V A L L S H T L P H R P E W D I G E E P A K H R D S S L L S V G L L L E A E L H T S V L E K G P A A D S S Q A L D	576
Pavo_muticus	A R R A L L V A H S L P E T P E W P I D T E P P K H K D V G S L M F G I L F V P E F A A S T L E K G P A D R P E A A D	570
Pavo_cristatus	A R R A L L V A H S L P E T P E W P I D T E P P K H K D V G S L M F G I L F V P E F A A S T L E K G P A D R P E A A D	570
Gallus_gallus	A R R A L L V A H S L P N T P E W P I D T E P P K H K D V G S L M F G I L F V P D F A A S T L E K G P A D R P E A A D	572
Anas_platyrhynchos	A G R A L L V A H S L P Q T P E W P I D A E P P K H K D V G P L T F G L L L P E F A T S L E K G P A D R P E A V D	567
Chelonia_mydas	A G R V L L L T H S L P Q A P Q W P I S A E P P K H K D A G H L S F G L L L T P E F A T S I L E K G P E A D R P E A A E	580
550.....560.....570.....580.....590.....600	

	** **	*****	* *****	. . :	:**	:. :	:**	**::**	:. *	*
Mus_musculus	FRQFWGTRSELRRF	FDGAIREAVVWEAESL	FEKRLIPHQVVTHLLALHADIPD	TCIQYVG	644					
Rattus_norvegicus	FRQFWGSRSELRRF	FDGAIREAVVWEAESL	SEKRLIPHQVVTHLLALHADIPD	TCIHVVG	638					
Homo_sapiens	FRQFWGSRSELRRF	FDGAIREAVVWEAASMS	QKRLIPHQVVTHLLALHADIPET	CVHYVG	638					
Pan_troglodytes	FRQFWGSRSELRRF	FDGAIREAVVWEAASMS	QKRLIPHQVVTHLLALHADIPET	CVHYVG	658					
Macaca_mulatta	FRQFWGFRSELRRF	FDGAIREAVVWEAASMS	QKRLIPHQVVTHLLALHADIPET	CVHYVG	639					
Callithrix_jacchus	FRQFWGSRSELRRF	FDGAIREAVVWEAASMS	QKRLIPHQVVTHLLALHADIPET	CIHYVG	638					
Bos_taurus	FRQFWGSRSELRRF	FDGAIREAVVWEAASMA	QKRLIPHQVVTHLLALHADIPD	TCVHYTG	638					
Equus_caballus	FRQFWGSRSELRRF	FDGAIREAVVWEAASMA	QKRLIPHQVVTHLLALHADIPD	TCVHYMG	638					
Canis_lupus_familiaris	FRQFWGSRSELRRF	FDGAIREAVVWEAASMA	QKRLIPHQVVTHLLALHADIPD	TCVHYVG	638					
Latimeria_chalumnae	FRSFWGEKSELRRF	FDGSICEAVVWPAQNLY	EKRLVPEQIIRHLLQLHADIPET	SVCYMG	404					
Rhinatrema_bivittatum	FRKFWEKSELRRF	FDGSICEAVVWAAGTL	SEKRLIPERVVHLLQLHADIPET	SVCYAG	642					
Xenopus_tropicalis	FRAFWGEKSELRRF	FDGSICEAVVWPGSSL	CEKRVPELIVKYLLELHADIPET	SVCYTG	636					
Pavo_muticus	FRTFWGEKSELRRF	FDGTICEAVVWEASTIC	QKRLIPEQIVRHLLKLHADIPET	SVCYTG	630					
Pavo_cristatus	FRTFWGEKSELRRF	FDGTICEAVVWEASTIC	QKRLIPEQIVRHLLKLHADIPET	SVCYTG	630					
Gallus_gallus	FRTFWGEKSELRRF	FDGSICEAVVWEASTIC	QKRLIPEQIVRHLLKLHADIPET	SVCYTG	632					
Anas_platyrhynchos	FRTFWGEKSELRRF	FDGTICEAVVWEASTIC	QKRLIPEQIVRHLLKLHADIPET	SVCYTG	627					
Chelonia_mydas	FRKFWEKSELRRF	FDGAICEAVVWGAETMC	QKRLIPEQIVKHLWLHADIPET	SVCYTG	640					
610.....620.....630.....640.....650.....660									

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Mus_musculus	GFLDALIQNPKEISSTGEEALALAVRCYDDLRLWLGLEGLPLTVSAVOGAHPVRLRYTEV	704
Rattus_norvegicus	GFLDALIQGPRETSSTGEEALALAVRCYDDLRLWLGLEDLPLTVSAVOGAHPVRLRYTEV	698
Homo_sapiens	GPLDALIQGLKETSSSTGEEALVAAVRCYDDLRLWLGLEGLPLTVSAVOGAHPVRLRYTEV	698
Pan_troglodytes	APLDALIQGLKETSSSTGEEALVAAVRCYDDLRLWLGLEGLPLTVSAVOGAHPVRLRYTEV	718
Macaca_mulatta	GPLDALIQGLKQTSSTGEEALAVAVCCYDDLRLWLGLEGLPLTVSAVOGAHPVRLRYTEV	699
Callithrix_jacchus	GPLDALIQGLKETSSSTGEEALAVAVRCYDDLRLWLGLEGLPLTVSAVOGAHPVRLRYTEV	698
Bos_taurus	GLLDALIQGLKETSSSTGEEALAAAVRCYDDLRLWLGLEDGLPLTVSAVOGAHPVRLRYTEV	698
Equus_caballus	GLLDVLMQGLKETSSSTGEEALAAAVRCYDDLRLWLGLEGLPLTVSAVOGAHPVRLRYTEV	698
Canis_lupus_familiaris	GLLDALIQSPKETSSSTGEEALAAAVRCYDDLRLWLGLEGLPLTVSAVOGAHPVRLRYTEV	698
Latimeria_chalumnae	GLLDSVVKLGKGLAGTGEEENVSVVRSYDDLRLKLNLEGLPLNVTSVQGTHPALRYTDV	464
Rhinatrema_bivittatum	ALLDSLIRRGKVPSTGTGEEQMLGVVNSYDDLRLKLNLEGLPLTVTSVQGTHPALRYTDV	702
Xenopus_tropicalis	NVLDCVLTRGKE-AGTIEEKMGLIQSYDDLRLKLNLTDLPLTVTSVQGTHPCRLRYSDV	695
Pavo_muticus	ALLESVIKNGKEALGTGEEDMVSIVCSYDDLRLKLNLEGLPLTVTAVQGVHPALRYTDV	690
Pavo_cristatus	ALLESVIKNGKEALGTGEEDMVSIVCSYDDLRLKLNLEGLPLTVTAVQGVHPALRYTDV	690
Gallus_gallus	ALLESVIKNGKEALGTGEEDMVSIVCSYDDLRLKLNLEGLPLTVTAVQGVHPALRYTDV	692
Anas_platyrhynchos	ALLDSVIKIGKEDSGTGEEAMVSIVCSYDDLRLKLNLEGLPLTVTAVQGVHPALRYTDV	687
Chelonia_mydas	AVLESVIRVGREPAGTGEEMVSIVRSYDDLRLKLNLEGLPLMVTAVQGTHPTLRYTDV	700
670.....680.....690.....700.....710.....720	

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Mus_musculus      FPPAPVVRPAYSFYNRQLQELASLLPRDPKPCPAYVEPMTVVCHLEGSQOWPODAEAVORVR 764
Rattus_norvegicus FPPAPVRPAYSFYNRHQELASLLPRLDKPCPAYVEPMTVVCHLEGSQOWPODAEAVORVR 758
Homo_sapiens       FPPTPVRPAFSFYETLRERSLLPRLDKPCPAYVEPMTVVCHLEGSQOWPODAEAVORVR 758
Pan_troglodytes    FPPTPVRPAFSFYELRERSLLPRLDKPCPAYVEPMTVVCHLEGSQOWPODAEAVORVR 778
Macaca_mulatta     FPPTPVRPASSFYEPLQERSLLPRLDKPCPAYVEPMTVVCHLEGSQOWPODAEAVORVR 759
Callithrix_jacchus FPPTPVRPASSFYEPLRERSLLPRDPKPCPAYVEPMFVVCHLEGSQOWPODAEAVRRVR 758
Bos_taurus         FPPTPVRPAHSFYQLRERASLLPRDPKPCPAYVEPMTVVCHLEGSQOWPODAEAIARRVR 758
Equus_caballus     FPPAPIQPAYSFFEHLREQASLLPRDPKPCPAYVEPMTVICHLEGSQOWPODAEAIARRVR 758
Canis_lupus_familiaris FPPTPVRPAYSFYEHLRDRASLLPRDPKPCPAYVEPMTVVCHLEGSQOWPODAEAIARRVR 758
Latimeria_chalumnae FPPVPVKPDYSYHVRVQSSQSLPVEEKPCPAYVPALKVICHLEGTGKWPOEKEGIRIR 524
Rhinatrema_bivittatum FPPLPVKPDYSFHEKVKDKKCLLPLANKPCPAYVAPLKVICHMEGSQOWPODKEAIKRVK 762
Xenopus_tropicalis FPPLPVKPDYSSYQLLREKKCLVPNPEKPCPAYVAPVKVICHMEGSQOWPODKDAIKRVK 755
Pavo_muticus       FPPIPMKPIYSFHKQVKTRHLLLPSEEKPCPAYITPLKIICHMEGSQOWPODKEAIKRIK 750
Pavo_cristatus     FPPIPMKPIYSFHKQVKTRHLLLPSEEKPCPAYITPLKIICHMEGSQOWPODKEAIKRIK 750
Gallus_gallus      FPPIPMKPIYSFHKQVKTRHLLLPSEEKPCPAYITPLKMIICHMEGSQOWPODKEAIKRIK 752
Anas_platyrhynchos FPPIPMKPIYSFHKQIRTKRLLLPSEEKPCPAYIAPMKIICHMEGSQOWPODKEAIKRIK 747
Chelonia_mydas     FPPTPMKPDYSYHMRIDKESLLPLAEKPCPAYIAPMKVICHMEGSQOWPODKEAIKRVK 760
.....730.....740.....750.....760.....770.....780

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Mus_musculus      AAFQLRLAEVLTOEHLRQCCATATHTDVLKDGFFVFRIRVAYQREPQILKEVRSPEGMVSL 824
Rattus_norvegicus AAFQLRLAEVLTOEHLRQCRATATHTDVLKGGFVFRIRVAYQREPQILKVRSPEGMISM 818
Homo_sapiens       AAFQLRLAELLTOQHGLQCRATATHTDVLKDGFFVFRIRVAYQREPQILKEVQSPEGMISL 818
Pan_troglodytes    AAFQLRLAELLTOQHGLQCRATATHTDVLKDGFFVFRIRVAYQREPQILKEVQSPEGMISL 838
Macaca_mulatta     AAFQLRLAELLTOQHGLQCRATATHTDVLKDGFFVFRIRVAYQREPQILKEVQSPEGMISL 819
Callithrix_jacchus AAFQLRLAELLTOQHGLQCRATATHTDVLKDGFFVFRIRVAYHREPQILREVQSPEGLNSL 818
Bos_taurus         AAFQLRLAELLTOQHGLPCRAATATHTDVLKDGFFVFRIRVAYQREPQILKETRSPAGMISL 818
Equus_caballus     AAFQLRLAELLTOQHGLRCRAATATHTDVLKDGFFVFRICVAYQREPQILKEMRSPEGMISL 818
Canis_lupus_familiaris AAFQLRLAELLTOQHGLRCRAATATHTDVLKDGFFVFRIRVAYQREPQILREMRSPPEGMISL 818
Latimeria_chalumnae AAFHIRLAELLNOHHLKTCRPCVSHMDIYKDGYVFRVQVAYHREPQILKETVTPDGMKLF 584
Rhinatrema_bivittatum AAFHVRLAELLKEQHGLVCRPTAAHVDVFKDGYIFRVQVAYHREPLFIKEFITPEGMMKH 822
Xenopus_tropicalis AAFQIRLAELLRAQHQLLCPNSATHTDVYKDGYVFRVQVAYHREPQYMKIEVTPPEGMMLKY 815
Pavo_muticus       AAFHLQLAELLQOQHQLICRPVATHTDVYKDGYVFRVQVAYHREPLILKEVVTPPEGMMLKY 810
Pavo_cristatus     AAFHLQLAELLQOQHQLICRPVATHTDVYKDGYVFRVQVAYHREPLILKEVVTPPEGMMLKY 810
Gallus_gallus      AAFHLQLAELLQOQHQLICRPVATHTDVYKDGYVFRVQVAYHREPLILKEVVTPPEGMMLKY 812
Anas_platyrhynchos AAFHLQLAELLQOQHQLICRPVATHTDVYKDGYVFRVQVAYHREPLILKEVVTPPEGMVKY 807
Chelonia_mydas     AAFHLRLAELLTOQHQLLCPVATHTDVYKDGYVFRVQVAYHREPHILKEVVTPPEGMMLKY 820
.....790.....800.....810.....820.....830.....840

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Mus_musculus      RDTPASLRLERDTRQLPPLTSALHGLQQQHPAFSGVARLAKRWVRAQLLGEGFTDESIDL 884
Rattus_norvegicus RDTPASLRLERDTRQLPPLTSALHGLQQQHPAFSGVARLAKRWVRAQLLGEGFTDESIDL 878
Homo_sapiens       RDTAASLRLERDTRQLPPLTSALHGLQQQHPAFSGVARLAKRWVRAQLLGEGFADESIDL 878
Pan_troglodytes    RDTAASLRLERDTRQLPPLTSALHGLQQQHPAFSGVARLAKRWVRAQLLGEGFADESIDL 898
Macaca_mulatta     RDTPASLRLERDTRQLPPLTSALHGLQQQHPAFSGVARLAKRWVRAQLLGEGFTDESIDL 879
Callithrix_jacchus RDTPASLRLERDTRQLPPLTSALHGLQQQHPAFSGVARLAKRWVRAQLLGEGFTDESIDL 878
Bos_taurus         RDTPASLRLERDTRQLPPLTSALHGLQQQHPAFSGVARLAKRWVRAQLLGEGFTDESIDL 878
Equus_caballus     RDTPASLRLERDTRQLPPLTSALHGLQQQHPAFSGVARLAKRWVRAQLLGEGFTDESIDL 878
Canis_lupus_familiaris RDTPASLRLERDTRQLPPLTSALHGLQQQHPAFSGVARLAKRWVRAQLLGEGFTDESIDL 878
Latimeria_chalumnae CDTEESQOLEMETVHLPLYLSTSLHGLQQQHPAFSGTCRLAKRWVSAQLLSDGVPEECIDL 644
Rhinatrema_bivittatum QDTEESQOLEMETLHLPLYLSTSLHGLQQQHPAFSGTCRLAKRWISAQLLSDGISGECVDL 882
Xenopus_tropicalis QDTEESQOLEMETLHLPLYLSTSLHGLQQQHPAFSGTCRLAKRWISAQLLSDGISGECVDL 875
Pavo_muticus       QDTEESQOLEMETLHLPLYLSTSLHGLQQQHPAFSGTCRLAKRWISAQLLSDGISGECVDL 870
Pavo_cristatus     QDTEESQOLEMETLHLPLYLSTSLHGLQQQHPAFSGTCRLAKRWISAQLLSDGISGECVDL 870
Gallus_gallus      QDTEESQOLEMETLHLPLYLSTSLHGLQQQHPAFSGTCRLAKRWISAQLLSDGISGECVDL 872
Anas_platyrhynchos EDTEESQOLEMETLHLPLYLSTSLHGLQQQHPAFSGTCRLAKRWVSAQLLSDGISGECVDL 867
Chelonia_mydas     RDTEESQOLEMETLHLPLYLSTSLHGLQQQHPAFSGTCRLAKRWVRAQLLSDGISGECVDL 880
.....850.....860.....870.....880.....890.....900

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Mus_musculus      LAASLFLHPEPFTPPSSPQVGFLRFLYLSTFDWKNNPLIVNLNGELTAEEOVGIRSSFL 944
Rattus_norvegicus VAASLFLHPEPFTPPSSPQVGFLRFLYLSTFDWKNNPLIVNLNSELTAEEQVEIRSSFL 938
Homo_sapiens       VAAALFLHPEPFTPPSSPQVGFLRFLFLVSTFDWKNNPLFVNLNNELTVEEQVEIRSGFL 938
Pan_troglodytes    VAAALFLHPEPFTPPSSPQVGFLRFLFLVSTFDWKNNPLFVNLNNELTVEEQVEIRSGFL 958
Macaca_mulatta     VAAALFLHPEPFTPPSSPQVGFLRFLYLSTFDWKNNPLIVNLNNELTVEEQVEIRSGFL 939
Callithrix_jacchus VAAALFLHPEPFTPPSSPQVGFLRFLFLVSTFDWKNNPLIVNLNNELTVEEQVEIRSSFL 938
Bos_taurus         VAAALFLHPEPFTPPSSPQVGFLRFLFLSTFDWKNNPLIVNLNNELTVEEQVEIRSVFL 938
Equus_caballus     VAAALFLHPEPFTPPSSPEVGFLRFLFLVSTFDWKNNPLIVNLNNELTVEEQVEIRSGFL 938
Canis_lupus_familiaris VVAALFLHPEPFTPPSSPQVGFLRFLFLSTFDWRNNPLIVNLNNELTVEEQAEIRSGFL 938
Latimeria_chalumnae LAAYLFLHPAPYSPSSPQVGFLRFLSLLSTFDWKTSPLIVNLNGDIKDVYAEIKNDFV 704
Rhinatrema_bivittatum LAAYLFLHPAPFTSPSSPQVGFLRFLQLMASFDWKNNPLIVNLNGDIKDVYAEIKNDFV 942
Xenopus_tropicalis LVAHLFLHPAPYSPSSPQVGFLRFLHLLATFDWKNSPLIVNLNGELKGPDYTEIQNDFI 935
Pavo_muticus       LVASLFLHPAPFTPPSSPQVGFLRFLNLLATYDWRNSPLIVNLNAGLTDADCTEIKNKFV 930
Pavo_cristatus     LVASLFLHPAPFTPPSSPQVGFLRFLNLLATYDWRNSPLIVNLNAGLTDADCTEIKNKFV 930
Gallus_gallus      LVASLFLHPAPFMPSSPQVGFLRFLNLLATYDWRNNPLIVNLNAGLTDVDCTEIKNKFV 932
Anas_platyrhynchos LVASLFLHPAPFTPPSSPQVGFLRFLNLLVTFDWNNNPLIVNLNAGLTDADCTEIRNKFM 927
Chelonia_mydas     LAASLFLHPAPFTPPSSPQVGFLRFLHLLTAFDWNNSPLIVNLNADLKDADYTEIRNEFV 940
.....910.....920.....930.....940.....950.....960

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Mus_musculus      AARTQLPVMVITPQDRRS SVWTQDGPSAQILQQLVSLAAEALPILEKQLMDPRGPGDIR 1004
Rattus_norvegicus AARTQLPVMVITPQDRRS SVWTQDGPSAQILQQLVSLAAEALPILEKQLMDPRGPGDIR 998
Homo_sapiens       AARAQLPVMVITPQDRKNSVWTQDGPSAQILQQLVVLAAEALPMLEKQLMDPRGPGDIR 998
Pan_troglodytes    AARAQLPVMVITPQDRKNSVWTQDGPSAQILQQLVVLAAEALPMLEKQLMDPRGPGDIR 1018
Macaca_mulatta     AARTQLPVMVITPQDRKHSVWTQDGPSAQILQQLVVLAAEALPMLEKQLMDPRGPGDIR 999
Callithrix_jacchus AARAQLPVMVITPQDRKNSVWTQDGPSAQILQQLVVLAAEALPVLEKQLMDPRGPGDIR 998
Bos_taurus         ATRAKLPVMVITPQDRKS SVWTQDGPSQIHLQVLILAAEALPVLEKQLMDPRGPGDIR 998
Equus_caballus     ATRLQLPVMVITPQDRKS SVWTQDGPSQIHLQVLILAAEALPVLEKQLMDPRGPGDIR 998
Canis_lupus_familiaris AARTQLPVMVITPQDRKNSVWTQDGPSQIHLQVLILAAEALPVLEKQLMDPQGPDIR 998
Latimeria_chalumnae AARAQLPVMFIATPRDRKS SIWTKGHPTAQILQRVIVLALESRLALETQLMDPTSTHDVK 764
Rhinatrema_bivittatum AARSRLPVMFIATPKDKRKI SLWTEGRPSAPILQRMVMLALESAYTLEKQLMDPLGSHDVK 1002
Xenopus_tropicalis SARAQLPVMFIATPKDKKDSLWTKTQPTAQILQRLIVLCLESRLALEEQQLMDPSGSQDYK 995
Pavo_muticus       AARSRLPVMFIATPKDKWNSMWTOERPSAQILQRLVLASESVRALEEQLMDPLSSQDVK 990
Pavo_cristatus     AARSRLPVMFIATPKDKWNSMWTOERPSAQILQRLVLASESVRALEEQLMDPLSSQDVK 990
Gallus_gallus      AARSRLPVMFIATPKDKWNSIWTOERPSAQILQRLVLASESVRALEEQLMDPLSSQDVK 992
Anas_platyrhynchos AARSRLPVMFIATPKDQWS SVWTREQPSAQILQRLVLAEESRLTLEEQLMDPLGSQDVK 987
Chelonia_mydas     AARPHLPVMFIATPRDKRS SVWTKERPSTQILQRLVLALESRLALEEQQLTDLPLGSQDVK 1000
.....970.....980.....990.....1000.....1010.....1020

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.*****:*** :* * ..:***** : ** * :* ** : . . :***:*** *
Mus_musculus      TVFRPPFDMYDVLHILTPRHIPRHRQAVDPVASFRCGLLAEPGPSS--LMPVLGYDPPQ 1062
Rattus_norvegicus TVFRPPFDIYDVLHILTPRHIPRHRQAVDPVASFRCGLVTEPGPSS--LMPVLGYDPPQ 1056
Homo_sapiens       TVFRPPLDIYDVLIRLSPRHIPRHRQAVDSPAASFRCGLLSQPGPSS--LMPVLGYDPPQ 1056
Pan_troglodytes    TVFRPPLDIYDVLIRLSPRHIPRHRQAVDSPAASFRCGLLSQPGPSS--LMPVLGYDPPQ 1076
Macaca_mulatta     TVFRPPLDIYDVLIRLSPRHIPRHRQAVDSPAASFRCGLLSQPGPSS--LMPVLGYDPPQ 1057
Callithrix_jacchus TVFRPPLDIYDVLIFLSPRHIPRHRQAVDSPAASFRCGLRSEPGPSS--LMPVLGYDPPQ 1056
Bos_taurus         TVFRPPLDMDYDVLIRLAPRHIPRHRQAVDSPAASFRCGLLSEPGPSS--LMPVLGYDPPQ 1056
Equus_caballus     TVFRPPLDMDYDVLIRLSPRHIPRHRQAVDSPAASFRCGLLSEPGSLS--LMPVLGYDPPQ 1056
Canis_lupus_familiaris TVFRPPLDMDYDVLIRLSPRHIPRHRQAVDSPAASFRCGLLSEPGPSS--LMPVLGYDPPQ 1056
Latimeria_chalumnae MVFRPPLDFYDAIIHLNPKQIPRHLEAVDKPKITFCRGMLKSDAPVKFIMPPVVDYDPVQ 824
Rhinatrema_bivittatum LVFRPPLDLYDVLHILNRPQIPRHREAVDTPVKSFSGMLKSNARVKTFYFPVVDYDPVQ 1062
Xenopus_tropicalis MTFRPPDLIDYDILIRLNPQIPRHREAVDQPAKSFGRGLLKEGAQVKDLMFPVVGYPVQ 1055
Pavo_muticus       IVFRPPLDLYDVLHILNSNQIPRHLESVDRPVKSFSGRGVVKNSAGAR-ILFPVVDYDPVQ 1049
Pavo_cristatus     IVFRPPLDLYDVLHILNSNQIPRHLESVDRPVKSFSGRGVVKNSAGAR-ILFPVVDYDPVQ 1049
Gallus_gallus      IVFRPPLDLYDVLHILNANQIPRHLEVRDVPVKSFSGRGVVKNSAGVR-ILFPVVDYDPVQ 1051
Anas_platyrhynchos IAFRPPDLIDYDVLHILNSNQIPRHLEGVDRPVKSFSGRGVVKNSAGVN-VLFPVVDYDPVQ 1046
Chelonia_mydas     MVFRPPLDFYDILIHILNNAQIPRHLEGVDRPVKSFSGRGMLKSDAPVKTLVFPVVGYPVQ 1060
.....1030.....1040.....1050.....1060.....1070.....1080

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Mus_musculus      LYLAQLREAFEDLALFFYDQHGGEVIGVLWKPSSFPQPPFKASSIKGRMVVSQG-GELVM 1121
Rattus_norvegicus LYLAQLREAFGDLALFFYDQHGGEVIGVLWKPSSFPQPPFKASSLKGRMVVSRG-GELVT 1115
Homo_sapiens      LYLTQLREAFGDLALFFYDQHGGEVIGVLWKPSTSFQPPFKASSTKGRMVMSRG-GELVM 1115
Pan_troglodytes   LYLTQLREAFGDLALFFYDQHGGEVIGVLWKPSTSFQPPFKASSTKGRMVMSRG-GELVM 1135
Macaca_mulatta    LYLMQLREAFGDLALFFYDQHGGEVIGVLWKPSTSFQPPFKASSTKGRMVMSRG-GELVM 1116
Callithrix_jacchus LYLTQLREAFGDLALFFYDQHGGEVIGVLWKPSTSFQPPFKASSTKGRMVMSRG-GELVM 1115
Bos_taurus        LYLAQLREAFGHLALFFYDQHGGEVIGVLWKPSTSFQPPFKVSNKGRIVVSQG-GEVPM 1115
Equus_caballus    LYLAQLREAFGHLALFFYDQHGGEVIGVLWKPSTSFQPPFKASNTKGRMVVSQG-EELVL 1115
Canis_lupus_familiaris LYLAQLREAFGDLALFFYDQHGGEVIGVLWKPSTSFQPPFKASNTKGRMVMSRG-GELVM 1115
Latimeria_chalumnae CYLQELKVATLQ----- 836
Rhinatrema_bivittatum CYLQELKAAGFDLALFCYDAHGGEVIGVLWKPLSFEPQSFKTTNAKGRMMEIRS-NRPMM 1121
Xenopus_tropicalis CYLQELREAYGEFALFFHDKHGGDVIGVLWKPSGFEPQPFKTTNMTGRVMDGKS-AKPLL 1114
Pavo_muticus       CYLQDLREAFSDALALFFYDKHGGEVIAVLWKPSSTFPQPFKVS SMKGRITVTTLN-NELVC 1108
Pavo_cristatus     CYLQDLREAFSDALALFFYDKHGGEVIAVLWKPSSTFPQPFKVS SMKGRITVTTLN-NELVC 1108
Gallus_gallus      CYLQDLREAFSDALALFFYDKHGGEVIAVLWKPSSTFPQPFKVS SMKGRITVTTLN-NELVC 1110
Anas_platyrhynchos CYLQELRDAFGDLALFFYDKHGGEVIAVLWKPLSFEPQPFKVS SMKGRMVSTMN-NELVC 1105
Chelonia_mydas     CYLQELREAFGDLALFFYDSHGGEVIGVLWKPSSFPQPPFKASNMKGRMMASLS-EELVT 1120
.....1090.....1100.....1110.....1120.....1130.....1140

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Mus_musculus      LPNIEAILEDFAVLGEGLVQAVEARSERWTV 1152
Rattus_norvegicus VPNIEAILEDFAVLGEGLVQAVEARSERWTV 1146
Homo_sapiens      VPNVEAILEDFAVLGEGLVQAVEARSERWTV 1146
Pan_troglodytes   VPNVEAILEDFAVLGEGLVQAVEARSERWTV 1166
Macaca_mulatta    VPNVEAILEDFAVLGEGLVQAVEARSERWTV 1147
Callithrix_jacchus VPNVEAILEDFAVLGEGLVQAVEARSERWTV 1146
Bos_taurus        VPNVEAILEDFAVLGEGLVQAVEARSERWTV 1146
Equus_caballus    VPNVEAILEDFAVLGEGLVQAVEARSERWTV 1146
Canis_lupus_familiaris VPNVEAILEDFAVLGEGLVQAVEARSERWTV 1146
Latimeria_chalumnae ----- 836
Rhinatrema_bivittatum VPNVEAILEDFAVLGEGLVQAVEARSERWTV 1152
Xenopus_tropicalis VPNVEAILEDFAVLGEGLVQAVEARSERWTV 1145
Pavo_muticus       VPNVEAILEDFAVLGEGLVQAVEARSERWTV 1139
Pavo_cristatus     VPNVEAILEDFAVLGEGLVQAVEARSERWTV 1139
Gallus_gallus      VPNVEAILEDFAVLGEGLVQAVEARSERWTV 1141
Anas_platyrhynchos VPNVEAILEDFAVLGEGLVQAVEARSERWTV 1136
Chelonia_mydas     VPNVEAILEDFAVLGEGLVQAVEARSERWTV 1151
.....1150.....1160.....1170.

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