

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/MTM012.Fst Tue Feb 1 14:04:38 2022

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Xenopus_tropicalis	-----MLGLG--TGGAAKSPKPSFVSYLTPPEEIDV	29
Rhinatrema_bivittatum	-----MLGLG--AAGGAK-PVKPSFVSYLAPPEEIQV	28
Pavo_muticus	-----MLG-----SGAKAAKPSFVSYSISPEEIIHI	24
Pavo_cristatus	-----MLG-----SGAKAAKPSFVSYSISPEEIIHI	24
Gallus_gallus	-----MLG-----SGAKAAKPSFVSYSISPEEIIHV	24
Anas_platyrhynchos	-----MLS-----SGAKAAKPSFVSYSVSPPEEIQI	24
Chelonia_mydas	-----MLGKG--AGGSGAKPAKPSFVSYSVSPPEEIIHI	29
Mus_musculus	-----MLGKGVGSGGGGTKAPKPSFVSYSVRPEEIIHT	31
Rattus_norvegicus	-----MLGKGVGSGGGGTKAPKPSFVSYSVRPEEIIHT	31
Homo_sapiens	-----MLGKGVGSGGGGTKAPKPSFVSYSVRPEEIIHT	31
Pan_troglodytes	-----MLGKGVGSGGGGTKAPKPSFVSYSVRPEEIIHT	31
Macaca_mulatta	-----MLGKGVGSGGGGTKAPKPSFVSYSVRPEEIIHT	31
Callithrix_jacchus	-----MLGKGVGSGGGGTKAPKPSFVSYSVRPEEIIHT	31
Canis_lupus_familiaris	-----MLGKGVGSGGGGTKAPKPSFVSYSVRPEEIIHA	31
Equus_caballus	-----MLGKGVGSGGGGTKAPKPSFVSYSVRPEEIIHT	31
Bos_taurus	MGGAPAAASAGGRCPPLLPRAATCGGGMLGKGVGSGGGGTKAPKPSFVSYSVRPEEIIHT	60
Latimeria_chalumnae	-----	
	1.....10.....20.....30.....40.....50.....60	

Xenopus_tropicalis	KEKEPSAEKVDNVPLLPGEFVLCEANTVLKCTQDEGSQRGVYGRLLCTNFRITFLGDEPP	89
Rhinatrema_bivittatum	KEKEP-TEKEANHLVPGELVLCCEASTVLKCMDEGLQRGYGRLLCTNFKISFLCDEAA	87
Pavo_muticus	KEP--VEK-EVNPHELLPGEQLLCEASTVYKYIQEDGSNRGTYGLVCTNFKIAFLDDDDST	81
Pavo_cristatus	KEP--VEK-EVNPHELLPGEQLLCEASTVYKYIQEDGSNRGTYGLVCTNFKIAFLDDDDST	81
Gallus_gallus	KEP--IEK-EVNPHELLPGEQLLCEASTVYKYIQEDGSNRGTYGLVCTNFKIAFLDDDDST	81
Anas_platyrhynchos	KEP--IEK-EVNPHELLPGEQLLCEASTVYKYIHEDGSNRGTTCGLVCTNFKIAFLDDDDSA	81
Chelonia_mydas	KEP--IEK-EVNLHLLPGEQLLCEANTVLKCVQEDGSNRGACGKLCTNFKIAFLGDESA	86
Mus_musculus	DEKEVTEK-EVTLHLLPGEQLLCEASTVLKYVQEDSCQRGVYGRLLCTDFKISFLGDEDS	90
Rattus_norvegicus	NEKEVTEKEEVTLHLLPGEQLLCEASTVLKYVQEDSCQGLICGRLLCTDFRISFLGDEGS	91
Homo_sapiens	NEKEVTEK-EVTLHLLPGEQLLCEASTVLKYVQEDSCQHGVIYGRLLCTDFKIAFLGDDES	90
Pan_troglodytes	NEKEVTEK-EVTLHLLPGEQLLCEASTVLKYVQEDSCQHGVIYGRLLCTDFKIAFLGDDES	90
Macaca_mulatta	NEKEVTEK-EVTLHLLPGEQLLCEASTVLKYVQEDSCQHGVIYGRLLCTDFKIAFLGDDES	90
Callithrix_jacchus	NEKEVTEK-EVTLHLLPGEQLLCEASTVLKYVQEDSCQHGVIYGRLLCTDFKIAFLGDDES	90
Canis_lupus_familiaris	NEKEVTEK-EVTLHLLPGEQLLCEASTVLKYVQEDSCQRGYIGKLVCTDFKIAFLGDDES	90
Equus_caballus	NEKEVTEK-EVTLHLLPGEQLLCEASTVLKYVQEDSCQRGYIGKLVCTDFKIAFLGDDES	90
Bos_taurus	NEKEATEK-EVTLHLLPGEQLLCEANTVLKCVQEDSCQRGYIGRLLCTDFKIAFLGDDES	119
Latimeria_chalumnae	-----	
70.....80.....90.....100.....110.....120	

Xenopus_tropicalis	-DDTI--PEFKNKIFGENDITLQCVDQIYGVDKKKAILSGQGLKKYPERLIVYCKDFR	146
Rhinatrema_bivittatum	TDDNE--LDFKNKIVGENDITLHCVDQIYGVDKRRCLLTGO-VKKYPEKMVIFCKDFR	144
Pavo_muticus	SDDNE--POLKNKIIIGENDITLQCVDQIYGVDKKK-LLTGO-LRKYPEKLIYCKDLR	137
Pavo_cristatus	SDDNE--POLKNKIIIGENDITLQCVDQIYGVDKKK-LLTGO-LRKYPEKLIYCKDLR	137
Gallus_gallus	SDDNE--POLKNKIIIGENDITLQCVDQIYGVDKKK-LLTGO-LRKYPEKLIYCKDLR	137
Anas_platyrhynchos	SDDNE--POLKNKIIIGENDITLQCVDQIYGVDKKK-LLTGO-LRKYPEKLIYCKDLR	137
Chelonia_mydas	SDDNE--PEFKNKIIIGENDITLHCIDHIYGVYDEKKK-SLSGO-LKKYPDKLIYCKDLR	142
Mus_musculus	ALDNGGEAOFKNKIIIGVNDVPLHCVDQIYGVFDEKKK-PLFGQ-LKKYPEKLVIHCKDLR	148
Rattus_norvegicus	AVDNGAETHFKNKIIIGVNDIPLHCVDQIYGVFDEKKK-PLFGQ-LKKYPEKLVIHCKDLR	149
Homo_sapiens	ALDND-ETQFKNKVIGENDITLHCVDQIYGVFDEKKK-TLFGQ-LKKYPEKLIHCKDLR	147
Pan_troglodytes	ALDND-ETQFKNKVIGENDITLHCVDQIYGVFDEKKK-TLFGQ-LKKYPEKLIHCKDLR	147
Macaca_mulatta	ALDND-ETQFKNKVIGENDITLHCVDQIYGVFDEKKK-TLFGQ-LKKYPEKLIHCKDLR	147
Callithrix_jacchus	ALDND-ETQFKNKVIGENDITLHCVDQIYGVFDEKKK-TLFGQ-LKKYPEKLIHCKDLR	147
Canis_lupus_familiaris	ALDND-EAQFKNKVIGENDITLHCVDQIYGVFDEKKK-PLFGQ-LKKYPEKLIHCKDLR	147
Equus_caballus	ALDND-ETQFKNKVIGENDITLHCVDQIYGVFDEKKK-TLFGQ-LKKYPEKLIHCKDLR	147
Bos_taurus	ALDND-ETQFKNKVIGENDITLHCVDQIYGVFDEKKK-TLFGQ-LKKYPEKLVIHCKDLR	176
Latimeria_chalumnae	-----	
130.....140.....150.....160.....170.....180	

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<i>Xenopus_tropicalis</i>	VFHFCLSYTKQEEVKRIVSGIIHHTQSPKLLKRLFLFSYAAAVPRYKVTFSMEKTLMFET	206
<i>Rhinatrema_bivittatum</i>	VFHFCRLRYTKEEEVKRIIVSGIVHHTQSPILHKRLFLFSYAAAAPHYMAIGTKKQTVMFDT	204
<i>Pavo_muticus</i>	VFNFCRLRYTKEEEVKRIIVSGIIHHSQTPKLLKRLFLFSYASAAPN--NTDGRNQTVMFDT	195
<i>Pavo_cristatus</i>	VFNFCRLRYTKEEEVKRIIVSGIIHHSQTPKLLKRLFLFSYASAAPN--NTDGRNQTVMFDT	195
<i>Gallus_gallus</i>	VFNFCRLRYTKEEEVKRIIVSGIIHHSQTPKLLKRLFLFSYASAAPN--NTDARNQTVMFDT	195
<i>Anas_platyrhynchos</i>	VFNFCRLRFTKEEEVKRIIVSGIIHHSQTPKLLKRLFLFSYASAAPN--NTDERNQTVMFDT	195
<i>Chelonia_mydas</i>	VFHFCRLRYTKEEEVKRIIVSGIVHHSQTPKLLKRLFLFSYATAAPT--NADTONQTVMFDA	200
<i>Mus_musculus</i>	VLHFCRLRYTKEEEVKRIIVSGIIHHTQSPKLLKRLFLFSYAAAVHG--TATDSRNCTVMFDT	207
<i>Rattus_norvegicus</i>	VLHFCRLRYTKEEEVKRIIVSGIIHHTQSPKLLKRLFLFSYAAAVHG--TAADPRNCTVMFDT	208
<i>Homo_sapiens</i>	VFQFCRLRYTKEEEVKRIIVSGIIHHTQAPKLLKRLFLFSYATAAQNNTVTPDKNHTVMFDT	207
<i>Pan_troglodytes</i>	VFQFCRLRYTKEEEVKRIIVSGIIHHTQAPKLLKRLFLFSYATAAQNNTVTPDKNHTVMFDT	207
<i>Macaca_mulatta</i>	VFQFCRLRYTKEEEVKRIIVSGIIHHTQAPKLLKRLFLFSYATAAQNNTVTPDKNHTIMFDT	207
<i>Callithrix_jacchus</i>	VFQFCRLRYTKEEEVKRIIVSGIIHHTQAPKLLKRLFLFSYATAAQNNTVTPDKNHTVMFDT	207
<i>Canis_lupus_familiaris</i>	VFHFCRLRYTKEEEVKRIIVSGIIHHTQAPKLLKRLFLFSYAAAAQNNTATDPKNHTVMFDT	207
<i>Equus_caballus</i>	VFHFCRLRYTKEEEVKRIIVSGIIHHTQAPKLLKRLFLFSYAAAAARNSTATHPKNHTVMFET	207
<i>Bos_taurus</i>	VFHFCRLRYTKEEEVKRIIVSGIIHHTQAPKLLKRLFLFSYATAARNSPATDPKKHAVMFDT	236
<i>Latimeria_chalumnae</i>	-----	
190.....200.....210.....220.....230.....240	

<i>Xenopus tropicalis</i>	VKDWMAELEERTKGNLHYKVLITANEGYKVSEK	237
<i>Rhinatrema bivittatum</i>	LEDWRLELEERTKGNIKYKAVSSNESYALSEK	235
<i>Pavo muticus</i>	LEDWRDELEERTKGNVQYKAVSTNEGYSKSEK	226
<i>Pavo cristatus</i>	LEDWRDELEERTKGNVQYKAVSTNEGYSKSEK	226
<i>Gallus gallus</i>	LEDWRDELEERTKGNVQYKAVSTNEGYSKSEK	226
<i>Anas platyrhynchos</i>	LEDWRNELEERTKGNVQYKVVITNEGYSRISEK	226
<i>Chelonia mydas</i>	IKDWRRELEERTKGNMKYKVLISANEAYKISEK	231
<i>Mus musculus</i>	PKDWCWELERTKGSVKYRTVSVNEGYSRSDR	238
<i>Rattus norvegicus</i>	PKDWCWELERTKGSVKYKIVSVNEGYSRCDR	239
<i>Homo sapiens</i>	LKDWCWELERTKGNMKYKAVSVNEGYSKVCER	238
<i>Pan troglodytes</i>	LKDWCWELERTKGNMKYKAVSVNEGYSKVCES	267
<i>Macaca mulatta</i>	LKDWCWELERTKGNMKYKAVSVNEGYSKVCER	238
<i>Callithrix jacchus</i>	LKDWCWELERTKGNMKYKAVSVNEGYSKVCER	238
<i>Canis lupus familiaris</i>	LKDWCWELERTKGNVKYKAVSVNEGYSKVCVR	238
<i>Equus caballus</i>	LQDWCWELERTKGNMKYKAVRVNEGYSQVSEK	238
<i>Bos taurus</i>	LQDWCWELERTKGNMKYKAVSVNEGYSKVCER	267
<i>Latimeria chalumnae</i>		
250.....260.....270.....280.....290.....300	

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Xenopus_tropicalis	-----LPQYFVVPMSLIPEDTLTDFOGRGVPIWCWSCPNGSALLKMA	278
Rhinatrema_bivittatum	-----LPPYFVVPMSLLEEDISEFOGKGIPWCWSCNHSALLKMA	276
Pavo_muticus	-----LPLYFVVPICVSEESILKYEGRGIPWCWSCNHAALLKMS	267
Pavo_cristatus	-----LPLYFVVPICVSEESILKYEGRGIPWCWSCNHAALLKMS	267
Gallus_gallus	-----LPLYFVVPICVSEESILKYEGRGIPWCWSCNHAALLKMS	267
Anas_platyrhynchos	-----LPLYFVVPICVSEETILKYEGRGIPWCWSCNHAALLKMS	267
Chelonia_mydas	-----LPLYFVVPMSLSEERILQYOGRGIPWCWSCNHASLLKMS	272
Mus_musculus	-----LPAYFVVPTPLPEDDVRRFQGHGIPWCWSCNHSALLKMS	279
Rattus_norvegicus	-----LPAYFVVPTPLLEDVVKRFGHGIPIWCWSCNHSALLKMS	280
Homo_sapiens	-----LPAYFVVPTPLPEENVQRFGHGIPWCWSCNHSALLKMS	279
Pan_troglodytes	RRQKEKPHLYLEGDLQFGLPAYFVVPTPLPEENVQRFGHGIPWCWSCNHSALLKMS	327
Macaca_mulatta	-----LPAYFVVPTPLPEENVQRFGHGIPWCWSCNHSALLKMS	279
Callithrix_jacchus	-----LPAYFVVPTPLPEENVQRFGHGIPWCWSCNHSALLKMS	279
Canis_lupus_familiaris	-----LPAYFVVPTPLPEEDVLRFGHGIPWCWSCNHGCALLKMS	279
Equus_caballus	-----LPEYFVVPTPLPEEDVPRFGHGIPMWCWSCNHGCALLKMS	279
Bos_taurus	-----LPAYFVVPAPLLIEDIEFFQGRGIPWCWSCNHGCALLKMS	308
Latimeria_chalumnae	-----MS	2
310.....320.....330.....340.....350.....360	

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	SLPKDVDDVALQHQTFLDRVEK	TLHRPPYEVRIEDLTASLPSLS	EVQVAYCRFKOLF	337
<i>Xenopus_tropicalis</i>	SLPKDVDDVALQHQTFLDRVEK	TLHRPPYEVRIEDLTASLPSLS	EVQVAYCRFKOLF	337
<i>Rhinatrema_bivittatum</i>	ALPKEQDESMLQRHKTFSERIDK	TIHRPPYEVAKTEELWSSLPSLQ	ETIQIAYSRFKOLF	335
<i>Pavo_muticus</i>	AFPKEQDDSTSQMOKAFLDGIYR	TIRKPPYELLKTDDLSSSLPSLQ	ETIQTAYTRFKOLF	326
<i>Pavo_cristatus</i>	AFPKEQDDSTSQMOKAFLDGIYR	TIRKPPYELLKTDDLSSSLPSLQ	ETIQTAYTRFKOLF	326
<i>Gallus_gallus</i>	AFPKEQDDSSAQSMOKAFLDGIYR	TIRKPPYELLKTDDLSSSLPSLQ	ETIQTAYTRFKOLF	326
<i>Anas_platyrhynchos</i>	AFPKEQDDSTAQMOKAFLDGIYK	TISKPPYELLKTDDLSSSLPSLQ	ODIQTAYTRYKOLF	326
<i>Chelonia_mydas</i>	AFPKEQEDNTSQMHKIFLDGVYK	TINKPPYEVLTKTDDLSSSLPSLQ	ODIQAAYTRFKOLF	331
<i>Mus_musculus</i>	ALPKEQDDGALQVQKSFLDGIYK	TIHRPPYEMVKTEDLSSNFLSLQ	ETIQSAYCKFKOLF	338
<i>Rattus_norvegicus</i>	ALPKEQDDSALQIQKSFLDGIYK	TIHRPPYEMVKTEDLSSNFLSLQ	ETIQSSYCKFKOLF	339
<i>Homo_sapiens</i>	ALPKEQDDGILQIQKSFLDGIYK	TIHRPPYEIVKTEDLSSNFLSLQ	ETIQTAYSKFKOLF	338
<i>Pan_troglodytes</i>	ALPKEQDDGILQIQKSFLDGIYK	TIHRPPYEIVKTEDLSSNFLSLQ	ETIQTAYSKFKOLF	386
<i>Macaca_mulatta</i>	ALPKEQDDGILQIQKSFLDGVYK	TIHRPPYEIVKTEDLSSNFLSLQ	ETIQTAYSKFKOLF	338
<i>Callithrix_jacchus</i>	ALPKEQDDGILQIQKGFLDRIYK	TIHRPPYEIVKTEDLSSNFLSLQ	ETIQTAYSKFKOLF	338
<i>Canis_lupus_familiaris</i>	ALPKEQDDGSLQIQKSFLDGIYK	TIHRPPYEIVKTEDLSTNFLSLQ	ODIQTAYSKFKOLF	338
<i>Equus_caballus</i>	ALPKEQDDAVLQVQKSFLDGVYK	TIHRPPYEIVKTEDLSSSFLSLQ	ODIQTAMASKFKOLF	338
<i>Bos_taurus</i>	ALPKEQDDSMSQIQKNFSLDRIYR	TVHRPPYETAKTEDLSSNFLSLQ	ETIQAMASKFKOLF	367
<i>Latimeria_chalumnae</i>	EAPKEQDENLQIYKGLMDRIPHGVLE	PPYGSAAHVEELASLPSLQ	ETIQAAAYCRFKOLF	61
370.....380.....390.....400.....410.....420			

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Xenopus_tropicalis	LIEN	-----	STDFWDTDLKWFSSLDTSNWMEIIRQC	368
Rhinatrema_bivittatum	WMEN	-----	RADFWDSDVKWFSLLSNSNWLEIIRQC	366
Pavo_muticus	LIDN	-----	STDFWATDVKWFSLLESTNWLEIIRRV	357
Pavo_cristatus	LIDN	-----	STDFWATDVKWFSLLESTNWLEIIRRV	357
Gallus_gallus	LIDN	-----	STDFWATDVKWFSLLESTNWLEIIRRV	357
Anas_platyrhynchos	LIDN	-----	SADFWATDVKWFSLLESTNWLEIIRRV	357
Chelonia_mydas	LIDNN	-----	STDFWDTDVKWFSLLESTNWLEIVRRC	363
Mus_musculus	LI	-----	DNSSEFWDTDIKWFSLLESSSWLDIIRRC	369
Rattus_norvegicus	LI	-----	DSSEFWDTDVKWFSLLESSGWLDIIRRC	370
Homo_sapiens	LI	-----	DNSTEFWDTDIKWFSLLESSSWLDIIRRC	369
Pan_troglodytes	LIGFPSPPPYCGSDHTATLLFSPSSAYQLPS	-----	DNSTEFWDTDIKWFSLLESSSWLDIIRRC	446
Macaca_mulatta	LIGFPPLPPYCGSDNTATLLFSPSSAYQLPS	-----	DNSTEFWDTDIKWFSLLESSSWLDIIRRC	398
Callithrix_jacchus	LI	-----	DNSTEFWDTDIKWFSLLESSSWLDIIRRC	369
Canis_lupus_familiaris	LI	-----	DNSTEFWDTDIKWFSLLSNSWLDIIRRC	369
Equus_caballus	LI	-----	DNSTEFWDTDIKWFSLLESSSWLDIIRRC	369
Bos_taurus	LI	-----	DNSTEFWDTDIKWFSLLESSSWLDIIRRC	398
Latimeria_chalumnae	LIDN	-----	IAEFWSDLKWFSSVNSNWLEIVIRQC	92
430.....440.....450.....460.....470.....480			

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Xenopus_tropicalis	LRKAVEVIEYLETHKINVVLKEDTASDFCCISSLVQIMDPYCRTKIGFOSLVOKEWVM	428	
Rhinatrema_bivittatum	LKKAIEVTEYLETESINVVLKEESTWDLCCVISSLVQVMDPQCRTKLGFOSLVOKEWVM	426	
Pavo_muticus	LKKAIEVVECLERQHTNVLLIEESATDLCCVISSLVQVMDSYSRTKLGFOSLVOKEWVI	417	
Pavo_cristatus	LKKAIEVVECLERQHTNVLLIEESATDLCCVISSLVQVMDSYSRTKLGFOSLVOKEWVI	417	
Gallus_gallus	LKKAIEVVECLERQHTNVLLIEESATDLCCVISSLVQVMDSYSRTKLGFOSLVOKEWVI	417	
Anas_platyrhynchos	LKKAIEVVECLERQHTNVLLIEESATDLCCVISSLVQVMDSYSRTKSGFOSLVOKEWVI	417	
Chelonia_mydas	LKKAIEVVEYLEEQNTNVLLVEENASDLCCVISSLVQVMDSHYRTKFGFOSLVOKEWVM	423	
Mus_musculus	LKKAIEITECLEAQN NVNLLLEENASDLCCLISSLVQVMDAHCRTRIGFOSLVOKEWVM	429	
Rattus_norvegicus	LKRAIEIIECLEAQN NVNLLLEENASDLCCLISSLVQVMDAHCRTWIGFOSLVOKEWVM	430	
Homo_sapiens	LKKAIEITECMEAQN NVNLLLEENASDLCLISSVLQIMDPHCRTRIGFOSLVOKEWVM	429	
Pan_troglodytes	LKKAIEITECMEAQN NVNLLLEENASDLCLISSVLQIMDPHCRTRIGFOSLVOKEWVM	506	
Macaca_mulatta	LKKAIEITECMEAQN NVNLLLEENASDLCLISSVLQIMDPHCRTRIGFOSLVOKEWVM	458	
Callithrix_jacchus	LKKAIEITECMEAQN NVNLLLEENASDLCLISSVLQIMDPHCRTRIGFOSLVOKEWVM	429	
Canis_lupus_familiaris	LKKAIEIAECLEAQN NVNLLLEENASDLCLISSVLQVMDPHCRTRVGFOSLVOKEWIM	429	
Equus_caballus	LKKAIEITECLEAQN NVNLLLEENASDLCLISSVLQVMDPHCRTRVGFOSLVOKEWIM	429	
Bos_taurus	LKKAIEIIECLEAQN NVNLLLEDNASDLCCVSSLAQVMDPHCRTVGFOSLVOKEWVM	458	
Latimeria_chalumnae	LKKVIDVIRYLENTTTYVLLLEDNLCCVISSLVQIMDPYRTKHGFOSLVOKEWVM	151	
490.....500.....510.....520.....530.....540		

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Xenopus_tropicalis      GGHCFDLDRCNHLRKNENE-APVFLFLDCVWQLVQYPLAFETETTYLTVLSDSINIPIF 487
Rhinatrema_bivittatum  GGHAFLDRCNHLRQNDKEEAPVFLFLDCVWQLVQYPPVAFQFTETTYLTVLSDSLYIPIF 486
Pavo_muticus           GGGHGFLDRCNHLHKSDEKEAPVFLLLLNCVWQLVQYPPAFETETTYLTVLSDSLYVPIF 477
Pavo_cristatus         GGGHGFLDRCNHLHKSDEKEAPVFLLLLNCVWQLVQYPPAFETETTYLTVLSDSLYVPIF 477
Gallus_gallus          GGGHGFLDRCNHLHKSDEKEAPVFLLLLNCVWQLVQYPPAFETETTYLTVLSDSLYVPIF 477
Anas_platyrhynchos    GGGHGFLDRCNHLHQSDEKEAPVFLLLLDCVWQLVQYPPAFETETTYLTVLSDSLYVPIF 477
Chelonia_mydas         GGHCFDLDRCNHLRQNDKEEAPVFLFLDCVWQLVQYPPAFETETTYLTVLSDSLYIPIF 483
Mus_musculus           GGHSFLDRCNHLHQSDEKEVPVFLFLDCVWQLVHQYPPAFETETTYLTVLSDSLYIPIF 489
Rattus_norvegicus      GGHSFLDRCNHLHQSDEKEVPVFLFLDCVWQLVHQHPPAFETETTYLTVLSDSLYIPIF 490
Homo_sapiens           GGHCFDLDRCNHLRQNDKEEVPVFLFLDCVWQLVHQHPPAFETETTYLTVLSDSLYIPIF 489
Pan_troglodytes       GGHCFDLDRCNHLRQNDKEEVPVFLFLDCVWQLVHQHPPAFETETTYLTVLSDSLYIPIF 566
Macaca_mulatta        GGHCFDLDRCNHLRQNDKEEVPVFLFLDCVWQLVHQHPPAFETETTYLTVLSDSLYIPIF 518
Callithrix_jacchus    GGHCFDLDRCNHLRQNDKEEVPVFLFLDCVWQLVHQHPPAFETETTYLTVLSDSLYIPIF 489
Canis_lupus_familiaris GGHCFDLDRCNHLRQSDKEEVPVFLFLDCVWQLVHQHPPAFDFTETTYLTVLSDSLYLPPIF 489
Equus_caballus        GGHCFDLDRCNHLRQSDKEEVPVFLFLDCVWQLVHQHPPAFETETTYLTVLSDSLYIPIF 489
Bos_taurus            GGHCFDLDRCNHLRQSDKEEVPVFLFLDCVWQLVHQHPPAFETETTYLTVLSDSLYIPIF 518
Latimeria_chalumnae   GGHCFDLDRCNHLRQTEKEEVPVFLFLDCVWQLVQYPPAFETETTYLTVLSDSLYIPIF 211
.....550.....560.....570.....580.....590.....600

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Xenopus_tropicalis      STFFFNSPWQKDTHSVVEGRQKQGESLRFYTVWDWSVQFEPKAIISFLNNPLYVEKAKLE 547
Rhinatrema_bivittatum  STFFFNSPCHKDTQHLSGSDSTDKQSPFHSFVWDWSVQFEAKTQALLKNPLYAEKSKQD 546
Pavo_muticus           STFFFNSQHOKDIT-TTGESLKTQSSPFRFLTVDWWSVQFDLKAQAFLLNNPLYAEKPKPE 536
Pavo_cristatus         STFFFNSQHOKDIT-TTGESLKTQSSPFRFLTVDWWSVQFDLKAQAFLLNNPLYAEKPKPE 536
Gallus_gallus          STFFFNSQHOKDIT-ATGESLKTQSGPFRFLTVDWWSVQFDLKAQAFLLNNPLYAEKPKPE 536
Anas_platyrhynchos    STFFFNSQHOKDIT-TTGESLKTQSGPFRFLTVDWWSVQFDLKAQAFLLNNPLYAEKPKPD 536
Chelonia_mydas         STFFFNSQHOKDAN-MSGEGHNAQSSHFRFLTVDWWSVQFEPKAQVLLNNPLYVDKPKPD 542
Mus_musculus           STFFFNSPHQKDTN-MGRENLDQSKPLTLLTVWDWWSVQFEPKAQTLLRNPLYVEKPKLD 548
Rattus_norvegicus      STFFFNSPHQKDTN-MGRESLDAQSKPLTLLTVWDWWSVQFEPKAQTLLRNPLYVEKPKLD 549
Homo_sapiens           STFFFNSPHQKDTN-MGREGQDTQSKPLNLLTVWDWWSVQFEPKAQTLLKNPLYVEKPKLD 548
Pan_troglodytes       STFFFNSPHQKDTN-MGREGQDTQSKPLNLLTVWDWWSVQFEPKAQTLLKNPLYVEKPKLD 625
Macaca_mulatta        STFFFNSPHQKDTN-MGREGQDTQSKPLNLLTVWDWWSVQFEPKAQTLLKNPLYVEKPKLD 577
Callithrix_jacchus    STFFFNSPHQKDTN-VGREGHETQSKPLNLLTVWDWWSVQFEPKAQTLLKNPLYVEKPKLD 548
Canis_lupus_familiaris STFFFNSPHQKDIN-MGREHQDTQSKPLNLLTVWDWWSVQFEPKAQMLLNPLYVEKPKLD 548
Equus_caballus        STFFFNSPHQKDTN-MGRESQDIQKPLNLLTVWDWWSVQFEPKAQTLLKNPLYVEKPKLD 548
Bos_taurus            STFFFNSPHQKDMN-VGKESQDSQSRPLNLLTVWDWWSVQFEPKAQTLLTNPLYVEKPKLE 577
Latimeria_chalumnae   STFFFNTPFQRPDEPFMADKNQCIQSNPLSYSTVWDWSLQFEPKAQALFNPLYVEKPKQD 271
.....610.....620.....630.....640.....650.....660

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: : : * * :***** * * * . * . *
Xenopus_tropicalis      KISRKAARTK-----HQRLSLPLTQSKTTPNK 574
Rhinatrema_bivittatum  KTIRRAATRPK-----HQRLSLPLTQSKTTPNK 573
Pavo_muticus           KSQRKTARFK-----HQRLSLPLTQTKSSPK 563
Pavo_cristatus         KSQRKTARFK-----HQRLSLPLTQTKSSPK 563
Gallus_gallus          KSQRKTARFK-----HQRLSLPLTQTKSSPK 563
Anas_platyrhynchos    KSQRKTARCK-----HQRLSCPLTQTKSSPK 563
Chelonia_mydas         KSQRKTTRFK-----HHRQLSLPLTQTKSSPK 569
Mus_musculus           RGQKGSRFK-----HQRLSLPLTQSKSSPK 575
Rattus_norvegicus      KGQRKGSRFK-----HQRLSLPLTQSKSSPK 576
Homo_sapiens           KGQRKGMRFK-----HQRLSLPLTQSKSSPK 575
Pan_troglodytes       KGQRKGMRFKL-----CLOAQNFSPTESTKERAVMHQRLSLPLTQSKSSPK 672
Macaca_mulatta        KGQRKGMRFKL-----CLOAQNFSLTESTKERAVMHQRLSLPLTQSKSSPK 624
Callithrix_jacchus    KGQRKGMRFKL-----CLOAQNFSPTESTKERAVMHQRLSLPLTQSKSSPK 595
Canis_lupus_familiaris KGQRKGMRFKGPQGGGCFPSQFSLLPASWTRTVLSPRTAWPEHQRLSLPLTQSKSSPK 608
Equus_caballus        KGQRKGMRFK-----HQRLSLPLTQSKSSPK 575
Bos_taurus            KVQRKGTHFK-----HQRLSLPLTQSKSSPK 604
Latimeria_chalumnae   KTVQKSQRPK-----HQRLSLPLTPNKPSPK 298
.....670.....680.....690.....700.....710.....720

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/MTM012.Fst Tue Feb 14:04:38 2022

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::***::... ::*::*::**::*::... :: :. **::** :. . :*::**::**
Xenopus_tropicalis  RGFFKDETGPFIKTLLGKRISKLISALDDVPNNGWAFYESWHRKPVDFHGLILPHLEGPD 634
Rhinatrema_bivittatum RGFFRDDPGPFIKNFKRISKLMNSSDEVNNCREFYDSWHCKPVDFHGLLLPHIEGPG 633
Pavo_muticus        RGFFREETDHLIKNILGKRIGKFINSSDEPPNSFREFYDSWHSKPVDYHGLLLPRIDGPE 623
Pavo_cristatus      RGFFREETDHLIKNILGKRIGKFINSSDEPPNSFREFYDSWHSKPVDYHGLLLPRIDGPE 623
Gallus_gallus       RGFFREETDHLIKNILGKRIGKFINSSDEPPNIFREFYDSWHSKPVDYHGLLLPRIDGPE 623
Anas_platyrhynchos  RGFFREETDHLIKNILGKRIGKFINSSDEPPNSFREFYDSWHSKPVDYHGLLLPRIDGPE 623
Chelonia_mydas      RGFFREETDHFINKILGKRISKLINSSDELHNNFTEFYDSWHCKPVDFHGLLLPHIEGPG 629
Mus_musculus        RGFFREETDHLIKNLLGKRISKLINSSDDLQDSSREFYDSWHSKPTDYHGLLLPHIEGPE 635
Rattus_norvegicus   RGFFREETDHLIKNLLGKRISKLINSSDDLQDNSREFYDNWHSKPTDYHGLLLPHIEGPE 636
Homo_sapiens        RGFFREETDHLIKNLLGKRISKLINSSDELQDNFREFYDSWHSKSTDYHGLLLPHIEGPE 635
Pan_troglodytes     RGFFREETDHLIKNLLGKRISKLINSSDELQDNFREFYDSWHSKSTDYHGLLLPHIEGPE 732
Macaca_mulatta      RGFFREETDHLIKNLLGKRISKLINSSDELQDNFREFYDSWHSKPTDYHGLLLPHIEGPE 684
Callithrix_jacchus  RGFFREETDHLIKNLLGKRISKLINSSDELQDNFREFYDSWHSKPTDYHGLLLPHIEGPE 655
Canis_lupus_familiaris RGFFREETDHLIKNLLGKRISKLINSSDELQDNFREFYDSWHSKPTDYHGLLLPHIEGPE 668
Equus_caballus      RGFFREETDHLIKNLLGKRISKLINSSDELQDNFREFYDSWHSKPTDYHGLLLPHIEGPE 635
Bos_taurus          RGFFREETDHLIKNLLGKRISKLINSSDELQDNFREFYDSWHSRPPSYQGLLLPHIEGPE 664
Latimeria_chalumnae KSFFRDEADNFMKTFLGRRISKLINFPPEELQDNFREFYEDWHSKPVDLHGILLPHIEGLA 358
.....730.....740.....750.....760.....770.....780

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Xenopus_tropicalis  IRIWAQRLLRWIPEAQVLGGGNVATMQKILEVTDLCKLKKKLENNPILPOYPSKENETID 694
Rhinatrema_bivittatum IRIWAQRCLRWIPDAQILGGGSVATMSRILETMEEVQSLRRKLEEKQIPGLPITKETIEMV 693
Pavo_muticus        IKVWAQRYLRWIPEAQLHGGGTIATAAKILDILKEVNLQVKMDEEHSQAV--SGDIHAV 681
Pavo_cristatus      IKVWAQRYLRWIPEAQLHGGGTIATAAKILDILKEVNLQVKMDEEHSQAV--SGDIHAV 681
Gallus_gallus       IKVWAQRYLRWIPEAQLHGGGTIATAAKILDILKEVNLQVKMDEEHSQAV--SGDIHAV 681
Anas_platyrhynchos  IRVWAQRYLRWIPEVQLHGGGTIATAARILDILMEEVERLQVKMDEEHSQAV--SGNIHAV 681
Chelonia_mydas      IKVWAQRYLRWIPEAQLGGGTVATATKILDMIEEVQSLQKKMDEKHSPTV--TQREAL 687
Mus_musculus        IKVWAQRYLRWIPEAQILGGGRVATMGKILLEMEEVQSLQEKIEARHHRQ--AVHAEAP 693
Rattus_norvegicus   IKVWAQRYLRWIPEAQILGGGRVATMGKILLEMEEVQSLQEKIEARHHRQ--AIHVQAP 694
Homo_sapiens        IKVWAQRYLRWIPEAQILGGGVATLSKILLEMEEVQSLQEKIDERHHSQ--APQAEAP 693
Pan_troglodytes     IKVWAQRYLRWIPEAQILGGGVATLSKILLEMEEVQSLQEKIDERHHSQ--APQAEAP 790
Macaca_mulatta      IKVWAQRYLRWIPEAQILGGSRVATMSKILLEMIEEVQSLQEKIDERHHSQ--APQAEAP 742
Callithrix_jacchus  IKVWAQRYLRWIPEAQILGGGVATMSKILLEMEEVQSLQEKIDEKHHSSQ--APQAEAP 714
Canis_lupus_familiaris IKVWAQRYLRWIPEAQILGGGRVATMSKILLEMEEVQSLQEKIEERHHSQ--ALPAEGP 726
Equus_caballus      IKVWAQRYLRWIPEAQILGGGRVATMSKILLEMEEVQSLQEKIDERHHSQV--ALQAEAS 693
Bos_taurus          IKVWAQRYLRWIPEAQILGGGVATMSKILLEMIEEVQSLQEKIEARHHSQ--ALQAEAA 722
Latimeria_chalumnae VRVWAQRYLRWIPEAQILGGGTFIATSRVFLMEEIQSLQGLDEKQISTQLHSEGSEVF 418
.....790.....800.....810.....820.....830.....840

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Xenopus_tropicalis  ARRKKSVRRSSSLYPFAMLHVSFRPAISTTSWRSWEPEDDIVNREDEFIDLGN----- 748
Rhinatrema_bivittatum AMLRKSARFSSSLYPFALLRRISLRPVIPTSTWRGLEAEDDLVKREDEFIDLGN----- 747
Pavo_muticus        PMLRNSARLSSSLFPFALLQRQSVKPALPTSTWKDLEDEDDLVKRDDEFVDLSSDVL---- 737
Pavo_cristatus      PMLRNSARLSSSLFPFALLQRQSVKPALPTSTWKDLEDEDDLVKRDDEFVDLSSDVL---- 737
Gallus_gallus       PMLRNSARLSSSLFPFALLQRQSVKPALPTSTWKDLEDEDDLVKRDDEFVDLSSDIL---- 737
Anas_platyrhynchos  PMLRNSARLSSSLFPFALLIHRQSVKPALPTSTWKDLEDEDDLVKRDDEFVDLSSDMLKCIY 741
Chelonia_mydas      PMLRNSARLSSSLFPFALLQRHSLKPVLPTSTWKDLEDEDDLAKRDDEFVDLSEVI----- 742
Mus_musculus        GLLRNSARLSSSLFPFALLQRHSAKPVLPTSGWKALGGEDDLAKREDEFVDLGDV----- 747
Rattus_norvegicus   GLLRNSARLSSSLFPFAMHQRHSAKPVLPTSGWKALGGEDDLAKREDEFVDLGDV----- 748
Homo_sapiens        CLLRNSARLSSSLFPFALLQRHSSKPVLPTSGWKALGDEDDLAKREDEFVDLGDV----- 747
Pan_troglodytes     CLLRNSARLSSSLFPFALLQRHSSKPVLPTSGWKALGDEDDLAKREDEFVDLGDV----- 844
Macaca_mulatta      CLLRNSARLSSSLFPFALLQRHSSKPVLPTSGWKALGDEDDLAKREDEFVDLGDV----- 796
Callithrix_jacchus  CLLRNSARLSSSLFPFALLQRHSSKPVLPTSGWKALGDEDDLAKREDEFMDLGDV----- 768
Canis_lupus_familiaris SLLRNSARLSSSLFPFALLQRHSSKPVLPTSGWKALGDEDDLAKREDEFVDLGDV----- 780
Equus_caballus      SLLRASARLSSSLFPFALLQRHSSKPVLPTSGWKALGDEDDLAKREDESVDLGDV----- 747
Bos_taurus          SPPRTSGRLSSSLFPFALLQRHSSKPVLPTSGWKALGDEDDLAKREDEFVDLGDV----- 776
Latimeria_chalumnae SVLHKS-RFSSSFPPFASLQRHSSFKPVIPINIRSSSGSDEDLAKRDDESVDLGEI----- 471
.....850.....860.....870.....880.....890.....900

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