File: /media/morpheus/disk1/fst/pep_msa/KIF**Dps**e: Tue Feb 112:38:14 2022 Page 1 of 9

Pavo_muticus	SPSLSQSPVAWDSPRALVSVPPAGQPGQAEPTCG	34
Pavo_cristatus	SPSLSQSPVAWDSPRALVSVPPAGQPGQAEPTCG	34
Gallus_gallus	MGPDGPQIQPTPSHDSPSTSEGTERRAPPAHLNPAHAHRPAALTALTAAAAPGRAEPPDA	60
Anas_platyrhynchos		
Chelonia_mydas	M <mark>G</mark> LKAEAQP	9
Mus_musculus	MGLEAQRLP	9
Rattus_norvegicus	M <mark>GLEAO</mark> KLS	9
Canis_lupus_familiaris	MTASDRAARRLGARLHRGGTALPPEQGQEEPSCNMGLETQRLP	43
Equus_caballus	MGLEAQRLP	9
Bos_taurus	QGWEQQSLNMGLEAQRLP	27
Homo_sapiens	MGLEAORLP	9
Pan_troglodytes	MGLEAQRLP	9
Macaca_mulatta	MGLEAQRLP	9
Callithrix_jacchus	MTASERAALGLEPACAAREDLARPQAGPEPSSLNMGLEAQRLP	43
Latimeria chalumnae	MGPKLQGHP	9
Rhinatrema bivittatum	MGPKSQGRP	9
Xenopus_tropicalis	mgpkvlQs	8
	1102030405060	
	.* .***.:*:*** * . *: : .::** *:* *	
Pavo muticus	AAEPXXXXRPAMGPEGAAVRVAVRVRPLLPKEVLRGHRSCLRGDAATGEVALGHRRFRF	94
Pavo cristatus	AAEPXXXXRPAMGPEGAAVRVAVRVRPLLPKEVLRGHRSCLRGDAATGEVALGHRRRFRF	94
Gallus_gallus	IAPRRAALRPAMGPEGAAVRVAVRVRPLLPKEVLRGHRSCLRGDAATGEVALGHRRRFRF	120
Anas platyrhynchos	MAPEGAAVRVAVRVRPLLPKEVLRGHRPCLRGDAATGEVALGHRRRFRF	49
Chelonia mydas	RAEETPVRVAVRIRPLLPKELLHGHEACLHGDPETNEVTLGRNRHFHF	57
Mus musculus	GAEEAPVRVALRVRPLLPKELLHGHQSCLRVEPERGRITLGRDRHFGF	57
Rattus norvegicus	GAEEAPVRVALRVRPLLPKELLHGHQSCLQVEPERGRITLGRDRHFGF	57
	GAEEAPVRVALRVRPLLPKELLHGHQSCLRVEPEHSRITLGRDRHFGF	91
Equus_caballus	GAEEAPVRVALRVRPLLPKELLHGHQSCLRVEPGHGRVTLGRDRHFGF	57
Bos taurus	GAEEAPVRVALRVRPLLRKELLHGHQSCLTVEPGRSRVTLGRDRHFGF	75
_		73 57
Homo_sapiens	GAEEAPVRVALRVRPLLPKELLHGHQSCLQVEPGLGRVTLGRDRHFGF GAEEAPVRVALRVRPLLPKELLHGHQSCLQVEPGLGRVTLGRDRHFGF	5 <i>7</i> 57
Pan_troglodytes	GAEEAPVRVALRVRPLLPKELLHGHQSCLQVEPGLGRVTLGRDRHFGF	_
Macaca_mulatta	GPEEAPVRVALRVRPLLPKELLHGHQSCLQVEPGLGRITLGRDRHFGF	57
Callithrix_jacchus	AAEEVPVRVALRVRPLLPKELLYGHQSCLQVEPRLGRITLGRDRHFGF	91
Latimeria_chalumnae	RAEETPVRVALRIRPLLPKEVLHGLQPCIRVNQEACQVTLGNDRHFKF	57
Rhinatrema_bivittatum	iaeespvrvvvrirpllpkellhghqsclhanaesrqvtlghnrhfqf	57
Xenopus_tropicalis	KTEETAVRVVVRVRPLLPKEVLHGQQHCLWTEPDQRRLTLGTNRHFQF	56
	708090100110120	
	:::: *::*: **: **: ***: ***: ***: *:*::::::	
Pavo_muticus	AAVLPEAAGQEAVYGACVRPLLRAFFQGFNATVFAYGQTGSGKTYTIGEASVASINEDEQ	154
Pavo_cristatus	AAVLPEAAGQEAVYGACVRPLLRAFFQGFNATVFAYGQTGSGKTYTIGEASVASINEDEQ	154
Gallus_gallus	AAVLPEAAGQEAVYSACVRPLLRAFFQGFNATVFAYGQTGSGKTYTIGEASVASINEDEQ	180
Anas_platyrhynchos	AAVLPEAAGQEAVYSACVRPLLRAFFQGFNATVFAYGQTGSGKTYTIGEASVAAINEDEQ	109
Chelonia_mydas	DAVFTESSN <mark>QESVYGAC</mark> V <mark>QP</mark> LVEAFFEGFNVTVFAY <mark>GQTGSGKTYTIGEAS</mark> VSSINEDEQ	117
Mus_musculus	HVVLGEDTGQEAVYQACVQPLLEAFFEGFNATVFAYGQTGSGKTYTMGEASVASLHEDEQ	117
Rattus_norvegicus	HVVLGEDAGQEAVYQACVQPLLEAFFEGFNATVFAYGQTGSGKTYTMGEASVASLHEDEQ	117
Canis_lupus_familiaris	HVVLDED <mark>TG</mark> QEAVYQACVQPLLEAFFEGFNATVFAYGQTGSGKTYTMGEASVASLHEDEQ	151
Equus_caballus	HVVLDEDAGQEAVYQACVQPLLEAFFEGFNATVFAYGQTGSGKTYTMGEASVASLHEDEQ	117
Bos_taurus	HVVLDEDAGQEAVYQACVQPLLEAFFEGFNVTVFAYGQTGSGKTYTMGEASVASLHEDEQ	135
Homo_sapiens	HVVLAEDAGQEAVYQACVQPLLEAFFEGFNATVFAYGQTGSGKTYTMGEASVASLLEDEQ	117
Pan_troglodytes	HVVLAEDARQEAVYQACVQPLLEAFFEGFNATVFAYGQTGSGKTYTMGEASVASLLEDEQ	117
Macaca_mulatta	HVVLAEDAGQEAVYQACVQPLLEAFFEGFNATVFAYGQTGSGKTYTMGEASVASLLEDEQ	117
Callithrix_jacchus	HVVLAEDAGQEAVYQACVQPLLEAFFEGFNATVFAYGQTGSGKTYTMGEASVASLLEDEQ	151
Latimeria chalumnae	DFVFDDASEQEEVYSGCVQPLIEAFFEGFNATVFAYGQTSSGKTYTIGEANISSISEEEQ	117
Rhinatrema bivittatum	HDVFDESSDQESVYSVCVQPLVEAFFEGFNATVFAYGQTGSGKTYTIGEASLASISEDEQ	117
Xenopus_tropicalis	QDILDETCSQDATYNACVQPLLAAFFQGFNVTVFAYGQTGSGKTYTIGEASISSISEDEQ	116
	130140150160170180	

File: /media/morpheus/disk1/fst/pep_msa/KIF**Dps**e: Tue Feb 1 12:38:14 2022 Page 2 of 9

	..** *.***** ****.***.* *.*. **	
Pavo muticus	GIIPRAMAETFOLIDENDLIDYTVRVSYLEVYKEEFRDLLOVDTASKDIQIREDDKGNIV	214
Pavo cristatus	GIIPRAMAETFQLIDENDLIDYTVRVSYLEVYKEEFRDLLQVDTASKDIQIREDDKGNIV	214
Gallus_gallus	GIIPRAMAETFQLIDENDLIDYTVRVSYLEVYKEEFRDLLQVDTASKDIQIREDDKGNIV	240
Anas_platyrhynchos	GIIPRAMAETFRLIDENDLVDYTVRVSYLEVYKEEFRDLLOVDTASKDIOIREDDKGNVV	169
Chelonia mydas	GIIPRAMAETFKLIDENDLIDYTVRVSYLEVYKEEFQDLLQVETASKDIQIREDDKGNIV	177
Mus musculus	GIIPRAMAEAFKLIDENDLLDCLVHVSYLELYKEEFRDLLEVGTASRDIQLREDDRGNVV	177
Rattus norvegicus	GIIPRAMAEAFKLIDENDLLDCLVHVSYLELYKEEFRDLLEVGTASRDIQLREDDRGNVV	177
Canis_lupus_familiaris	GIIPRAMAEAFKLIDENDLLDCLVHVSYLEVYKEEFRDLLEVGTASRDIQLREDDRGNVV	211
Equus_caballus	GIIPRAMAEAFKLIDENDLLDCLVHVSYLEVYKEEFRDLLEVGTASRDIQLREDDRGNVV	177
Bos taurus	GIIPRAMAEAFKLIDENDLLDCLVHVSYLEVYKEEFRDLLEVGTASRDIOLREDDRGNVV	195
Homo_sapiens	GIVPRAMAEAFKLIDENDLLDCLVHVSYLEVYKEEFRDLLEVGTASRDIOLREDERGNVV	177
Pan_troglodytes	GIVPRAMAEAFKLIDENDLLDCLVHVSYLEVYKEEFRDLLEVGTASRDIQLREDERGNVV	177
Macaca_mulatta	GIVPRAMAEAFKLIDENDLLDCLVHVSYLEVYKEEFRDLLEVGTASRDIQLREDEHGNVV	177
Callithrix_jacchus	GIVPRAMAEAFKLIDENDLLDCLVHVSYLEVYKEEFRDLLEVGTASRDIQLREDERGNVV	211
Latimeria_chalumnae	GIIPRAIAEIFKLIDENNLTDYTVRVSYLEVYKEDFRDLLEVETASKDIOIREDDKGNIV	177
Rhinatrema_bivittatum	GIIPRAMAEIFRLIDENDLIDYTVKISYLEVYKEDFRDLLEVETASKDIQIREVEKGNIV	177
Xenopus_tropicalis	GIIPRSMAEIFKLIDENDLIDFTLRVSYLEVYKEEFRDLLEVHTTSKSILIREDEKGNVV	176
nenopub_croprearry	190200210220230240	1,0
	* *:** :******* **::**.** *****:*** :*:	
Pavo muticus	LC <mark>G</mark> VKESEVEGLDEVLSLLEMGNTAKHTGATHINAQSSRSHTIFTVTMEQRRGAGRVTRL	274
Pavo_cristatus	LCGVKESEVEGLDEVLSLLEMGNTAKHTGATHINAQSSRSHTIFTVTMEQRRGAGRVTRL	274
Gallus_gallus	LCGVKESEVEGLDEVLSLLEMGNTAKHTGATHINAQSSRSHTIFTVTMEQRRGAGRVTRL	300
Anas_platyrhynchos	L <mark>SCVKESEVEGLDEVLS</mark> LLEM <mark>CNTAKHTGATHINAQSSRSHTIFTVTMEQRRGAGR</mark> LTRL	229
Chelonia mydas	LYGVKETEVEGLDEVLSLLEMGNTVKHTGATHINTQSSRSHTIFTVTMEQRRGAGRLTRL	237
Mus musculus	LCGVKEVDVEGLDEVLSLLEMGNAARHTGATHFNRLSSRSHTVFTVTLEORGRTPSRL	235
Rattus norvegicus	LCGVKEVDVEGLDEVLSLLEMGNAARHTGATHFNRLSSRSHTVFTVTLEORGRAPTRL	235
Canis_lupus_familiaris	LCGVKEVDVEGLDEVLSLLEMGNAARHTGATHLNRLSSRSHTVFTVTLEORGRAPSRM	269
Equus_caballus	LCGVKEVDVEGLDEVLSLLEMGNAARHTGATHLNHLSSRSHTVFTVTLEORGRTPSRL	235
Bos taurus	LCGVKEVDVEGLDEVLSLLEMGNAARHTGATHLNRLSSRSHTIFTVTLEORGRAPSRL	253
Homo_sapiens	LCGVKEVDVEGLDEVLSLLEMGNAARHTGATHLNHLSSRSHTVFTVTLEORGRAPSRL	235
Pan troglodytes	LCGVKEVDVEGLDEVLSLLEMGNAARHTGATHLNHLSSRSHTVFTVTLEORGRAPSRL	235
Macaca_mulatta	LCGVKEVDVEGLDEVLSLLEMGNAARHTGATHLNRLSSRSHTVFTVTLEORGRAPSRL	235
Callithrix_jacchus	LCGVKEVDVEGLDEVLSLLEMGNAARHTGATHLNRLSSRSHTVFTVTLEQRGRTPSRL	269
Latimeria_chalumnae	L <mark>SGVKECEVEGLDEVLS</mark> LLET <mark>GNTAKHTG</mark> ATQVNAHSSRSHTIFTVAMEQRRAA <mark>GR</mark> ATRL	237
Rhinatrema bivittatum	LCGVKENEVEGLDEVLSMLEMCNTAKHTAATQINVQSSRSHTIFTVTMEQRRGPSRITRL	237
Xenopus_tropicalis	LCGIKECEVEGLDEVLSLLEMGNAAKHTGATHVNVHSSRSHTVFTVTMEQRRCVGRVARV	236
	250260270280290300	
	.::: *****************************	
Pavo_muticus	ALSNQPTIPASGQVLVSKFHFVDLAGSERIVKTGNTGERLKESIQINSGLLAL	327
Pavo_cristatus	ALSNQPTIPASGQVLVSKFHFVDLAGSERIVKTGNTGERLKESIQINSGLLAL	327
Gallus_gallus	ALSNQPTIPASGQVLVSKFHFVDLAGSERIVKTGNTGERLKESIQINCGLLAL	353
Anas_platyrhynchos	ALHNHPSVPASGQVLVSKFHFVDLAGSERIVKTGNTGERLKESIQINCGLLAL	282
Chelonia_mydas	TLHDRASVPASGQVLASKFHFVDLAGSERVVKTGNTGERLKESIQINSGLLAL	290
Mus_musculus	PRPAAGHLLVSKFHFVDLAGSERVLKTGSTGERLKESIQINSTLLAL	282
Rattus_norvegicus	PRPGAGHLLVSKFHFVDLAGSERVLKTGSTGERLKESIQINSTLLAL	282
	PRPAAGQLLVSKFHFVDLAGSERVLKTGSTGERLKESIQINSSLLAL	316
Equus_caballus	PRPAAGQLLL <mark>SKFHFVD</mark> LA <mark>GSER</mark> VL <mark>KTGSTGER</mark> LKESIQINSSLLAL	282
Bos_taurus	PRPAAGQLLVSKFHFVDLAGSERVLKTGSTGERLKESIQINSSLLAL	300
Homo_sapiens	PRPAPGQLLVSKFHFVDLAGSERVLKTGSTGERLKESIQINSSLLAL	282
Pan_troglodytes	PRPAPGQLLVSKFHFVDLAGSERVLKTGSTGERLKESIQINSSLLAL	282
Macaca_mulatta	PRPAQGQLLVSKFHFVDLAGSERVLKTGSTGERLKESIQINSSLLAL	282
Callithrix_jacchus	PRPAAGQLLVSKFHFVDLAGSERVLKTGSTGERLKESIQINSSLLAL	316
Latimeria_chalumnae	AGGEPAAIIVSAASGPGLAQIIASKFHFVDLAGSERIVKTGNTGERLKESIQINSGLLAL	297
Rhinatrema_bivittatum	ALKDQDSILGLGQVLISKFHFVDLAGSERILKTGNTGERLKESIQINSGLLAL	290
Xenopus_tropicalis	ATDEEETLPDIGQVLSSKFHFVDLAGSERVLKTGNTGERLKESIQINSGLLAL	289
	$\dots 310 \dots 320 \dots 330 \dots 340 \dots 350 \dots 360$	

File: /media/morpheus/disk1/fst/pep_msa/KIF**Dpt**e: Tue Feb 1 12:38:14 2022 Page 3 of 9

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*******
                                          :****************
                          GNVISALGDPRRKGSHIPYRDSKITRILKDSLGGNAQTVMIACVSPSSSDFDESLNTLNY
Pavo_muticus
                                                                                                  387
                          GNVISALGDPRRKGSHIPYRDSKITRILKDSLGGNAQTVMIACVSPSSSDFDESLNTLNY
                                                                                                  387
Pavo_cristatus
Gallus_gallus
                          GNVISALGDPRRKGSHIPYRDSKITRILKDSLGGNAQTVMIACVSPSSSDFDESLNTLNY
                                                                                                  413
                          GNVISALGDPRRKSSHIPYRDSKITRILKDSLGGNAQTVMIACVSPSSSDFDESLNTLNY
                                                                                                  342
Anas_platyrhynchos
Chelonia mydas
                          GNVISALGDPRRKCSHIPYRDSKITRILKDSLGGNAQTVMIACVSPSSSDFDESLNTLNY
                                                                                                  350
                          GNVISALGDPQRRGSHIPYRDSKITRILKDSLGGNAKTVMIACVSPSSSDFDETLNTLNY
Mus_musculus
                                                                                                  342
Rattus_norvegicus
                          GNVISALGDPQRRGSHIPYRDSKITRILKDSLGGNAKTVMIACVSPSSSDFDETLNTLNY
                                                                                                  342
376
Equus_caballus
                          GNVISALGDPQRRGSHIPYRDSKITRILKDSLGGNAKTVMIACVSPSSSDFDETLNTLNY
                                                                                                  342
                          GNVISALGDPQRRGSHIPYRDSKITRILKDSLGGNAKTMMIACISPSSSDFDETLNTLNY
                                                                                                  360
Bos_taurus
Homo_sapiens
                          GNVISALGDPQRRGSHIPYRDSKITRILKDSLGGNAKTVMIACVSPSSSDFDETLNTLNY
                                                                                                  342
                          GNVISALGDPORRGSHIPYRDSKITRILKDSLGGNAKTVMIACVSPSSSDFDETLNTLNY
Pan_troglodytes
                                                                                                  342
Macaca_mulatta
                          GNVISALGDPQRRGSHIPYRDSKITRILKDSLGGNAKTVMIACVSPSSSDFDETLNTLNY
                                                                                                  342
Callithrix_jacchus
                          GNVISALGDPQRRGSHIPYRDSKITRILKDSLGGNAKTVMIACVSPSSTDFDETLNTLNY
                                                                                                  376
                          GNVISALGDPKRKCTYIPYRDSKITRILKDSLGGNAKTVMVACVSPSSSEFDESLNTLNY
Latimeria_chalumnae
                                                                                                  357
Rhinatrema_bivittatum
                          GNVISALGDPRRKSSHIPYRDSKITRILKDSLGGNAKTVMIACLNPSSSDFDESLNTLNY
                                                                                                  350
Xenopus_tropicalis
                          GNVISALGDPKRKTMHIPYRDSKITRILKDSLGGNAKTVMIACVSPSASDFDETLNTLNY
                                                                                                  349
                          .....370.....380......390......400......410......420
                                                                     * ****** *.
                          ** : :::
Pavo muticus
                          A<mark>SRAQNIQNKAVVNCR</mark>KETEQVEELHLQIKNLQKALEQRHRSETRIINRSDTAKRCPQEP
                                                                                                  447
                          a<mark>sraonionkavvncrketeqveelhlo</mark>iknlokaleo<mark>rhrsetr</mark>iin<mark>r</mark>sdtakrc<mark>p</mark>qe<mark>p</mark>
Pavo cristatus
                                                                                                  447
                          ASRAONIONKAVVNCRKETEQVEELHMQIKNLOKALEORHRSETRIINRSDTAKRCPOEP
Gallus gallus
                                                                                                  473
Anas_platyrhynchos
                          A<mark>SRAQNIQNKAVVNCRKETEHVEELHRQ</mark>IKNLQKALEQ<mark>RHRSETR</mark>IIN<mark>R</mark>SDTTKRSA<mark>P</mark>DP
                                                                                                  402
Chelonia_mydas
                          A<mark>SRAQNIKNKAMVNCRRETEHVEE</mark>LQLQIKNLQRALEQ<mark>RHRSETR</mark>IIN<mark>R</mark>SDAAKRC<mark>P</mark>QDH
                                                                                                  410
Mus_musculus
                          ASRAQNIRNRATVNWRPEAERVPEE----QAAGARGPPRHRSETRIIHRGRRVPCPAVGS
                                                                                                  398
                          ASRAQNIRNRATVNWRPEAERVPEE----QAAGARGPPRHRSETRIIHRGRRVLCPGVGS
Rattus norvegicus
                                                                                                  398
Canis_lupus_familiaris A<mark>SRAQNIRNRATVNWRPETERAPEE----VAAG</mark>AR<mark>GPPRHRSETR</mark>IIH<mark>RG</mark>RRA<mark>PGP</mark>AQA<mark>P</mark>
                                                                                                  432
                          ASRAQNIRNRATVNWRPEAERAPEE----AAAGARGPPRHRSETRIIHRGRRGPGPAAAS
Equus_caballus
                                                                                                  398
                          ASRAQNIRNRATVNWRPEAERGPEE----AVASARGPPRHRSETRIIHRGRRAPGPAAAS
                                                                                                  416
Bos_taurus
                          A<mark>SRAQNIRNRATVNWRPEAERPPEE----TASG</mark>AR<mark>GPPRHRSETRIIHRG</mark>RRA<mark>PGP</mark>ATA-
Homo sapiens
                                                                                                  397
Pan troglodytes
                          ASRAONIRNRATVNWRPEAERPPEE----AASGARGPPRHRSETRIIHRGRRAPGPATA-
                                                                                                  397
                          ASRAONIRNRATVNWRPEAERPPEE----VASGVRGPPRHRSETRIIHRGRRAPGPATA-
Macaca mulatta
                                                                                                  397
                          a<mark>sraqnirnratvnwrpeaerp</mark>sed----aas<mark>g</mark>ar<mark>gpprhrsetriihrg</mark>rhaq<mark>gp</mark>aaa<mark>g</mark>
Callithrix_jacchus
                                                                                                  432
                          ANRAQNIKNKATVNCRGETDR<mark>TEE</mark>LQLQIKNLRRALEQRHRSETRIINRSDPAKNPRGAC
Latimeria chalumnae
                                                                                                  417
Rhinatrema_bivittatum
                          ASRAQNIKNKITVNYRGEVENVKDLELQIRNLQRALEQRHRSETRIIYRSDPSKNARRPL
                                                                                                  410
Xenopus tropicalis
                          A<mark>SRAQNIKNKATVNCKRDTDCVEDLHLQ</mark>IKSLQRALEQ<mark>RLRSETR</mark>ILN<mark>R</mark>SD<mark>P</mark>AKAVNQRS
                            .....430......440......450......460......470......480
                                                                              :.::*:* ** **
                                         .**:: * *.*** *: :*
                          -----TARLLAECAHYRTCTDAAYRLLMELQEDSNLTVEQVLRVKEWLCAVESERS
Pavo_muticus
                                                                                                  498
                          -----TARLLAECAHYRTCTDAAYRLLMELQEDSNLTVEQVLRVKEWLCAVESERS
                                                                                                  498
Pavo_cristatus
                          -----TARLLAECAHYRTCTDAAYRLLMELQEDSNLTVEQILRVKEWLCAVESERS
                                                                                                  524
Gallus_gallus
                          -----TARLLAECTHYRTCTDAAYRLLTELQEDSNLTVEQILRVKEWLCAVESERS
----TARLLAECAHYRTCTDAAYQLLMELQGEGNLTVEQILRVKEWLCAVESERS
Anas platyrhynchos
                                                                                                  453
                                                                                                  461
Chelonia_mydas
                          -----AAVAAGLGAECARCRARTSAAYSLLRELQAEPGLPGAAARKVRDWLCAVEGERS
----AAVAPGLGTECARCRARTSAAYSLLRELQAEPGLPGAAARKVRDWLCAVEGERS
Mus musculus
                                                                                                  452
Rattus_norvegicus
                                                                                                  452
492
Equus_caballus
                                                                                                  452
                          -----AAATA<mark>RLGAECARYRARTDAAYS</mark>LLRELQAEPGLPGAAARKVRDWLCAVEGERS
                                                                                                  470
Bos taurus
                          ----<mark>Saaaamrlgaecaryractdaays</mark>llrel<mark>qaepglpgaaarkvrdwlcavegers</mark>
Homo_sapiens
                                                                                                  452
                          ----SAAAAMRLGAECARYRACTDAAYSLLRELQAEPGLPGAAARKVRDWLCAVEGERS
----SAGAAMRLDAECARYRACTDAAYSLLRELQAEPGLPGATARKVRDWLCVVEGERS
                                                                                                  452
Pan_troglodytes
                                                                                                  452
Macaca_mulatta
                          -AAASSAAAAKRLGAECARYRACTDAAYSLLRELHAQPGLPGAAARKVRDWLCAVEGERS
                                                                                                  491
Callithrix_jacchus
Latimeria_chalumnae
                          G-----GHTSRLLAECAHYRMCTDAAYRLLMELQGEGNLTTEQVLRVKDWLCAVEEERS
                                                                                                  471
Rhinatrema_bivittatum
                          SE----D<mark>G</mark>KN<mark>Q</mark>LLAECAHYRKCTDAAYQLFTELLAEGTLTVDQ<mark>S</mark>LKAKDWLCAVEDERY
                                                                                                  465
                          MD----NPVSQVIVECAHYRTCTDAAYLLLMDLLSDNNLGPAQVLRAKEWMCSVEEERS
Xenopus_tropicalis
                                                                                                  464
                          \dots \dots 490 \dots \dots 500 \dots \dots 510 \dots \dots 520 \dots \dots 530 \dots \dots 540
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File: /media/morpheus/disk1/fst/pep_msa/KIF**Dps**e: Tue Feb 1 12:38:14 2022 Page 4 of 9

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Pavo muticus	ELTSAG-LDRGIESTSAEEQSLEAQGCKLPKAQGQASTEKGCEVIKDKHVANLQRQVERL	557
Pavo_muticus Pavo_cristatus	ELTSAG-LDRGIESTSAEEQSLEAQGCKLPKAQGQASTEKGCEVIKDKHVANLQRQVERL	557
Gallus gallus	ELTSAG-LDRGIESTSAEDQSLEAQGCKLPKAQGQASTENGCEAIKDKHVANLQRQVERL	583
Anas_platyrhynchos	ELTSAG-LDSGIESTSAEEQGLDTRGSKLAKGQVNTEKGCESIKDEHVAKLQRQVERL	510
Chelonia mydas	ELTSASGLDSGIESTSAEDRRPOAOGSKPPOTOVSTEKACEAARDEHLAOLOROVERL	519
Mus musculus	TLSSASGPDSGIESAPAEDQAAQGTSGRKGDEGTQQLLTLQSQVARL	499
Rattus norvegicus	ALSSASGPDSGIESAPADDQAAQGTSGRKGDEGAQQLLILQSQVARL	499
	ALSSASGPDSGIESASAEEPATQGPGGPKVAKGQDEEGALQLLALQSQVARL	544
Equus_caballus	ALSSASGPDSGIESASAEERAAQAPGARKGAKGQEDEGALQLLALQSQVARL	504
Bos_taurus	ALSSASGPDSGIESASAEERAAQAPGARKGARGQEDEGALQIDALQSQVARL ALSSASGPDSGIESASAEEQATQGPGGRKEDEGPLQLLALQSQVARL	517
_	ALSSASGPDSGIESASVEDQAAQGAGGRKEDEGAQQLLTLQNQVARL	499
Homo_sapiens Pan troglodytes	ALSSASGPDSGIESASVEDQAAQGAGGRKEDEGAQQLLTLQNQVARL	499
Macaca mulatta	ALSSASGPDSGIESASVEGOAAQGAGGRKEDEGAQQLRTLQNQVARL	499
Callithrix jacchus	NMSSASGPDSGIDSASVEDQVAQEAGGRKEDEGVPQLLTLQNQVARL	538
Latimeria chalumnae	ELTTASGQDSGIESTSVEEASEREKGRGLSKYETGISCEKECEESRDDYIAKLQSQVQCL	531
Rhinatrema bivittatum	ENTITAGODSGIESTSVEEASERERGRGLSKIEIGISCERECEESRODIIAKLOSOVOCL EMTSTPGIDSGIESTTAEEOKPKELSKCOGPSGLEKASEMNKNKYITDLEROVOHL	521
Xenopus_tropicalis	DVSSASGLDSGIESSTAEEK-LKELGKRQIKDKGVLTFEKECEIEKDKLIEKLQLQIQRL	523
xenopus_tropicalis	550560570580590600	523
	550500570580590600	
	*:** :**:***** *. :*::*:: : : : *::* .:	
Pavo muticus	EEENRDFLAALEDAMEQYKLQSDKLQEQQDKISELHVRLEMAMPNLCVPELLENLHLVTA	617
Pavo cristatus	EEENRDFLAALEDAMEQYKLQSDKLQEQQDKISELHVRLEMAMPNLCVPELLENLHLVTA	617
Gallus gallus	EEENRDFLAALEDAMEQYKLQSDKLQEQQDKISELHVRLEMAMPNLCVPELLENLHLVTA	643
Anas_platyrhynchos	EEENRDFLAALEDAMEQYKLQSDKLQEQQDTISELHVRLEMAMPNLCVPELLEDLHLVTA	570
Chelonia mydas	EEENRDFLAALEDAMEQYKLQSNKLQEQQDAISELHVCLEMAMPDLQVPELLQNIHLVEL	579
Mus musculus	EEENRDFLAALEDAMEQYKLQSDRLREQQEEMVELRLRLELAQPGWGAPGLLQGLPPGSF	559
Rattus norvegicus	EEENROF HAALEDAMEQYKLOSDRLREQQEEMVELRLRLELAQPGWGAPGLLOGLSPGSF	559
Canis_lupus_familiaris		604
Equus_caballus	EEENROFLAALEDAMEQYKLQSDRLREQQEEMAELRLRLELVRPGWGAPGLLQGLPPGSF	564
Bos_taurus	EEENROFLAALEDAMEQYKLQSDRLREQQEEMAELRLRLELVWPGWGAPGILQGLPPGSF	577
Homo_sapiens	EEENROF HAALEDAMEQYKLQSDRLREQQEEMVELRLRLELVRPGWGGPRLLNGLPPGSF	559
Pan_troglodytes	EEENROF LAALEDAMEQYKLQSDRLREQQEEMVELRLRLELVRPGWGGPRLLNGLPPGSF	559
Macaca mulatta	EEENROF LAALEDAMEQYKLQSDRLREQQEEMVELRLRLELVRPGWGCPGLLNGLPPGSF	559
Callithrix jacchus	EEENROF LAALEDAMEQYKLQSDRLREQQEEMVELRLRLELVRPGWGCPGLLNGLPPRSF EEENROFLAALEDAMEQYKLQSDRLREQQEEMVELRLRLELVRPGWGSPGLLPGLPSGSF	598
Latimeria chalumnae	EEENKOFLAALEDAMEQYKQQSSKLQNQROTIVELQSSLKALRSGRSTSELLENVHLVEL	591
Rhinatrema bivittatum	EDENMOFLAALEDAMEQYKLQNOKLQDQQDKITELQYHLECGNSSLSVSALLENVHLVEM	581
Xenopus_tropicalis	EDENREFLSALEDAMEQYKLQSTKLQEQQDEIIKHQNILERLRPGLSASTLLEDVHVLQL	583
xellopus_cropicalis	610620630640650660	565
	010020030040050000	
	** ***	
Pavo muticus	TQRPHTAPLAATQPHGLSKIPTEQSRRGLCQKQLDSS-PSLKEDLASCHPN-	667
Pavo_cristatus	TQRPHTAPLAATQPHGLSKIPTEQSRRGLCQKQLDSS-PSLKEDLASCHPN-	667
Gallus_gallus	TQRPHTAPLTATQPHSLNRVPTEQSGRGLCQKQLDSS-LSLKENSTSCHPN-	693
Anas platyrhynchos	TORPHTAPLAAAOSHGLCGVPSGLLPAEOSGRVLCRKDEDLAGCHPNH	618
Chelonia mydas	AQRPHTAPLDTTRSHGLSLVQSRPSHTSQSRRVHCGKLSSSP-SHLGEDLVVHCQS-	634
Mus musculus	VPRPHTAPLGGAHTHMLGMMPSTCLPGEEVSSEQQVVSG-KEVKAEVLAQADK-	611
Rattus norvegicus	VPRPHTAPLGGAHTHMTGTMPRTCLPGEEVSSEQQVANG-KEAKAELLAQVDK-	611
Canis lupus familiaris		659
Equus_caballus	VPRPHTAPLGGAHTRVLGMVPPACLPEDQVDPENWGEQVTDG-REAGAKVLAEVDR-	619
Bos_taurus	VPRPHTAPLGGAHTHVLGMVPPACIPGDEVGPESRGEQMKNG-REAGAKFLTEGDR-	632
Homo sapiens	VPRPHTAPLGGAHAHVLGMVPPACLPGDEVGSEQRGEQVTNG-REAGAELLTEVNR-	614
Pan troglodytes	VPRPHTAPLGGAHAHVLGMVPPACLPGDEVGSEQRGEQVTNG-REAGAELLTEVNR-	614
Macaca mulatta	VPRPHTAPLGGAHDHVLGTVPPACFPGDEVGSEQRGEQVTNG-REAGVELLTEVNR-	614
Callithrix_jacchus	LPRPHTAPLGGAHGHMLGMVPPACLSGDEVGSEQRGEQVTDG-REAGAELLADVNR-	653
Latimeria chalumnae	HPRPHTAPLDTTHPFTFSMLHPNCTLNGDAGRIHSRKVHLCCVENMVPGFQSR	644
Rhinatrema bivittatum	SQRPRTAPLENTHTTYSPKLDMLQSGSISHCRIGRIHGRKVSGYGMSDVAEHMVEGCQSH	641
Xenopus tropicalis	GGRPSTAPIIQIRPHDSLEQKKSSSWEFSKSKKISSSCISSLSKEFTKSFQTG	636
	670680690700710720	

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Pavo muticus	LPSSAELRDTALRKEHSQGSEKAAELSLEEDEEWEQRRSLYQRRNGIPSWS	718
Pavo cristatus	LPSSAELRDTALRKEHSQGSEKAAELSSEEDEEWEQRRSLYQRRNGIPSWS	718
Gallus_gallus	LRSSAELKEMALRRERSQGLEKAAELSSEEDEEWERRQSQYQRRNGIPSWS	744
Anas_platyrhynchos	TQRLPSSAEVKDTVLRRELSQDSEKLAELSSEEEEEWEQKQSLCQRRNGIQSWS	672
Chelonia mydas	RACSLEAKDVMLMRECSEDSEPSLDGEGEQKRSLHQRRNGIRSWS	679
Mus musculus		653
Rattus_norvegicus	LGSASSITSEEEEEEEEEPPRTLHLRRNGISNWS	646
	PGSGSSAASEEEEEQEEEQEEQLPQRNLHLRRNGINKWS	698
	LGSGSSAASEEEEEQEEEDLARRTLHLRRNGISRWS	655
Equus_caballus		
Bos_taurus	<mark>PGSGSS</mark> DASEAEEEEEEEEKEGLPRQSLYPRRNGVSKWN	671
Homo_sapiens	<mark>PPRRTLHLRRN</mark> RISNCS	648
Pan_troglodytes	L <mark>GSGSS</mark> AASEEEEEEEELPRRTLHLRRNGISNCS	648
Macaca_mulatta	L <mark>GSGSS</mark> AASEEEEEEEEELPRRTLHLRRNGISNCS	649
Callithrix_jacchus	<mark>PPRRTLH</mark> LRRNGISNCI	687
Latimeria_chalumnae	NQCLTRSLEEVGAALQVGFTEDSETSPERSDEEAENEEPRKGKQRRKLANRTWT	698
Rhinatrema_bivittatum	DEGLMCNLEDGGTVLQKAFSENSEMAESNLEDEDSDVDVEKEPNGTRIKCRKEGLPWN	699
Xenopus_tropicalis	TQNLVSSLEEADTVLQRRFSEDSNESAEEDDKDQCKGQQGKPPRRERITKPGSN	690
	730740750760770780	
Pavo muticus	RREVSSKLNEELSGGHPLLIQEEQLELPKEACRRQERP	756
Pavo_cristatus	RREVSSKLNEELSGGHPLLIQEEQLELPKEACRRQERP	756
Gallus gallus	KREVSSKLSEEPNRGHP-LIQEEQLELPKEMCRRQERP	781
Anas_platyrhynchos	KREACSKLGEELGGGSPRLMOEEQLELLKEACRRRERL	710
Chelonia mydas	KKDVSSKVCEEQSRGNSLHRQEEPPELAKEACGRREQAGPREGL	723
Mus musculus	QRAGLSPGSPPDRKGPEVCPEEPAAAIPAPQAVGSGKVPVQTRQAP	699
Rattus norvegicus	QRAGVRPGSPPDRKGPEVCPEEPAAAIPAPQAVGGSKAPGQTRQAP	692
Canis_lupus_familiaris	QREGACPGSPLDRKGPELHLEELGAAIPGPRVVGGSKAPARPRQTP	744
	QRGGPRPGSPPDRKGSELHLEELGTAIPGSRAVAGSKAHARLRQGP	701
Equus_caballus		_
Bos_taurus	QRMGACPESPLNRKGPELRLEELGAAIPGPRVVGGSKALAQPRQAP	717
Homo_sapiens	QRAGARPGSLPERKGPELCLEELDAAIPGSRAVGGSKARVQARQVP	694
Pan_troglodytes	QRAGARPGSLPERKGPELCLEELDAAIPGSRAVGGSKARVQARQVP	694
Macaca_mulatta	QRAGALPGSLPERKGPELCLEELDAAIPGSRAVGGSKARVQARQVP	695
Callithrix_jacchus	QRAGAQPGSPSDRRGPELCLEELEAAIPGSRVGAHRLPVAAVGGSKARVQARQVP	742
Latimeria_chalumnae	KREVVAAS <mark>SP</mark> LREA <mark>GDLGWE</mark> QHELSNTSCSRRD <mark>GG</mark> LL <mark>GIVG</mark> EV <mark>GLP</mark>	744
Rhinatrema_bivittatum	NKEVNSVSVINEEQSRISQAQEQDSMDDGIVKRTQRNLHGFLHTRKKPAILDR	752
Xenopus_tropicalis	RSHYK <mark>P</mark> QSRISESE <mark>GEKS</mark> TSTLLNINSSLSQSAQNV <mark>P</mark> RE	729
	790800810820830840	
	*: ** ******: *: ***** **: **: **: **:	
Pavo_muticus	AGKDSEWRLVQAQQKIRDLAINIRMKEELITELIKTGRDAQALNKQYCQKISE	809
Pavo_cristatus	AGKDSEWRLVQAQQKIRDLAINIRMKEELITELIKTGRDAQALNKQYCQKISE	809
Gallus_gallus	ARKDSEWRLGQAQQKIRELAINIRMKEELITELIKTGRDAQALNKQYCQKIGE	834
Anas platyrhynchos	PGKDSEWRLVQAQQKIRELAINIRMKEELITELIKTGKDAQALNKQYCQKISE	763
Chelonia_mydas	SGKDSERRLVQAQQKIRELAINIRMKEELIAELIKTGKDAQAMNRQYCQKIFE	776
Mus musculus	AAMASEWRLAQAQQKIRELAINIRMKEELIGELVRTGKAAQALNROHSQRIRE	752
Rattus_norvegicus	aamasewrlaqaqokirelainirmkeeligelvrtgkaaqalnrohsqrire	745
	aamasewrlagagokirelsinirmkeeligelvrtgkaagalnrohsohire	797
Equus_caballus	AAMASEWRLAQAQOKIRELAINIRMKEELIGELVRTGKAAQALNROHSORIRE	754
Bos taurus	AAMASEWRLAQAQQKIRELAINIRMKEELIGELVRTGKAAQALNRQHSQRIQE	770
Homo_sapiens	PATASEWRLAQAQQKIRELAINIRMKEELIGELVRTGKAAQALNRQHSQRIRE	747
Pan troglodytes	PATASEWRLAQAQQXTRELATNIRMKEELIGELVRTGKAAQALNRQHSQXTRE	747
Macaca mulatta	SATASEWRLAQAQQKIRELAINIRMKEELIGELVRIGKAAQALNRQHSQRIRE	747 748
Macaca_mulatta Callithrix_jacchus	SATASEWRLAQAQQKIRELAINIRMKEELIGELVKTGKAAQALNKQHSQKIRESATASEWRLAQAQQKIRELAINIRMKEELIGELVCTGKAAQALNRQHSQRIRE	748 795
Latimeria_chalumnae	DARLVKDSEWRLVQAQQKIRELAINIRMKEELIKELVKTGKDAQAMNRQYCQKISD	800
Rhinatrema_bivittatum	SHPFGAHSEKNSEWRLLQAQQKIRELAINIRMKEELIKELIKTGKDAQAMNKQYCLKISE	812
Xenopus_tropicalis	SQILGNDSKWRLRQAQQKIRELAINIRMKEELIKELVKTGKEAQAMNKQYCLKISE	785
	850860870880890900	

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Pavo muticus	LEQEAEQVRAELSDSQKQLQELEGKEPWDPGEKRKLQEYRTRVAAAQSKARVLSKKKQAT	869
_	LEQEAEQVRAELSDSQKQLQELEGKEPWDPGEKRKLQEYRTRVAAAQSKARVLSKKKQAT LEQEAEQVRAELSDSQKQLQELEGKEPWDPGEKRKLQEYRTRVAAAQSKARVLSKKKQAT	869
Pavo_cristatus	LEQEAEQVRAELSDSQKQLQELEGKEPWDPGEKRKLQEYRTRVAAAQSKAQVLSKKKQAT	894
Gallus_gallus		823
Anas_platyrhynchos Chelonia mydas	LEQEAEQVRAELSDSQKQLQELEGKEPWDPGEKRKLQEYRTRVAAAQSKAQVLCKKKQAT LEQEAEQVRAELSSGOKQLQELEGKEPDDAGEKCKLQEYRTRVAAAQSKARVLREKKQAT	836
Mus musculus	LEQEAEQVRAELSSGQRQLQELEGREPQDAGERCKLQEIRIRVAAAQSKARVLKEKKQAI LEQEAERVRAELCEGORQLRELEGREPQDASERSRLQEFRKRVAAAQSQVQVLKEKKQAI	812
Rattus norvegicus	LEQEAERVRAELCEGORQLRELEGREPODASERSRLQEFRKRVAAAQSQVQVLREKKQAT	805
		857
Canis_lupus_familiaris	LEQEAERVRAELSESQRQLRELEGKEPQDPGERSQLQEFRQRVAAAQSQVQVLKEKKQAT LEQEAERVRAELSEGORQLRELEGKEPQDAGERSQLQEFRKRVAAAQSQVQVLKEKKQAT	814
Equus_caballus	LEREAERVRAELSEGOROLWELEGREPODAGERSOLOEFRKRVAAAONOVOVLKEKKOAT	830
Bos_taurus	LEQEAEQVRAELSEGQRQLWELEGKEPQDAGERSQLQEFKRKVAAAQNQVQVLKEKKQAT	807
Homo_sapiens	LEQEAEQVRAELSEGQRQLRELEGKELQDAGERSRLQEFRRRVAAAQSQVQVLKEKKQAT LEQEAEQVRAELSEGQRQLRELEGKEPQDAGERSRLQEFRRRVAAAQSQVQVLKEKKQAT	
Pan_troglodytes Macaca mulatta	LEQEAEQVRAELSEGQRQLRELEGKEPQDAGERSRLQEFRRRVAAAQSQVQVLKEKKQAT LEQEAERVRAELSEGORQLRELEGKEPQDAGERSRLQEFRRRVAAAQSQVQVLKEKKQAT	807 808
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Callithrix_jacchus	LEQEAEQVRAELSEGQRQLRELEGQEPQDASERSRLQEFRRRVAAAAQSQVQVLKEKKQAT	855 860
Latimeria_chalumnae	LEREAEQARAELTEAQRQLQELEGKEPRDPVEKSKLQEYRRKIAVAQSKVQVLKKKKQDT	
Rhinatrema_bivittatum	LKKESEQVHMELSESQRQLQELEDELPGSLVEKSKVQEYRKKVAMAQNKVQVLKKKKQAT	872
Xenopus_tropicalis	LENEAEQIRAEVSESQRQLLELEGKASRDPAEKCKLQEYRKKIAAAESKVQVLNEKKQAT	845
	910920930940950960	
	:.** **: *: :**::: *::** ***::*: ** * * ******	
Pavo muticus	ERLVSLSAQSEKRVQELERNIQLMRRQQGQLQRRLREESEQKRRLEAEMNKRQHRVKELE	929
Pavo_cristatus	ERLVSLSAQSEKRVQELERNIQLMRRQQGQLQRRLREESEQKRRLEAEMNKRQHRVKELE	929
Gallus gallus	ERLVSLSAQSEKRVQELERNIQLMRRQQGQLQRRLREESEQKRRLEAEMNKRQHRVKELE	954
Anas platyrhynchos	ERLVSLSAQSEKRVQELERNIQLMRRQQGQLQRRLREESEQKRRLEAEMNKRQHRVKELE	883
Chelonia mydas	ERLVSLSAQSEKRVRELERNVELMRRQQGQLQRRLREETEQKRRLETEMHKRQHRVKELE	896
Mus musculus	ERLVSLSAQSETRLQELERNVQLMRRQQGQLQRRLREETEQKRRLETEMNKRQHRVKELE	872
Rattus norvegicus	ERLVSLSAQSETRLQELERNVQLMRRQQGQLQRRLREETEQKRRLETEMNKRQHRVKELE	865
Canis_lupus_familiaris	ERLVSLSAQSEKRLQELERHVQLMRQQQGQLQKRLREETEQKRRLETEMTKRQHRVKELE	917
Equus_caballus	ERLVSLSAQSERRLQELERNVQLMRQQQGQLQRRLREETEQKRRLETEMNKRQHRVKELE	874
Bos taurus	ERLASISAQSEKRIQELERNVQLMRQQQGQLQRRIREETEQKRRIEAEMNKRQHRVKELE	890
_	ERLVSLSAQSEKRLQELERNVQLMRQQQGQLQRRLREETEQKRRLEAEMSKRQHRVKELE	867
Homo_sapiens	ERLVSLSAQSEKRLQELERNVQLMRQQQGQLQRRLREETEQKRRLEAEMSKRQHRVKELE ERLVSLSAQSEKRLQELERNVQLMRQQQGQLQRRLREETEQKRRLEAEMSKRQHRVKELE	867
Pan_troglodytes		868
Macaca_mulatta Callithrix jacchus	ERLVSLSAQSEKRLQELERNVQLMRQQQGQLQRRLREETEQKRRLEAEMSKRQHRVKELE ERLVSLSAQSEKRLEELERNVQLMRQQQGQLQRRLREETEQKRRLEAEMSKRQHRVKELE	915
Latimeria chalumnae	EHLASLSVQSERRIQDLERNVQQMKQQQGQLQRKLKEETEQKRRLEAEMQKGKHRVKELE	913
_	EHLASLSVOSERRIODLERNVOOMKOOOGOLORKLKEETEQKRKLEAEMOKGKHRVKELE	920
Rhinatrema_bivittatum	EKLVSLSSQSQTRILELERNVQLMKQQQGQLQKKLKEEVEQKHRLQMEMQKRRHRVKELE	932 905
Xenopus_tropicalis	EKLVSLSAQSERRIEELEKNIQQMKQQQCQLQRKLKEETEQKRRLESEMQKRSHRVKELE970980990100010101020	905
	970980990100010101020	
	..**	
Pavo muticus	LKHEQHQKILRIKTEEIAAFQRKRRSGSNGSVISLEQQQKIEEQKKWLDMEMDKVLEQRR	989
Pavo_cristatus	LKHEQHQKILRIKTEEIAAFQRKRRSGSNGSVISLEQQQKIEEQKKWLDMEMDKVLEQRR	989
Gallus_gallus	LKHEQHQKILRIKTEEIAAFQRKRRSGSNGSVISLEQQQKIEEQKKWLDMEMDKVLEQRR	1014
Anas platyrhynchos	LKHEQHQKILRIKTEEIAAFQRKRRSGSNGSVISLEQQQKIEEQKKWLDMEMDKVLEQRR	943
Chelonia mydas	LKHEQHQKILRIKTEEIAAFQRKRRSGSNGSVISLEQQQKIEEQKKWLDLEMDKVLEQRR	956
Mus musculus	LKHEQQQKILKIKTEEIAAFQRKRRSGSNGSVVSLEQQQKIEEQKKWLDQEMEKVLQQRR	932
Rattus norvegicus	LKHEQQQKILKIKTEEIAAFQRNRRSGSNGSVVSLEQQQKIEEQKKWLDQEMEKVLQQRR	925
	RRHEQQQKILKIKTEEIAAFQRKRRSGSNGSVVSLEQQQKIEEQKKWLDQEMEKVLQQRR	977
Equus caballus	LKHEQQQKILKIKTEEIAAFQRKRRSGSNGSVVSLEQQQKIEEQKKWLDQEMEKVLQQRR	934
Bos_taurus	LKHEQQQKILKIKTEEIAAFQRKRRSGSNGSVVSLEQQQKIEEQKKWLDQEMEKVLQQRR	950
Homo sapiens	LKHEQQQKILKIKTEEIAAFQRKRRSGSNGSVVSLEQQQKIEEQKKWLDQEMEKVLQQRR	927
Pan troglodytes	LKHEQQQKILKIKTEEIAAFQRKRRSGSNGSVVSLEQQQKIEEQKKWLDQEMEKVLQQRR	927
Macaca mulatta	LKHEQQQKILKIKTEEIAAFQRKRRSGSNGSVVSLEQQQKIEEQKKWLDQEMEKVLQQRR	928
Callithrix jacchus	LKHEQQQKILKIKTEEIAAFQRKRRSGSNGSVVSLEQQQKIEEQKKWLDQEMEKVLQQRR	975
Latimeria_chalumnae	IRNEQQQKILKIKTEEIAAFQRKRRSGSNGSVVSLEEQQKIEEQRKWLDSEMEKVLEQRH	980
Rhinatrema bivittatum	LKHEQHQKILRIKTEEIAAFQRQRRSGSNGSVISLEQHQKIEEQKKWLDLEMDKVLEQRR	992
Xenopus tropicalis	LKHEQQQKVLRIKTEEIAAFQRKRRSGSNGSVISLEQQQKIEEQKKWLDSEIDKVLEQRR	965
venobra_crobicaria	103010401050106010701080	303

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Pavo muticus	ALDELEDELRKREAIVAKKEALLQEKNGLESKRLRSSQALTDDIVRVSSRLEHLEKELTE	1049
Pavo_cristatus	ALDELEDELRKREAIVAKKEALLOEKNGLESKRLRSSQALTDDIVRVSSRLEHLEKELTE	1049
	ALDELEDELRKREAIVAKKEALLQEKNGLESKRLRSSQALTDDIVRVSSRLEHLEKELTE	1074
Gallus_gallus		-
Anas_platyrhynchos	ALDELEDELRKREAIVAKKEALLQEKNGLESKRLRSSQALTDDIVRVSSRLEHLEKELTE	1003
Chelonia_mydas	ALDELEDELRKREAIVAKKEALLQEKNGLEKKRRRSSQALTDDIVRVSSRLELLEKELTE	1016
Mus_musculus	ALEELGEELRKREVILAKKEALMQEKTGLESKRLRSSQALNEDIVRVSSRLEHLEKELSE	992
Rattus_norvegicus	ALEELGEELRKREVILAKKEALMQEKTGLESKRMRSSQALNEDIVRVSSRLEHLEKELSE	985
Canis lupus familiaris	ALEELGEELHKREAILAKKEALMQEKTGLESKRLRSSQALSEDIVRVSSRLEHLEKELSE	1037
Equus caballus	ALEELGEELHKREAILAKKEALMQEKTGLESKRLRSSQALNEDIVRVSSRLEHLEKELSE	994
Bos taurus	ALEELGEELHKREAILAKKEALMQEKTGLESKRLRSSQALNEDIVRVSSRLEHLEKELSE	1010
Homo_sapiens	ALEELGEELHKREAILAKKEALMOEKTGLESKRLRSSOALNEDIVRVSSRLEHLEKELSE	987
Pan_troglodytes	ALEELGEELHKREAILAKKEALMQEKTGLESKRLRSSQALNEDIVRVSSRLEHLEKELSE	987
Macaca_mulatta	ALEELGEELHKREAILAKKEALMQEKTGLESKRLRSSQALNEDIVRVSSRLEHLEKELSE	988
Callithrix_jacchus	ALEELGEELHKREAILAKKEALMQEKTGLESKRLRSSQALNEDIVRVSSRLEHLEKELSE	1035
Latimeria_chalumnae	SLEELEEELK <mark>KRE</mark> AIL <mark>TKKEALQQEKSGLETKRLRSSQALS</mark> NDIVRVSSRLELLERELCE	1040
Rhinatrema_bivittatum	ALEELEEELKKRETIVNKKEALLQEKHDLESKRLQSSQALSNDIVRVSSRLENLEKELLE	1052
Xenopus_tropicalis	SLNELEEELHKREGILLKKEALQQEKNDLEIKRLRSSQALSNDIVRVSSRIEDLEKELSE	1025
-	109011001110112011301140	
_	<u>*.***:**:.**:*************************</u>	
Pavo_muticus	KNGQLRHGSAHDQQQIRQEISNLRQEKDQLLKQRLELDNKLRQGTLLSPEEERILFQLDE	1109
Pavo_cristatus	KNGQLRHGSAHDQQQIRQEISNLRQEKDQLLKQRLELDNKLRQGTLLSPEEERILFQLDE	1109
Gallus_gallus	KNGQLRHGSAHDQQQIRQEISNLRQEKDQLLKQRLELDNKLRQGTLLSPEEERILFQLDE	1134
Anas_platyrhynchos	KSGQLRHGSAHDQQQIRQEINSLRQEKDQLLKQRLELDNKLRQGTLLSPEEERILFQLDE	1063
Chelonia_mydas	KSGOLRHGSAHDQQQIRQEINSLRQEKDQLLKQRLEIDNKLRQGTLLSPEEERILFQLDE	1076
Mus musculus	KSGOLROGSAONOOOIRGEIDTLROEKDSLLKORLEIDSKLROGSLLSPEEERTLFOLDE	1052
—		1032
Rattus_norvegicus	KSGQLRQGSALNQQQIRGEIDTLRQEKDSLLKQRLEIDSKLRQGSLLSPEEERTLFQLDE	
Canis_lupus_familiaris		1097
Equus_caballus	KSGQLRQGSAQSQQQIRGEIDTLRQEKDSLLKQRLEIDGKLRQGSLLSPEEERTLFQLDE	1054
Bos_taurus	KSGQLRQGSAQSQQQIRGEIDALRQEKDSLLKQRLEIDSKLRQGSLLSPEEERTLFQLDE	1070
Homo_sapiens	KSGQLRQGSAQSQQQIRGEIDSLRQEKDSLLKQRLEIDGKLRQGSLLSPEEERTLFQLDE	1047
Pan_troglodytes	KSGQLRQGSAQSQQQIRGEIDSLRQEKDSLLKQRLEIDSKLRQGSLLSPEEERTLFQLDE	1047
Macaca mulatta	KNGQLRQGSAQSQQQIRREIDSLRQEKDSLLKQRLEIDSKLRQGSLLSPEEERTLFQLDE	1048
Callithrix_jacchus	KSGOLROGSTOSOOOIRGEIDSLROEKDSLLKORLEIDSKLROGSLLSPEEERTLFOLDE	1095
Latimeria_chalumnae	KSGQLRNGSAQDQQQIRQEINSLRQEKELLLKQRLELDEKLRQGNHLSAEEERIVFQLDE	1100
Rhinatrema_bivittatum	KNGQLRQGSAQNQQQIRHQISNLRQEKELLLKQRLEIDSKLRQGDLLSPEEERILFQLDE	1112
Xenopus_tropicalis	KNGQLRQGSAHDQQRIRDEINNLRQEKDLLLKQRVDIDDKLRQGNLLSAEEERILFQLDE	1085
	$\dots \dots 1150 \dots \dots 1160 \dots \dots 1170 \dots \dots 1180 \dots \dots 1190 \dots \dots 1200$	
	******* **** **** ******************	
Pavo_muticus	AIEALDAAIEYKNESITCRQRVLRASASLLSQCEMNLMAKLSYLSSSETRALLCKYFDKV	1169
	AIEALDAAIEYKNESITCRORVLRASASLLSOCEMNLMAKLSYLSSSETRALLCKYFDKV	1169
Pavo_cristatus		
Gallus_gallus	AIEALDAAIEYKNESITCRQRVLRASASLLSQCEMNLMAKLSYLSSSETRALLCKYFDKV	1194
Anas_platyrhynchos	AIEALDAAIEYXNESITCRQRVLRASASLLSQCEMNLMAKLSYLSSSETRALLCKYFDKV	1123
Chelonia_mydas	AIEALDAAIEYKNESITCRQRVLRASASLLSQCEMNLMAKLSYLSSSETRALLCKYFDKV	1136
Mus_musculus	AIEALDAAIEYKNEAITCRORVLRASASLLSOCEMNLMAKLSYLSSSETRALLCKYFDKV	1112
Rattus_norvegicus	AIEALDAAIEYKNEAITCRORVLRASASLLSQCEMNLMAKLSYLSSSETRALLCKYFDKV	1105
Canis_lupus_familiaris		1157
Equus_caballus	AIEALDAAIEYKNEAITCRQRVLRASASLLSQCEMNLMAKLSYLSSSETRALLCKYFDKV	1114
Bos taurus	AIEALDAAIEYKNEAITCRORVLRASASLLSQCEMNLMAKLSYLSSSETRALLCKYFDKV	1130
_		
Homo_sapiens	AIEALDAAIEYKNEAITCRQRVLRASASLLSQCEMNLMAKLSYLSSSETRALLCKYFDKV	1107
Pan_troglodytes	AIEALDAAIEYKNEAITCRQRVLRASASLLSQCEMNLMAKLSYLSSSETRALLCKYFDKV	1107
Macaca_mulatta	AIEALDAAIEYKNEAITCRQRVLRASASLLSQCEMNLMAKLSYLSSSETRALLCKYFDKV	1108
Callithrix_jacchus	AIEALDAAIEYKNEAITCRQRVLRASASLLSQCEMNLMAKLSYLSSSETRALLCKYFDKV	1155
Latimeria_chalumnae	AIEALDAAIEYKNEAITRRQRVLRASASMLSQCEMNLMAKLSYLSASETRALLCKYFDKV	1160
Rhinatrema bivittatum	AIEALDAAIEYKNEAITRRORVLRASASMLSKCEMNLMTKLSYLSSSETRALLCKYFDKV	1172
Xenopus_tropicalis	AIEALDAAIEYKNESITRRQRVLRASASLLSQCEMNLMAKLSYLSSSETRALLCKYFDKV	1145
	121012201230124012501260	

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***** *** *** *** *** *** *** *** *** *** *** *** *** ***
                             VTLREDQHRQHIAFSELEMQLEEQQQLVHWLEAAVERQRLEMDRQLTLQQKEHEQSMQLL
Pavo_muticus
                                                                                                             1229
                              V<mark>TLREDQHRQ</mark>HIAF<mark>SELEMQLEEQQQLVHWLE</mark>AAV<mark>ERQRLEMDRQLTLQQKEHEQ</mark>SMQLL
Pavo_cristatus
                                                                                                             1229
                              VTLREDOHROHIAFSELEMOLEEQOOLVHWLEAAVERORLEMDROLTLOOKEHEOSMOLL
Gallus_gallus
                                                                                                             1254
Anas_platyrhynchos
                             VTLREEQHRQHIAF<mark>SELEMQLEEQQQLVHWLE</mark>VAL<mark>ERQRLETDRQLTLQQKEHEQ</mark>SVQLL
                                                                                                             1183
                              VTLREDOHROHIAFSELEMOLEEQOOQVYWLEVAVERORLEMDROLTLOOKEHEONIOFL
Chelonia mydas
                                                                                                             1196
                              V<mark>TLREEQHQQQIAFSELEMQLEEQQR</mark>LV<mark>YWLE</mark>VAL<mark>ERQRLEMDRQLTLQQKEHEQN</mark>VQLL
Mus_musculus
                                                                                                             1172
Rattus norvegicus
                              V<mark>TLREEQHQQQ</mark>IAF<mark>SELEMQLEEQQR</mark>LVYWLEVAL<mark>ERQRLEMDRQ</mark>LTLQQKEHEQNVQLL
                                                                                                             1165
Canis_lupus_familiaris
                             VTLREEQHQQQIAFSELEMQLEEQQRLVYWLEVALERQRLEMDRQLTLQQKEHEQNIQLL
                                                                                                             1217
Equus_caballus
                             VTLREEQHQQQVAFSELEMQVEEQQRLVYWLEVALERQRLEMDRQLTLQQKEHEQNIQLL
                                                                                                             1174
                             VTLREEQHQQQVAFSELELQLEEQQRLVYWLEAALERQRLEMDRQLTLQQRGHEQHVQLL
                                                                                                             1190
Bos_taurus
                             VTLREEQHQQQIAFSELEMQLEEQQRLVYWLEVALERQRLEMDRQLTLQQKEHEQNMQLL
Homo_sapiens
                                                                                                             1167
Pan_troglodytes
                             VTLREEQHQQQIAFSELEMQLEEQQRLVYWLEVALERQRLEMDRQLTLQQKEHEQNMQLL
                                                                                                             1167
Macaca_mulatta
                             VTLREEQHQQQIAFSELEMQLEEQQRLVYWLEVALERQRLEMDRQLTLQQKEHEQNMQLL
                                                                                                             1168
Callithrix_jacchus
                              V<mark>TLREEQHQQQIAFSELEMQLEEQQR</mark>LVYWLEVALERQRLEMDRQLTLQQKEHEQNLQLL
                                                                                                             1215
                             VTLREEERKLQLAYFEMEMRLEEQQRLVYWLEAAVERQRLETDRRLTLQQKEHERNVQLL
Latimeria_chalumnae
                                                                                                             1220
                             VTLREEEHKQQMAFSELEMQLEEMQRLVYWLEAALERQRLEVDRQLMLQQKEHERNLQLL
Rhinatrema_bivittatum
                                                                                                             1232
Xenopus_tropicalis
                             V<mark>TLREEEHKL</mark>QIAF<mark>SELEMK</mark>LEEQQRQVYWLEVAL<mark>ERQRLEMDRQ</mark>LTLQQKEHERNMQLI
                                                                                                             1205
                              \dots 1270 \dots 1280 \dots 1290 \dots 1300 \dots 1310 \dots 1320
                                                    :* * : **::*
                             *:*:: ***:
                                                                            :* *.*:*
                             LQQSREHMEEGLASSKLQYEGRIQVLEKELSRYMRANQELSQRLNSINL-----HPGV
LQQSREHMEEGLASSKLQYEGRIQVLEKELSRYMRANQELSQRLNSINL------HPGV
Pavo muticus
                                                                                                             1282
                                                                                                             1282
Pavo cristatus
                             LOOSREHMEEGLAS<mark>SKLOYEGRIOVLEKELSRYMRANOELSOR</mark>LNSINL-----H<mark>PG</mark>A
Gallus gallus
                                                                                                             1307
                             L<mark>QQSREHMDEG</mark>LAS<mark>SKLQYEGRIQLLEKE</mark>LSRYLRA<mark>NQE</mark>LS<mark>QR</mark>LSSLSL-----Q<mark>PGG</mark>
Anas_platyrhynchos
                                                                                                             1236
                             L<mark>QQSQEHMGEG</mark>LASSKLQFEGRIQVLEKELSRYVWANQVLNQRLSNLS-----HPGQ
LQQGRDHLGEGLADSKRQYEARIHALEKELGRHMWINQELKQKLSAGST-----AGQS
Chelonia_mydas
                                                                                                             1248
Mus_musculus
                                                                                                             1225
                             L<mark>QQGRDHLGEGLADSKRQYEAR</mark>IQALEKELGRHMWINQELK<mark>QK</mark>LSA<mark>GNT</mark>-----A<mark>G</mark>QS
Rattus norvegicus
                                                                                                             1218
Canis_lupus_familiaris LQQSRDHLGEGLADSKRQYETRIQALEKELGRHMWMNQELKQKLSSWNA-----AGLS
                                                                                                             1270
                             L<mark>QQSRDHFGEG</mark>LADSKRLYETRIQALERELGRHMWINQELK<mark>QK</mark>LGSLSA-----ASQS
Equus_caballus
                                                                                                             1227
                             LQQSRDHLGEGLADSRRQYETRIQALEKELGRHVRLNQELKQKLSSLSA-----ASQS
Bos_taurus
                                                                                                             1243
                             L<mark>QQSRDHLGEGLADSRRQYEAR</mark>IQALEKELGRYMWINQELK<mark>OKLGG</mark>VNA------V<mark>G</mark>HS
Homo sapiens
                                                                                                             1220
                             L<mark>OOSRDHLGEGLADSRROYEAR</mark>IOALEKELGRYMWINOELK<mark>OKLGG</mark>VNA------V<mark>G</mark>HS
Pan troglodytes
                                                                                                             1220
                             LQQSRDHLSEGLADSRRQYEARIQALEKDLGRYMWINQELKOKLGGVNT-----VGHS
LQQSRDHLGEGLADSKRQYEARIQALEKELGRYMWINQELKOKLGGVNT-----AGHS
Macaca mulatta
                                                                                                             1221
Callithrix_jacchus
                                                                                                             1268
Latimeria chalumnae
                             LQQCRDQTDEGLALRQRQYEGRTQLLERELNRYKWTNQELNQKLREIAMQPSNQGMADFC
                                                                                                             1280
                             LQQCQEHMSEGLSGRKQQYEGRLQILEKELSWYMWAHQELTQRLSLLTG-HSPHVMGSHS
LKQFQGQMGEGLAGSKRQYEARIQMLEKELCWYMQAHQELSQRLIKVSI-PKQNAPGQQV
Rhinatrema_bivittatum
                                                                                                             1291
Xenopus tropicalis
                                                                                                             1264
                              .....1330.....1340......1350......1360......1370......1380
                             AKAGMERNVHTG-----TCEEFSH--GEL--PLPPAEENHRGRDESRDLVHAPLPA
Pavo_muticus
                                                                                                             1329
                             AKAGMERNVHAG-----TCEEFSH--GEL--PLPPAEENHRGRDESRDLVHAPLPA
                                                                                                             1329
Pavo_cristatus
                             AKAGVERNVHTG------TCEEFSH--GEP--PLPPAEENHRGRDESRDLVHAPLPA
Gallus_gallus
                                                                                                             1354
                             PK-GMERNTHG------PCEEPSP--GELPVPLAATEESHRLRDESRDLVHAPLPS
SKAGADRSMLGAGDRPPAVLGTCEESGTGIVEQQVQVAVTEGSHKCRDENRELVHAPLPS
Anas platyrhynchos
                                                                                                             1283
                                                                                                             1308
Chelonia_mydas
                             R--GCERRSLCLENROCL--GNEDGLHPAAPEPLWOSSLLEGVSRVWDESRDLVHAPLPL
Mus musculus
                                                                                                             1281
                             R--<mark>GCERRSHCLENRQGL--GNEDGPHVAAQEPLWP</mark>SSLL<mark>EGAPR</mark>VWD<mark>ESRDLVHAPLP</mark>L
Rattus_norvegicus
                                                                                                             1274
Canis lupus familiaris
                             RVTGGEKRTLCLENRPPP--GTEEELPAG-PELLWQQPLPDSVPRARDEVRDVVRAPLPL
                                                                                                             1327
                             R--<mark>GGEKRTP</mark>CLENRQPP--GSEDELH<mark>PA-PEL-WQCP</mark>LTEGA<mark>PRAREEMRDLVHA</mark>PL<mark>P</mark>L
Equus_caballus
                                                                                                             1281
                             RVMGGEKRTPCLENRQAP--GSEDELYPA-PEPLWQPTGMEGAPRPREEMRDLVHAPLPL
                                                                                                             1300
Bos taurus
                             R--<mark>GGEKRS</mark>LCS<mark>EGRQAP--GNEDELHLA-PELLWLSP</mark>LTEGA<mark>PRTREETRDLVHAPLP</mark>L
Homo_sapiens
                                                                                                             1275
                             R--<mark>GGEKRS</mark>LCL<mark>EGRÕAP--GNEDELHLA-PELLWLSP</mark>LTEGAPRTREETRDLVHAPLPL
R--GGEKRSLCSEGRÕAP--GNEDELH<mark>P</mark>A-PELLWLYPLTEGAPRTREETRDLVHAPLPL
                                                                                                             1275
Pan_troglodytes
                                                                                                             1276
Macaca_mulatta
                             R--<mark>GGEKKS</mark>LGSEGR<mark>Q</mark>AP--GNE-ELH<mark>P</mark>A-<mark>P</mark>ELLRLS<mark>P</mark>LTEGAPRTREEMRDLIHAPLPL
                                                                                                             1322
Callithrix_jacchus
Latimeria_chalumnae
                             KPAGMDGRAHSIVDRL<mark>SHGAGG</mark>TTEES<mark>G</mark>NTALPEQLPSNPEHKRRLREESRDWIHTPLPP
                                                                                                             1340
Rhinatrema_bivittatum
                             KVTEGDGRAFHIAEGQPLVAG-SLEETTNGVVLEQSPASMERHPRPWEESRDLVHAPLPP
                                                                                                             1350
                             NVALGDGRSLTTAEKQ-----TTEIHSATVNLNN<mark>PVFGTD</mark>KNIQPRE---DFLYAPL<mark>PP</mark>
                                                                                                             1315
Xenopus_tropicalis
                              .....1390.....1400.....1410.....1420.....1430......1440
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Pavo_muticus	TWRRSSLPT	-DST <mark>G</mark> D <mark>P</mark> R	Q <mark>EV</mark>	/HL <mark>P</mark> RS <mark>LGP-AK</mark>	-PRREPRRA <mark>S</mark> L	1368
Pavo_cristatus	TWRRSSLPT	-DST <mark>G</mark> D <mark>P</mark> R	Q <mark>E</mark> V	/HL <mark>P</mark> RS <mark>LGP-AK</mark>	-PRREPRRASL	1368
Gallus_gallus	TWRRSSLPT	-DST <mark>G</mark> DSR	н <mark>е</mark> у	/HL <mark>P</mark> RS <mark>LGP-AK</mark>	- <mark>PRRE</mark> PRR <mark>AS</mark> L	1393
Anas_platyrhynchos	TWRRSSLPS	-DS <mark>PG</mark> D <mark>P</mark> RRD	AEHSLRAGQPHEV	/QL <mark>P</mark> RGLPP-AK	-PRWEPRRASL	1334
Chelonia_mydas	TWRRSSLPS	-DS <mark>P</mark> L <mark>GPEGIQ</mark> (<mark>REA</mark> EYLLRL <mark>G</mark> Q <mark>P</mark> QEV	/VL <mark>PWN</mark> LAPLPK	-PWRELRRASL	1364
Mus_musculus	TWKRSSLCS	E <mark>QGS</mark> SEE <mark>S</mark> RY	VRE <mark>T</mark> TEPPVGRVLPMGEV	<mark>/GLSWNFGP</mark> LPK	-PRWEPRRTS-	1337
Rattus_norvegicus	TWKRSSLCS	<mark>EQGS</mark> SEEPR	A <mark>RET</mark> T <mark>EPP</mark> VGRVL <mark>P</mark> MGEV	/SLSW <mark>NFGP</mark> LPK	-PRWEPRRTS-	1330
Canis_lupus_familiaris	TWKRSSLCG	-EEPG <mark>S</mark> LEELRI	PREATEPLVGRVL <mark>P</mark> GGEI	L <mark>GLPWN</mark> FGPLAT	-PRRDLRRG <mark>S</mark> -	1384
Equus_caballus	TWRRSSLCG	GEE <mark>Q</mark> G <mark>S</mark> SEELRI	PREA-EPLAGRVLPMGEG	GL <mark>PWN</mark> LGPLPK	- <mark>PRRE</mark> LRRAS-	1338
Bos_taurus	TWKRSSLCS	-EE <mark>QGSPEEL</mark> R(ORDAAELPVGRVL <mark>P</mark> VGE	AGL <mark>PWN</mark> LGPLAK	- <mark>PRRE</mark> LRRV <mark>S</mark> -	1357
Homo_sapiens	TWKRSSLCG	-EEQG <mark>SP</mark> EELR(<mark>PEAAEPLVGRVLP</mark> VGE	A <mark>GLPWN</mark> FGPLSK	- <mark>PRRE</mark> LRRAS-	1332
Pan_troglodytes	TWKRSSLCG	-EEQG <mark>SP</mark> EELR(<mark>PEAAEP</mark> LVGRVL <mark>P</mark> VGE	A <mark>GLPWN</mark> FGPLSK	- <mark>PRRE</mark> LRRAS-	1332
Macaca_mulatta	TWKRSSLCG	-EEQG <mark>SP</mark> EELR(<mark>PEAAEP</mark> LVGRVL <mark>P</mark> VGE	A <mark>GLPWN</mark> FGPLSK	- <mark>PRRE</mark> LRRAS-	1333
Callithrix_jacchus	TWKRSSLGG	-EE <mark>QGS</mark> SEELR(<mark>PREAAEPLPGRVMPMGE</mark>	A <mark>GLPWN</mark> FGP <mark>S</mark> SK	- <mark>PWRE</mark> LRRAS-	1379
Latimeria_chalumnae	SWRRSSL <mark>P</mark> T	-ED <mark>Q</mark> S <mark>GLEELR</mark> (REAAELPCNRTTQPGEG	A <mark>TLWSVG</mark> QVL <mark>P</mark>	KSRREFRRS <mark>S</mark> L	1399
Rhinatrema_bivittatum	TWRRSSLPS	-DN <mark>PPGL</mark> DD L C	QQGS <mark>TLGRGI</mark> QPNEV	ANTKTLN <mark>YL</mark> TP	-GRRELQRTNL	1405
Xenopus_tropicalis	TWRRSSLPT	-EE <mark>Q</mark> HGLEELRI	N <mark>RE-TVLENSKLVQP</mark> AEA	LCQR <mark>N</mark> LSYL <mark>PK</mark>	-SRRELRRCNV	1372
	145	01460	147014	180149	01500	

	:**** **:	
Pavo_muticus	NVTPLPYHPAMIDVRKNPL	1387
Pavo_cristatus	NV <mark>TPLPYHPAMIDVRKNP</mark> L	1387
Gallus_gallus	NV <mark>TP</mark> LPYHPAMIDVRKNPL	1412
Anas_platyrhynchos	NV <mark>SPMPHHP</mark> AMI <mark>DVRKNP</mark> L	1353
Chelonia_mydas	NVA <mark>PVPSHPGMIDVRRNP</mark> V	1383
Mus_musculus	<mark>PGMIDVRKNP</mark> L	1348
Rattus_norvegicus	<mark>PGMID</mark> VRK <mark>NP</mark> L	1341
Canis_lupus_familiaris	<mark>PGMIDVRKNP</mark> L	1395
Equus_caballus	<mark>PGMIDVRRNP</mark> L	1349
Bos_taurus	<mark>PGMIDVRKNP</mark> L	1368
Homo_sapiens	<mark>PGMIDVRKNP</mark> L	1343
Pan_troglodytes	<mark>PGMIDVRKNP</mark> L	1343
Macaca_mulatta	<mark>PGMIDVRKNP</mark> L	1344
Callithrix_jacchus	<mark>PGMIDVRKNP</mark> L	1390
Latimeria_chalumnae	NS <mark>SSGIIDVRKNP</mark> L	1413
Rhinatrema_bivittatum	NA <mark>SP</mark> LISSS <mark>GMID</mark> VRI <mark>NP</mark> L	1424
Xenopus_tropicalis	<mark>NT</mark> V <mark>P</mark> VISNLEMIDVRKNPL	1391
	1510	