

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/AKADapsTue Feb 1 11:01:02 2022

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                                **: ** : **
Pavo_muticus                   -----MEDEERLKKLE 11
Pavo_cristatus                 -----MEDEERLKKLE 11
Gallus_gallus                  -----MEDEERLKKLE 11
Mus_musculus                   -----MEDEERORKLA 11
Rattus_norvegicus              -----MEDEERORKLA 11
Homo_sapiens                   -----MEDEEROKKLE 11
Pan_troglodytes                -----MEDEEROKKLE 11
Macaca_mulatta                 -----MEDEEROKKLE 11
Callithrix_jacchus             -----MEDEEROKKLE 11
Canis_lupus_familiaris         -----MEDEERORKLE 11
Equus_caballus                 -----MEDEEROKKLE 11
Bos_taurus                     -----MEDEEROKKLE 11
Rhinatrema_bivittatum         MNVSAPLRSGEAAAAGAAAGEATGWGRRRAALTAAGGERVTPCAFSRAGAMEDEEROKKLE 60
Xenopus_tropicalis             -----MEEEDQERKRKLE 13
Danio_rerio                    -----MMEDEERORKLE 12
1.....10.....20.....30.....40.....50.....60

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*****.:**.* * : * : ** .
Pavo_muticus                   AGKAKLAQFRQRKAQTDGQSTSKKQKKKRKTASIKDEESIQDGLDIDRSRGDETSACSSR 71
Pavo_cristatus                 AGKAKLAQFRQRKAQTDGQSTSKKQKKKRKTASIKDEESIQDGLDIDRSRGDETSACSSR 71
Gallus_gallus                  AGKAKLAQFRQRKAQTDGQSTSKKQKKKRKTASIKDEESIQDGLDIDRSRGDETSACSSR 71
Mus_musculus                   AGKAKLARFRQRKAQYDGDIP-KKQKKKR-TSSSKHDSLSLHTDQ-----QSGELCSESSQ 64
Rattus_norvegicus              AGKAKLARFRQRKAQCDGDIP-KKQKKKR-TFSSKQDSSLHTDQ-----QSAEICSESSQ 64
Homo_sapiens                   AGKAKLAQFRQRKAQSDGQSPSKKQKKKRKTSSSKHDSVAHHDNLNIDQSQCNEMYINSSQ 71
Pan_troglodytes                AGKAKLAQFRQRKAQSDGQNPSSKKQKKKRKTSSSKHDSVAHHDNLNIDQSQCDEMYINSSQ 71
Macaca_mulatta                 AGKAKLAQFRQRKAQSDGQNPSSKKQKKKRKTSSSKHDSVAHHDNLNIDQSQCDEMYINSSQ 71
Callithrix_jacchus             AGKAKLAQFRQRKAQSDGQNPSSKKQKKKRKTSSSKYDVAHHDNLNIDQSQCDEMYINSSQ 71
Canis_lupus_familiaris         AGKAKLAQFRQRKAQSDGQNPSSKKQKKKRKTSSSKHDSVAHHDNLNIDQSQCDEMYINSSQ 71
Equus_caballus                 AGKAKLAQFRQRKAQSDGQNPSSKKQKKKRKTSSSKHDSVAHHDNLNIDQSQCDEMYINSSQ 71
Bos_taurus                     AGKAKLAQFRQRKAQSDGQNP-KKQKKKRKTSSSKHDSVAHHDNLNIDQSQCDEMYINSSQ 70
Rhinatrema_bivittatum         AGKAKLAQFRQRKA--DGQNPQPKRQKKKKKSKTKEGELSK-DGPDIDQSEHDETCSQDVE 117
Xenopus_tropicalis             AGKAKLAQFRQRKAQSDGQHAAKPKKKKASTGSKGQQTAEDAQETSYSSQSHSHSQSTE 73
Danio_rerio                    AGKAKLAQFRQRKAQSDGQKKKKKKKKPELEPTE----- 46
.....70.....80.....90.....100.....110.....120

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. : :: : ***:*:: :: ** :
Pavo_muticus                   R-GAAATADFAVTRTLHSGEIIKHIAAYTTEPESEISTAVEDYSS-----EVNGCSFVT 124
Pavo_cristatus                 R-GAAATADFAVTRTLHSGEIIKHIAAYTTEPESEISTAVEDYSS-----EVNGCSFVT 124
Gallus_gallus                  R-GAAATADFAVTRTLHSGEIIKHIAAYTTEPESEISTAVEDYSS-----EVNGCSFVT 124
Mus_musculus                   RVDLAGNPDCS-----GPER-KHGQVFSAEPESEISTADECSS-----E----- 103
Rattus_norvegicus              RADSAGSPDSS-----SAEKAKHGQVFAADPESEISTADECSS-----EINGCNSVT 112
Homo_sapiens                   RVESTVIPESTIMRTLHSGEITSHEQGFVSVELESEISTTADDCSS-----EVNGCSFVM 125
Pan_troglodytes                RVESTVTPESTIMRTLHSGEITSHEQGFVSVELESEISTTADDCSS-----EVNGCSFVM 125
Macaca_mulatta                 RVESTVTPESTIMRTLHSGEITSHEQGFVSVELESEISTTADDCSS-----EVNGCSFVM 125
Callithrix_jacchus             KVESTVTPTT---RTLHSGEITSHEQGFVSVELESEISTTADDCSS-----EVNGCSFVM 122
Canis_lupus_familiaris         RVGTTVTPESTIMRTLHSGEITSHEQGFVSVELESEISTTADDCSS-----EVNGCSFVM 116
Equus_caballus                 KVGSAVTPESTIMRPLHGGEIHKDQVFSVEPESEISTTADDCSS-----EVNGCSFVM 125
Bos_taurus                     RSGTAVPPESTITRALHSGEIVKCDQVFSVEPESEISTTADDCSS-----EVNGCSFVM 130
Rhinatrema_bivittatum         R-GAVATTKFTTMRTLHSGDIHKDQFTIEAESEISTTADDCSS-----EVNGCSFET 170
Xenopus_tropicalis             G--ASATEEFSIMRTLHSGESVKHDKTYTIEPESEISTTADDCSS-----EVTGDRFPF 125
Danio_rerio                    --GESANTVFSVSKTLRSGETVTHDQTYTIEPESEISTTADDCSS-----EVNGFHKRS 98
.....130.....140.....150.....160.....170.....180

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                ***:  :  ::  .  :::  .  **  *  :***:****:
Pavo_muticus      RTAIPTDLIR-EEFGVGEICSEHGMQH----SLMQLEVMENELAGKQQEIEELNREE 179
Pavo_cristatus    RTAIPTDLIR-EEFGVGEICSEHGMQH----SLMQLEVMENELAGKQQEIEELNREE 179
Gallus_gallus     RTAIPADLIR-EEFGVGEMCSEHGMQH----SLMQLEVMENELAGKQQEIEELNREE 179
Mus_musculus      -----EEFSLDDSSEQGAS----SQTCLQMVEKELAEKQHDIEELTQELEE 148
Rattus_norvegicus KPGNPTDLIR-EEDFSIDDSYSEQGAS----SQTCLQMGENELAEKQHEVEELTQELEE 167
Homo_sapiens      RTGKPTNLLR-EEFGVDDSYSEQGAD----SPTHLEMMESELAGKQHEIEELNREE 180
Pan_troglodytes   RTGKPTNLLR-EEFGVDDSYSEQGAD----SPTHLEMMESELAGKQHEIEELNREE 180
Macaca_mulatta    KTGKPTNLLR-EEFGVDDSYSEQGAQY----SLTHLEMMESELAGKQHEIEELNREE 180
Callithrix_jacchus RTGKPTNLLR-EEFGVDDSYSEQGAQY----SPTHLEMMESELAGKQHEIEELNREE 177
Canis_lupus_familiaris RTEKSTNLLR-EEFGGADDSYSEHGAQY----NQTHLEMMENELAGKQHEIEELSREEE 171
Equus_caballus    RAEKPTNLLR-EEFCVDDSSSEHGAQF----SHTHMEMEH-ELAGKQHEIEELNREE 179
Bos_taurus        RTGKPTNLLR-EEFGVDDSYSEHGAQY----NQTHLEMMESELAGKQHEIEELNREE 185
Rhinatrema_bivittatum RAQMSTNLMR-EEFGVPENSEHDMS----SQTRLEVMEDELVEKRQEIEELNREE 225
Xenopus_tropicalis TANSTADLVREEEFEVRETSEQGTCS----SLTRLEVMEDELAGKQQEIEELNKELEE 181
Danio_rerio       DCDPAFSLIG-EEDLHPSETEAQMEADLGGGTQNRMQIMEDELEAKNMAMELSRELD 157
                .....190.....200.....210.....220.....230.....240

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Pavo_muticus      MRAAYGTEGLQQLQEFEAAIKRDDIITQLTTNLQAREKDETMREFLELTEQSQKLQI 239
Pavo_cristatus    MRAAYGTEGLQQLQEFEAAIKRDDIITQLTTNLQAREKDETMREFLELTEQSQKLQI 239
Gallus_gallus     MRAAYGTEGLQQLQEFEAAIKRDDIITQLTTNLQAREKDETMREFLELTEQSQKLQI 239
Mus_musculus      MRASFGTEGLKQLQEFEAAIKRDGIITQLTANLQAREKDDTMVEFELTEQSQKLQI 208
Rattus_norvegicus MRASFGTEGLKQLQEFEAAIKRDGIITQLTANLQAREKDDTTIEFELTEQSQKLQI 227
Homo_sapiens      MRVTYGTEGLQQLQEFEAAIKRDGIITQLTANLQAREKDETMREFLELTEQSQKLQI 240
Pan_troglodytes   MRVTYGTEGLQQLQEFEAAIKRDGIITQLTANLQAREKDETMREFLELTEQSQKLQI 240
Macaca_mulatta    MRVTYGTEGLQQLQEFEAAIKRDGIITQLTANLQAREKDETMREFLELTEQSQKLQI 240
Callithrix_jacchus MRVTYGTEGLQQLQEFEAAIKRDGIITQLTANLQAREKDETMREFLELTEQSQKLQI 237
Canis_lupus_familiaris MRATYGTDGLQQLQEFEAAIKRDGIITQLTANLQAREKDETMREFLELTEQSQKLQI 231
Equus_caballus    MRATYGTEGLQQLQEFEAAIKRDGIITQLTANLQAREKDETMREFLELTEQSQKLQI 239
Bos_taurus        MRATYGTEGLKQLQEFEAAIKRDGIITQLTANLQAREKDETMREFLELTEQSQKLQI 245
Rhinatrema_bivittatum MRAAYGTEGLQQLQEFEAAIKRDGIITQLTANLQAREKDETMREFLELTEQSQKLKI 285
Xenopus_tropicalis MRAACGTQGLQQLQEFEMAIKRDDIITQLTTNLQAREKDETMKEFLELTEQSQKLKI 241
Danio_rerio       IRSAFGTEGVQQLQDFEEALKRDEIITQLTSNLQARTEKEFVMREFLELTEQSQKLQI 217
                .....250.....260.....270.....280.....290.....300

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***:***.* *:... : **:*** :: **  ****:  :.. .
Pavo_muticus      QFQHLQASEALRNTSHSCTAADLLQAKQQILSHQQQLEDQECLLKNYQKNEEFEVQITH 299
Pavo_cristatus    QFQHLQASEALRNTSHSCTAADLLQAKQQILSHQQQLEDQECLLKNYQKNEEFEVQITH 299
Gallus_gallus     QFQHLQASEALRNTSHSCTAADLLQAKQQILSHQQQLEDQECLLKNYQKNEEFEVQITH 299
Mus_musculus      QFQHLQANETLQNSTLSRTATDLLQAKRQIFTQQQLQ-----DYQKKEEDLQAQISF 261
Rattus_norvegicus QFQHLQANETLQNSTLSRTATDLLQAKRQIFTLQQLQ-----DYQKKEEDVQAQISF 280
Homo_sapiens      QFQQLQASETLRNSTSSTAADLLQAKQQILTHQQQLEEDQHLLEDYQKKKEDFTMQISF 300
Pan_troglodytes   QFQQLQASETLRNSTSSTAADLLQAKQQILTHQQQLEEDQHLLEDYQKKKEDFTMQISF 300
Macaca_mulatta    QFQQLQASETLRNSTSSTAADLLQAKQQIRTHQQQLEEDQHLLEDYQKKKEDFTMQISF 300
Callithrix_jacchus QFQQLQASETLRNSTSSTAADLLQAKQQILTHQQQLEEDQHLLEDYQKKKEDFKMQISF 297
Canis_lupus_familiaris QFQHLQASETLRNSTSSTAADLLQAKQQILTHQQQLEEDQHLLEDYQKKKEDFKMQISF 291
Equus_caballus    QFQHLQASETLRNSTSSTAADLLQAKQQILTHQQQLEEDQHLLEDYQKKKEDFKMQISF 299
Bos_taurus        QFQHLQASETLRNSTSSTAADLLQAKQQILTHQQQLEEDQHLLEDYHRKKEDFKMQISF 305
Rhinatrema_bivittatum QFQHLQASETLRNSTSSTAADLLLAKQQIITYQQQLEEDQEHQLKISONQIEEFQAQAIF 345
Xenopus_tropicalis QFQHLQASEALRNNSHTSSTAADLLSKQQQILAYQQQLEEDQEHRLKLYQKDNESYKAHNES 301
Danio_rerio       QFQQLQAGEILRSSNISSTAADLLQARTQITLYQQQLEEDQEAQLRLQENTHTQISLNTQ 277
                .....310.....320.....330.....340.....350.....360

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Pavo_muticus	L	O	G	I	I	K	T	Y	E	M	E	K	Q	R	---	N	E	E	E	---	D	M	N	K	L	O	E	K	E	A	L	V	E	E	L	E	A	K	L	K	E	E	E	K	S	F	O	L	K	E	K	L	S	D	V	S	K	L	H	357
Pavo_cristatus	L	O	G	I	I	K	T	Y	E	M	E	K	Q	R	---	N	E	E	E	---	D	M	N	K	L	O	E	K	E	A	L	V	E	E	L	E	A	K	L	K	E	E	E	K	S	F	O	L	K	E	K	L	S	D	V	S	K	L	H	357
Gallus_gallus	L	O	G	L	I	K	T	Y	E	M	E	K	Q	R	---	N	E	E	E	---	D	M	N	K	L	O	E	K	E	A	L	V	E	E	L	E	A	K	L	K	E	E	E	K	S	L	O	L	K	E	K	I	S	D	I	S	K	L	H	357
Mus_musculus	L	O	E	K	L	R	A	F	E	M	E	K	D	R	---	K	I	E	N	L	A	K	E	I	O	E	K	O	A	L	I	D	E	L	N	T	R	V	V	E	E	E	K	T	O	L	K	N	K	V	I	T	A	D	E	L	L	320		
Rattus_norvegicus	L	O	E	K	I	R	M	L	E	M	E	K	D	R	---	K	V	E	S	L	N	T	K	E	I	E	E	K	O	A	I	E	E	L	N	T	R	V	I	E	E	E	R	K	T	A	E	L	N	K	V	I	T	A	D	E	L	L	339	
Homo_sapiens	L	O	E	K	I	K	V	Y	E	M	E	Q	D	K	---	K	V	E	N	S	N	K	E	E	I	O	E	K	E	T	I	I	E	E	L	N	T	K	I	I	E	E	E	K	T	L	E	L	K	D	K	L	T	A	D	K	L	L	359	
Pan_troglodytes	L	O	E	K	I	K	V	Y	E	M	E	Q	D	K	---	K	V	E	N	S	N	K	E	E	I	O	E	K	E	T	I	I	E	E	L	N	T	K	V	I	E	E	E	K	T	L	E	L	K	D	K	L	T	A	D	K	L	L	359	
Macaca_mulatta	L	O	E	K	I	K	V	Y	E	M	E	Q	D	K	---	K	V	E	N	S	N	K	E	E	I	O	E	K	E	T	I	I	E	E	L	N	T	K	I	I	E	E	E	K	T	L	E	L	K	D	K	L	T	A	A	D	K	L	L	359
Callithrix_jacchus	L	O	E	K	I	K	V	Y	E	M	E	Q	D	K	---	K	V	E	N	S	N	K	E	E	I	O	E	K	E	V	I	E	I	E	L	N	T	K	I	I	E	E	E	K	T	L	E	L	K	D	K	L	T	A	A	D	K	L	L	356
Canis_lupus_familiaris	L	O	E	K	I	R	A	Y	E	M	E	Q	D	K	---	K	V	E	S	S	N	K	E	---	I	O	E	K	D	A	I	D	E	L	N	T	K	I	I	E	E	E	K	I	T	L	E	L	T	D	K	V	T	A	A	D	K	L	L	349
Equus_caballus	L	O	E	K	I	R	T	Y	E	M	E	Q	D	K	---	K	V	E	S	S	N	K	E	---	I	O	E	K	E	A	I	E	E	L	S	T	K	I	I	E	E	E	K	T	L	E	L	K	D	K	V	T	A	A	D	K	L	L	357	
Bos_taurus	L	O	E	K	I	R	A	Y	E	M	E	Q	D	K	---	K	V	E	N	S	N	K	E	---	I	O	E	K	E	A	V	I	E	E	L	N	T	K	I	I	E	E	E	K	T	I	D	L	K	D	K	V	T	A	A	D	K	L	L	363
Rhinatrema_bivittatum	L	O	O	R	T	G	S	Y	E	M	V	Q	T	N	K	E																																												

	: . : :	:	. .	**	: *.** *	* *:	::*	::*:***::	:	.	
Pavo_muticus	EELKEQISLKNLEISNMKIELTTYKOKERKCSD EIKQLMGTV EEL OKRCYKDSQSSEADIV	417									
Pavo_cristatus	EELKEQISLKNLEISNMKIELTTYKOKERKCSD EIKQLMGTV EEL OKRCYKDSQSSEADIV	417									
Gallus_gallus	EELKEEISLRNLEISNMRIELTTYKOKERCSD EIKQLMGTV EEL OKRCYKDSQSSEADIV	417									
Mus_musculus	GGLHEQLTQRNQEIQLSKLELGNSOONERKCSDEI K ELMRTVEEL OKRN LKDSWLETSAV	380									
Rattus_norvegicus	GQLGQGVTEKDQE IKS LKL EL V NS O ON ER KC S DE IK E LM RT VE EL OK RN L KD S QL GT G TV	399									
Homo_sapiens	GELQEQIVQNQOEIKNMKLELTNSKOKERCSSEEIKQLMGTV EEL OKRN HK D SQ FETDIV	419									
Pan_troglodytes	GELQEQIVQNQOEIKNMKLELTNSKOKERCSSEEIKQLMGTV EEL OKRN HK D SQ FETDIV	419									
Macaca_mulatta	GELQEQVVQNQOEIKNMKLELTNSKOKERCSSEEIKQLMGTV EEL OKRN HK D SQ FETDIV	419									
Callithrix_jacchus	GELQEQVIQNQOEIKNMKLELTNSKOKERCSSEEIKQLMGTV EEL OKRN HK D SQ FGTDITV	416									
Canis_lupus_familiaris	EELQEQVVQNQOEIKNMKLELSNSKOKERQCSEEIKQLMGTV EEL OKKNHKD SQFETDIL	409									
Equus caballus	EELQEHVLQKNQELKNVKLELTNSKOKERQCSEEVQOLMGTV EEL OKKNHKD SQFETDIL	417									
Bos_taurus	EELQEQVVQNQOEIKNMKLELTNSKOKERCSSEEIKQLMGTV EEL OKKNHKD SQFEMDIL	423									
Rhinatrema_bivittatum	EELKEQTIQNKQBANSLTIELTNSKOKERCSSDEIKQLMGTV EDLOKRYH K DS Q TETHII	465									
Xenopus_tropicalis	EELRQELVIKHQETNNLAEESSSRORERSSEEIKQLMGTV EEL OKKH YKGTFQ EADIIV	418									
Danio_rerio	NEVNRLS AKTHALDNCEKELSASROKERMSSGEILOLMKVSVDLOORSHODRRSETLSE	395									
430.....440.....450.....460.....470.....480										

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Pavo_muticus	Q	R	M	E	L	T	O	R	R	L	A	O	L	A	E	D	E	M	H	G	O	O	I	V	O	M	K	O	E	L	I	K	O	H	A	V	E	I	O	R	L	A	O	K	V	E	L	E	K	T	S	S	L	C	L		477					
Pavo_cristatus	Q	R	M	E	L	T	O	R	R	L	A	O	L	A	E	D	E	M	H	G	O	O	I	V	O	M	K	O	E	L	I	K	O	H	A	V	E	I	O	R	L	A	O	K	V	E	L	E	K	T	S	S	L	C	L		477					
Gallus_gallus	Q	R	M	E	L	T	O	R	R	L	A	O	L	A	E	D	E	M	H	G	O	O	I	V	O	M	K	O	E	L	I	K	O	H	A	V	E	I	O	R	L	A	O	K	V	E	L	E	K	T	S	S	L	C	L		477					
Mus_musculus	R	R	V	E	O	E	T	O	R	K	L	S	H	L	A	E	L	D	E	M	Y	G	O	O	I	V	O	M	K	O	E	L	I	N	O	H	M	S	O	I	E	L	K	S	O	H	K	R	E	M	E	N	T	L	K	S	D	T		440		
Rattus_norvegicus	R	R	V	E	O	E	T	O	R	K	L	S	I	L	A	E	L	D	E	M	Y	G	K	O	I	V	O	M	K	O	E	L	M	K	O	H	M	S	O	I	E	L	K	S	O	H	K	R	D	E	N	T	L	K	S	D	A		459			
Homo_sapiens	Q	R	M	E	O	E	T	O	R	K	L	E	O	L	R	A	E	L	D	E	M	Y	G	O	O	I	V	O	M	K	O	E	L	I	R	O	H	M	A	O	M	E	E	M	K	T	R	H	K	G	E	M	E	N	A	L	R	S	Y	S		479
Pan_troglodytes	Q	R	M	E	O	E	T	O	R	K	L	E	O	L	R	A	E	L	D	E	M	Y	G	O	O	I	V	O	M	K	O	E	L	I	R	O	H	M	A	O	M	E	E	I	K	T	R	H	K	G	E	M	E	N	A	L	R	S	Y	P		479
Macaca_mulatta	Q	R	M	E	O	E	T	O	R	K	L	E	O	L	R	A	E	L	D	E	M	Y	G	O	O	I	V	O	M	K	O	E	L	I	R	O	H	V	S	O	M	E	E	L	K	T	R	H	K	G	E	M	E	N	A	L	R	S	Y	P		479
Callithrix_jacchus	Q	R	M	E	O	E	T	O	R	K	L	E	O	L	R	A	E	L	D	E	M	Y	G	O	O	I	V	O	M	K	O	E	L	I	R	O	H	M	S	O	M	E	E	L	K	A	L	H	K	G	E	M	E	N	A	L	O	S	H	P		476
Canis_lupus_familiaris	Q	R	M	E	O	E	A	R	K	L	E	O	L	R	A	E	L	D	E	M	Y	G	O	O	I	V	O	M	K	O	E	L	I	K	O	H	M	S	O	I	D	E	L	K	I	O	H	K	G	E	M	E	N	A	L	R	S	Y	P		469	
Equus caballus	Q	R	M	E	O	E	T	O	R	K	L	E	O	L	R	A	E	L	D	E	M	Y	G	O	O	I	V	O	M	K	O	E	L	I	K	O	H	M	L	O	I	E	E	L	K	T	R	H	K	G	E	M	E	N	A	L	R	S	Y	P		477
Bos_taurus	Q	R	M	E	O	E	T	O	R	K	L	E	O	L	R	A	E	L	D	E	M	Y	G	O	O	I	V	O	M	K	O	E	L	I	K	O	H	V	S	O	I	D	E	L	R	T	R	H	K	G	E	L	E	N	A	L	R	S	H	P		483
Rhinatrema_bivittatum	Q	R	M	E	L	E	A	G	K	K	L	E	O	L	R	A	E	L	D	E	M	Y	G	O	O	I	V	O	M																																	

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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Pavo_muticus	QELNFSREQVORAKOTIMDMECRLNEAEKYQFVIEDLKTQLASASEFRKELELKHEAEVT	596												
Pavo_cristatus	QELNFSREQVORAKOTIMDMECRLNEAEKYQFVIEDLKTQLASASEFRKELELKHEAEVT	596												
Gallus_gallus	QELNFSREQVORAKOTIMDMECRLNEAEKYQFVIEDLKTQLASASEFRKELELKHEAEVT	596												
Mus_musculus	EEVRFLREQVKARQTIAEQENRSLSEARKSLSTVEDLKAEIVAASESRKELELVKHEAEIT	555												
Rattus_norvegicus	EEVRFLREQVKARQTIAEQENRSLSDARKSLSTVEDLKAEIVAASESRKELELVKHEAEIT	574												
Homo_sapiens	EELSFSREIQIQRARQTIAEQESKLNEAHKSLSTVEDLKAEIVSASESRKELELKHEAEVT	594												
Pan_troglodytes	EELSFSREIQIQRARQTIAEQESKLNEAHKSLSTVEDLKAEIVSASESRKELELKHEAEVT	594												
Macaca_mulatta	EELSFSREIQIQRARQTIAEQESKLNEAQKSLSTVEDLKAEIVSASESRKELELKHEAEVT	594												
Callithrix_jacchus	EELSFSREIQIQRARQTVAEQESKLNEAHKSLSTVEDLKAEIVSASESRKELELKHEAEVT	591												
Canis_lupus_familiaris	EELSFSREIQIQRARQTIAEQENKLSSEAHKSLSTVEDLKAEIVSASEYRKELELVKHEAEVT	584												
Equus caballus	EELSFSRDQIQRARQTIAEQESKLNEAYKSLSTVEDLKAEIVSACESRKELELVKHEAEVT	592												
Bos_taurus	EELSFSRDQIQRARQTITEQEGKLN EAYKSLSTVEDLKAEIVSASEARKKELELVKHEAEVT	598												
Rhinatrema_bivittatum	QDLSFAREQIERAKQSIIIEKCKLAEBANKFOIIIIDLKTQAVSASEFTKELELVKHDAEIT	642												
Xenopus_tropicalis	QDMLAREQIQKAKE SITEKESKLSSEASSLLVAVDDLKAELAAANAYTKELQTKHSEIT	596												
Danio_rerio	QELTELREEKRHLLEKLEHLKADLQSSDHLRAAMSDLQMKLDEALKENTSINAHESEVT	553												
	.....610.....620.....630.....640.....650.....660												

	*****.***.*.: *****.*:**.***.***.***.***.***.***.*	
Pavo_muticus	NYKIKLEMLEREKDAVLDRMAESQEAELERLRTKLLFSHEEELSRLKEDLOKEHVMNMES	656
Pavo_cristatus	NYKIKLEMLEREKDAVLDRMAESQEAELERLRTKLLFSHEEELSRLKEDLOKEHVMNMES	656
Gallus_gallus	NYKIKLEMLEREKDAVLDRMAESQEAELERLRTKLLFSHEEELSRLKEDLOKEHVMNMES	656
Mus_musculus	NYKIKLEMLEKEKNAVLDRMAESQEAELERLRTQLLFSHEEELSCLKEDLEVEHRINIEK	615
Rattus_norvegicus	NYKIKLEMLEKEKNAVLDRMAESQEAELERLRTQLLFSHEEELSCLKEDLEVEHRINIVEK	634
Homo_sapiens	NYKIKLEMLEKEKNAVLDRMAESQEAELERLRTQLLFSHEEELSCLKEDLEIEHRINIEK	654
Pan_troglodytes	NYKIKLEMLEKEKNAVLDRMAESQEAELERLRTQLLFSHEEELSCLKEDLEIEHRINIEK	654
Macaca_mulatta	NYKIKLEMLEKEKNAVLDRMAESQEAELERLRTQLLFSHEEELSCLKEDLEIEHQINIEK	654
Callithrix_jacchus	NYKIKLEMLEKEKNAVLDRMAESQEAELERLRTQLLFSHEEELSCLKEDLEIEHRINIEK	651
Canis_lupus_familiaris	NYKIKLEMLEREKNAVLDRMAESQEAELERLRTQLLFSHEEELSCLKEDLEIEHRIDIEK	644
Equus caballus	NYKIKLEMLEREKNAVLDRMAESQEAELERLRTQLLFSHEEELSCLKEDLEIEHRINIEK	652
Bos_taurus	NYKIKLEMLEREKNAVLDRMAESQEAELERLRTQLLFSHEEELSCLKEDLEIEHRINIEK	658
Rhinatrema_bivittatum	NYKIKLEMLEREKDENVLDRMAESQEAELERLRTQLLFSHEEELSCLKREDLEQEHRANTEK	702
Xenopus_tropicalis	NYKIKLDMLEREKDAVLDRMAESQEAEFEKLRTHFLFSQEEELSCLKREDLTREHSNTEN	656
Danio_rerio	NYKIKLDMLEREKDAVLDRMAESQEAELERLRTQLLFSHEEELTRLREDLOMENLNINEN	613
670.....680.....690.....700.....710.....720	

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* : : : * : : : : : : : : : : * : : * : : * : : : : : : : : : :
Pavo_muticus      LKDNLMHHKQQLDGVKKEMSKIEAMOLEKDNLITKQNLMLLEISKLKDLQOSIVNSK- 715
Pavo_cristatus    LKDNLMHHKQQLDGVKKEMSKIEAMOLEKDNLITKQNLMLLEISKLKDLQOSIVNSK- 715
Gallus_gallus     LKDNLMHHKQQLDGVKKEMSKIEAMOLEKDNLITKQNLVLEISKLKDLQOSIVNSK- 715
Mus_musculus      LKDNLGIHYKQQIDGLQNE MNRMESMOCETDNLITQONQLILENSKLRLDQOECLVNSK- 674
Rattus_norvegicus LKDNLGIHYKQQIDGLQNE MNRMETMOCETDNLITRQNLILENSKLRLDQOEHLVNSK- 693
Homo_sapiens      LKDNLGIHYKQQIDGLQNE MSQKIETMFEKDNLITKQNLILEISKLKDLQOSLVNSK- 713
Pan_troglodytes   LKDNLGIHYKQQIDGLQNE MSQKIETMFEKDNLITKQNLILEISKLKDLQOSLVNSK- 713
Macaca_mulatta    LKDNLGIHYKQQIDGLQNE MSQKIETMFEKDNLITKQNLILEISKLKDLQOSLVNSK- 713
Callithrix_jacchus LKDNLSIHYKQQIDGLQNE MSQKIETMFEKDNLITKQNLILEISKLKDLQOSLVNSK- 710
Canis_lupus_familiaris LKDNLGIHYKQQIDGLQNE MSQKIETMFEKDSLITKQNLILEISKLKDLQOSLMNSK- 703
Equus_caballus    LKDNLGIHYKQQIDGLQNE MSQKIETMFEKDNLITKQNLILEISRLKDLQOSLVNSK- 711
Bos_taurus        LKDNLGIHYKQQIDGLQNE MSQKIETMFEKDNLITKQNLILEISKLKDLQOSLVNTK- 717
Rhinatrema_bivittatum LKGNLTLSKQQLDDIQNE MSQKIETMFEKDSLITKQNLMLLEISQLNNLQOSIVNSK- 761
Xenopus_tropicalis LKQNLTKFRQQLDNMMDHMDNTISITMSEKDTLVTKQNNLMLEISKLKDLLQSVGDPQ- 715
Danio_rerio       LRDEINTKHQAIEHLQNLSDALKNMREKESLQONIQHLSTENIHLHQEIEKQKNTFS 673
.....730.....740.....750.....760.....770.....780

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. . : : : * : : : . : : . : : : : : : : : : : : : : : :
Pavo_muticus      --SEEMTLQIHELQKEIEVLROEEKEKGTLEQEIQLKTELMOQOMRETEDSLQNKCS 773
Pavo_cristatus    --SEEMTLQIHELQKEIEVLROEEKEKGTLEQEIQLKTELMOQOMRETEDSLQNKCS 773
Gallus_gallus     --SEEMTLQIHELQKEIEVLROEEKEKGTLEQEIQLKTELMOQOMRETEDSLQNKCS 773
Mus_musculus      --SEEMNLQINELQKEIEILKQEEKEKGTLEQEVQELQKTEQLEKQLEKEDDLQEKCA 732
Rattus_norvegicus --SEEMNLQINELQKEIEILRREEKEKGSLEQEVQELQKTEQLEKQLEKEDDLQEKCA 751
Homo_sapiens      --SEEMTLQINELQKEIEILRREEKEKGTLEQEVQELQKTELLEKQOMKEKENDLQEKFA 771
Pan_troglodytes   --SEEMTLQIDELQKEIEILRREEKEKGTLEQEVQELQKTELLEKQOMKEKENDLQEKFA 771
Macaca_mulatta    --SEEMTLQINELQKEIEILRREEKEKGTLEQEVQELQKTELLEKQOMKEKENDLQEKFT 771
Callithrix_jacchus --SEEMTLQINELQKEIEILRREEKEKGTLEQEVQELQKTELLEKQOMKEKENDLQEKFI 768
Canis_lupus_familiaris --SEEMTLQINELQKEIEILRREEKEKGTLEQEVQELQKTELLEKQOMKEKEDDLQEKFT 761
Equus_caballus    --SEEMTLQINELQKEIEVLROEEKEKGTLEQEVQELQKTELLEKQOMKEKEDDLQEKFA 769
Bos_taurus        --SEEMTLQINELQKEIEILRREEKEKGTLEQEVQELQKTELLEKQOMKEKEDDFQEKFA 775
Rhinatrema_bivittatum --SEAMTLQISELQKEIETLRKEEKEKGTLEQEAQELQKVDLLQKEIKDKEDNFSGKQFV 819
Xenopus_tropicalis --SEEMMIQMNELQKDLQPYRREEKEKETTEQDFQMLQKIKLLEKEVKEK-DTLSEQIA 772
Danio_rerio       FAERNFEVNYQELKEEYTCLANAKLQLEERLAKGSMQAKANGAVEKHTLMEKLEKENK 733
.....790.....800.....810.....820.....830.....840

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. * . * . : : : : : : : : : : : : : : : :
Pavo_muticus      ELETQNNLLQGENKTLEEKLSMLVISEEN-VILNDSVSSKAENLDVOKRIENLITENEQ 832
Pavo_cristatus    ELETQNNLLQGENKTLEEKLSMLVISEEN-VILNDSVSSKAENLDVOKRIENLITENEQ 832
Gallus_gallus     ELETQNNLLQGENKTLEEKLSMLVISEEN-VILNDSVSSKSENLDVOKRIESLITENEQ 832
Mus_musculus      QLEAENNILKEEKRVLKEDKLMYSPSEQERSIAVDPSTSKSADSRWQKEVAMLRKETED 792
Rattus_norvegicus QLEAENSVLKDEKKALEDMLKMYTPLDQEDPSTRKSEDPWQKEVGMRLKENED 805
Homo_sapiens      QLEAENSILKDEKKTLEDMLKIHTPVSEERLIFLDSIKSKSKDSVWEKEIEILTEENED 831
Pan_troglodytes   QLEAENSILKDEKKALEDMLKIHTPVSEERLIFLDSIKSKSKDSVWEKEIEILTEENED 831
Macaca_mulatta    QLEAENSILKDEKKALEDMLKIHTPDNQEERLIFLDSIKSKSKDSVWEKEIEILTEENED 831
Callithrix_jacchus QLEAENSILKDEKKALEDMLKIHTPINQEERLIFLDSIKSKSKDSVWQKEIEILTEENED 828
Canis_lupus_familiaris QLETENSTLKDEKKALEDMLKMYTPVNQEE-LIFLDSIKSKSQCKWQKEIEILTEENED 820
Equus_caballus    QLEAENSILKDEKKALEDMLKMYTPVNQEERLIFLDSIKSKPKDCSCQKEIEILTEENED 829
Bos_taurus        QLEAENSILKDEKKALEDMLKIHTPVNEERLTFIDSTKSQSKDCRWQKEIEILTEENED 835
Rhinatrema_bivittatum VLKEENKVLKDENTALHEKLNVDVTHHN---LTCIESDSRSQYLDLQKQVEIISVESEQ 876
Xenopus_tropicalis SQKVDIRILRDENNTLQATLKNYN-----IIGSVSDQGDDRNSELRNEMEKLTLLENKQ 825
Danio_rerio       SLSERIIILERERAVQTHMHHSIRCARADDTHTSLTHTDAQDHPALALPPQLTRGDVQ 793
.....850.....860.....870.....880.....890.....900

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      .      :      :      *      .      :      :      :      :      *      .      :      :
Pavo_muticus      LKKQNIQLQEDTE-----RQKSAFLSTEKELEANYRGLQKECESLLKAKNVLEENMN      884
Pavo_cristatus    LKKQNIQLQEDTE-----RQKSAFLSTEKELEANYRGLQKECESLLKAKNMLEENMN      884
Gallus_gallus     LKKQNIQLQEDTE-----RQKSAFLSTEKELDANYKGLQKECESLLKAKNVLEENMN      884
Mus_musculus      LQQQCLYLNEEIE-----KQKNTFAFAEKNFEVNYQELQREYTCLLKIRDLEATQT      844
Rattus_norvegicus LQQQCLHLSEEIE-----KQKNTFAFAEKNFEVNYQELQREYTCLLKIRDLEDITLA      857
Homo_sapiens      LKQQCIQLNEEIE-----KQKNTFSFAEKNFEVNYQELQEEYACLLKVKDDLEDSDKN      883
Pan_troglodytes   LKQQCIQLNEEIE-----KQKNTFSFAEKNFEVNYQELQEEYACLLKVKDDLEDSDKN      883
Macaca_mulatta    LKQQCIQLNEEIE-----KQKNTFSFAEKNFEVNYQELQEEYACLLKVKDDLEDSDKN      883
Callithrix_jacchus LKQQCIHLNEEIE-----KQKNTFSFAEKNFEVNYQELQEEYACLLKVKDDLEDSDKN      880
Canis_lupus_familiaris LKKQCIQLTEEIE-----KQKNTFSFAEKNFEVNYQELQEDYACLLKVKTDLEDSDKN      872
Equus_caballus    LRKQCIQLTEEIE-----KQKNTFSFAEKNFEVNYQELQEDYACLLKVKMDLEESKN      881
Bos_taurus        LKKQCIQLTEEIE-----KQKNTFSFAEKNFEVNYQELQEDYACLLKVKSDLEDSDKN      887
Rhinatrema_bivittatum LRMQNIQLKEEIE-----KQKNTFSFAEKNFEVNYQELQEEYTCLLKVKAELEEGRD      928
Xenopus_tropicalis LKKLEFTLKEELE-----RQKNTFSFAEKNFEVNFHELQEEYTCLLKIKNQLEDSDIT      877
Danio_rerio       TDGVCVMQPLEMDGAHAECRLQLEAQRISLTQIHAAQMELLRESVCVQLPSRQTHAHT      853
.....910.....920.....930.....940.....950.....960

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      :      :      :      *      .      :      :      :      :      :      :      :
Pavo_muticus      KLEAEYKIKLKALSEELHHLQSNRPVLFKSRTSSFEESN-ENKVFRADTHETGEVVEKDA      943
Pavo_cristatus    KLEAEYKIKLKALSEELHHLQSNRPVLFKSRTSSFEESN-ENKVFRADTHETGEVVEKDA      943
Gallus_gallus     KLEAEYKIKLKALSEELHHLQSNRPVLFKSRTSSFEESN-ENKVFRADTHETGEVVEKDA      943
Mus_musculus      KQALEYESKLRALAEELLSKRGNPAP-KGKSSG-----IFPSETLEIGEVEKDT      894
Rattus_norvegicus KQALQYESKLSALEEELHSQRGSPTTPPKGENSGFAA-----NRTFPLEPLEVGEVVEKDT      913
Homo_sapiens      KQELEYKSKLKALNEELH-LQKINPTTVKMKSSVFDE-----DKTFVAETLEMGEVVEKDT      938
Pan_troglodytes   KQELEYKSKLKALNEELH-LQKINPTTVKMKSSVFDE-----DKTFVAETLEMGEVVEKDT      938
Macaca_mulatta    KQELEYKSKLKALNEELH-LQKINPTTVKMKSSVFDE-----DKTFVAETLEMGEVVEKDT      938
Callithrix_jacchus KQELEYKSKLKALNEELH-LQKINPVPVKMKSSVFDE-----DKTFVAETLEMGEVVEKDT      935
Canis_lupus_familiaris KQEVYKSKRLKTLSEELHHLQKINPTILKMKSSVFDD-----DKTYIGEPLETVEVVEKDT      928
Equus_caballus    KQEVYKSKLKALSEELHHLQKINPTIVKMKSSVIDD-----DKAFIAEPLIEIGEVEKDT      937
Bos_taurus        KQEIYKSKLKALSEELHHLRRINPSIVKMKSSVFDD-----DKTFIAEPLIEIGEVEKDT      943
Rhinatrema_bivittatum KQELEYESKLTNLNEELQFLRTNKHAFEMKSTVLED-----HKDIFDAFESGEVVEKDT      983
Xenopus_tropicalis KKEEYESIKLNSLNKELAKLKGISAEHPALQDIKDEVPGASELVKIDALEVGEVVEKDT      937
Danio_rerio       HTQEEFGARSADLPSQCSAQLOETHQELHKLNTHS-----QTLMEETLQQSHSTPSVC      908
.....970.....980.....990.....1000.....1010.....1020

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      :      *      .      :      :      :      :      :      :      :      :      :      :
Pavo_muticus      TELMEKLEVTQREKLELSRLSDLSEQLKSKHSEVCLLSEKVKSLKDEKERVLAKEKELE      1003
Pavo_cristatus    TELMEKLEVTQREKLELSRLSDLSEQLKSKHSEVCLLSEKVKSLKDEKERVLAKEKELE      1003
Gallus_gallus     TELMEKLEVTQREKLELSRLSDLSEQLKSKHSEVCHLSEKVKSLKDEKEKVLAKKELE      1003
Mus_musculus      TELMEKLEVTKREKLELSEKVSGLSEQLKQTHCTINSLSAEVRALKQEKELLLRCGELE      954
Rattus_norvegicus TELMEKLEVTRREKLELSEKVSGLSEQLKQTHGTIDSLSEVRALKQEKELLLRCGELE      973
Homo_sapiens      TELMEKLEVTKREKLELSQRLSDLSEQLKQKHGEISFLNEEVKSLKQEKQVSLRCRELE      998
Pan_troglodytes   TELMEKLEVTKREKLELSQRLSDLSEQLKQKHGEISFLNEEVKSLKQEKQVSLRCRELE      998
Macaca_mulatta    TELMEKLEVTKREKLELSQRLADLSEQLKQKHGEISFLNEEVKSLKQEKQVLLRCRELE      998
Callithrix_jacchus TELMEKLEVTKREKLELSQRLSDLSEQLKQKHGEISFLNEEVKSLKQEKQVLLRCRELE      995
Canis_lupus_familiaris TELMEKLEVTKREKLELSERLSDLSEQLKQKHGEISFLSEKVKSLKQEKQVLLRCRELE      988
Equus_caballus    TELMEKLEVTKREKLELSERLSDLSEQLKQKHGEISFLSEEVKSLKQEKQVLLRCRELE      997
Bos_taurus        TELMEKLEVTKREKLELSERLSDLSEQLKQKCDKISFLTEEVKSLKQDKQVLLRCRELE      1003
Rhinatrema_bivittatum TELMEKLEVAQREKLELTLLRLDLSEQLKQKQNEINQLENEIKSLMEDKEHVIVKCKELE      1043
Xenopus_tropicalis TELMEKLEIAQRDKKELSLKLFDLSEQMLKQNEINQLEKHVKSICQERDNALSDLOKQE      997
Danio_rerio       APLRADLLQCVQDEECVSDAQRWSEVSDGVQDHQRRLETHIAKVIVMSVEFAQQTETE      968
.....1030.....1040.....1050.....1060.....1070.....1080

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:
Pavo_muticus      FIISHAKRENISNTEPKTKCFKGKALETASPACESESRNKTSAPSNEVGEGVNVRENLGSGK 1063
Pavo_cristatus    FIISHAKRENISNTEPKTKCFKGKALETASPACESESRNKTSAPSNEVGEGVNVRENLGSGK 1063
Gallus_gallus     FIVSHAKRENISNTEPKTKCFKGKARETATPPYESRKNKTSAPSNEVGEGM-VRENLGSGK 1062
Mus_musculus      LLANPSGTENAAVCPVQMSYQAGLVMGKVGDSG-----GSISKISKDLAE 1000
Rattus_norvegicus LLTNANGTENASVCPVQRSFYQAGPVMGTVRDSQ-----GPISKVSEDLA 1019
Homo_sapiens      IIINHNRANENVQSCDTQVSSLLDGVVTMTSRGAE-----GSVSKVNSKFGE 1044
Pan_troglodytes   IIINHNRANENVQSCDTQVSSLLDGVVTMTSRGAE-----GSVSKVNSKFGE 1044
Macaca_mulatta    IIINHNRAGNVQSCDTQVSSLSGDGVVTMTSRDAE-----GSVSKVNSKFGE 1044
Callithrix_jacchus IIINHNRANIQSCDTQVSSLSGDGVVTMTSRDAE-----GSISKVNSRFGE 1041
Canis_lupus_familiaris IIINHNRKRTENINVCDQDLSKDGVMITITSKDSG-----GSISKINKDCGE 1034
Equus_caballus    IIINHNRKNTENVNVCDVQLKSLRERVVTMTSGESG-----GPISKINKDFGE 1043
Bos_taurus        IIIDHSRTENVNVHDVHLSLKDGVV--ASRDPG-----GSVPKINKDFGK 1047
Rhinatrema_bivittatum MMHHCNQSEYVTAFEQEKEMTLGEVFPVFNKKSFDCKEEFR----REAKLQSPFSNSDQ 1098
Xenopus_tropicalis KVIGVKETLSAQSDKKTLDNRLGIMSNEEIDKCNISLAEEILIN----EAEEREDIQHLN 1053
Danio_rerio       RISKQTRRETSTGMQNTENSQEEEEHRTWTSKREQ-----ELQMQKDREDDTE 1016
.....1090.....1100.....1110.....1120.....1130.....1140

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:
Pavo_muticus      TISHRVTKVQEVQMSKPEQPAFVEHLHEMTDRLTDETSLIAITQTANNHLOQQVNTILKS 1123
Pavo_cristatus    TISHRVTKVQEVQMSKPEQPAFVEHLHEMTDRLTDETSLIAITQTANNHLOQQVNTILKS 1123
Gallus_gallus     AISHQVTEVQEVQMSKPEQPAFVEHLHEMTDRLTDETSLIAITQTANNHLOQQVNTILKS 1122
Mus_musculus      ESKPMIEDKIPFK-----ESGREQLLLPTR---AQKPSHATVEPCESEKLQQLHALKA 1051
Rattus_norvegicus ESKPMIEDKIPFK-----ESGREPLLLPTR---TKKPSRVITVEPCESEKLQQLYALKA 1070
Homo_sapiens      ESKIMVEDKVSFENMTVGESKQEQILDLHPLSVTKESSLRATOPSENDKLOKELNVLS 1104
Pan_troglodytes   ESKIMVEDKVSFENMTVGESKQEQILDLHPLSVTKESSLRATOPSENDKLOKELNVLS 1104
Macaca_mulatta    ESKIMVEDKVSFENMTTGKESKQEQILDLHPLSVTKESSLRATOPSENDKLOKELNVLS 1104
Callithrix_jacchus ESKIMVEDKVSFGNMTAGKQSKQEQILDFHPLSVTKESSLRATEPSENDKLOKELNVLS 1101
Canis_lupus_familiaris ESKIMEEYKIPFENTTVGKESKQEQFLDLHPLVRNGSLGTEPNTNDKLOWELSVLS 1094
Equus_caballus    ESKMMKEDKISFENMTIGTESKQEQVLVSLHPLSATNESLPEPTEPSEKDKLOQELSVLS 1103
Bos_taurus        ESKIMEVKNIPFENMTLEKESKQEQ-FSAHLPSVTINESSLGITDPGENDKLOQELSALS 1106
Rhinatrema_bivittatum HETIESHDLQENLDLIEENQSLDLRLHELTSKLAGEILLIVRIQSENHELKHLLELLQL 1158
Xenopus_tropicalis NCSLSHLSAETHVSKVEKESEPHIQKLHELKSVIKETESPLLVRTQKERDSLQOELATLHA 1113
Danio_rerio       KQHLFPHMQSCSTQQTQKDEEEFAEVRGHRGSRVTSQPSGEEPESLSSDDITERDLRL 1076
.....1150.....1160.....1170.....1180.....1190.....1200

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:
Pavo_muticus      EQ-----ADLQLOMEAQRICLSLVYSAHVDQVREHLKEEK 1158
Pavo_cristatus    EQ-----ADLQLOMEAQRICLSLVYSAHVDQVREHLKA 1158
Gallus_gallus     EQ-----ADLQLOMEAQRICLSLVYSAHVDQVREHLKA 1157
Mus_musculus      EQ-----DDLRLQMEAQRICLFFVYSTHADQVRAHMEKER 1086
Rattus_norvegicus EQFSPCREIESELLQLFLMLTPVHFKDDLRLQMEAQRICLFFVYSTHADQVRAHMEKER 1130
Homo_sapiens      EQ-----NDLRLQMEAQRICLSLVYSTHVDQVREYME 1139
Pan_troglodytes   EQ-----NDLRLQMEAQRICLSLVYSTHVDQVREYME 1139
Macaca_mulatta    EQ-----NDLRLQMEAQRICLSLVYSTHVDQVREYME 1139
Callithrix_jacchus EQ-----NDLRLQMEAQRICLSLVYSTHVDQVREYME 1136
Canis_lupus_familiaris EQ-----NDLRLQMEAQRICLSLVYSTHVDQVREYME 1129
Equus_caballus    EQ-----NDLRLQMEAQRICLSLVYSTHVDQVREYME 1138
Bos_taurus        EQ-----NDLRLQMEAQRICLSLVYSTHVDQVREYME 1141
Rhinatrema_bivittatum EQ-----SDLRLQMEAQRISLTQVYSVHLELVREHVOKEK 1193
Xenopus_tropicalis AQ-----ADMKLHLEAQQLSLTLIHNAQIELINENLOKOK 1148
Danio_rerio       VNAG-----LRRVLMFVLKTTAAAEQTIGTHVEAILEASSRGO 1114
.....1210.....1220.....1230.....1240.....1250.....1260

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<i>Pavo muticus</i>	ESELCSLKEELIRSHLQEMNDLKVVHOMELQTMKIOPADDEVSSSORLIEKLNEAITEEC	1218								
<i>Pavo cristatus</i>	ESELCSLKEELIRSHLQEMNDLKVVHOMELQTMKIOPADDEVSSSORLIEKLNEAITEEC	1218								
<i>Gallus gallus</i>	ESELCSLKEELIRSHLQEMNDLKVVHOMELQTMKIOPADDEVSSSORLIEKLNEAITEEC	1217								
<i>Mus musculus</i>	EEALCSLKDELISAQOKKIDELHMHQCOLNFKIQETG--DEPLQVLIERLQKAVSEKC	1144								
<i>Rattus norvegicus</i>	EEALCSLKDELVSAQOKKIDELHMHQCOLNFKIQETG--NEPLQVLIERLQKAVSEKC	1188								
<i>Homo sapiens</i>	DKALCSLKEELIFAQEEKIKELQKIHQLELQTMKTOETGDEGKPLHLLIGKLQKAVSEEC	1199								
<i>Pan troglodytes</i>	DKALCSLKEELIFAQEEKIKELQKIHQLELQTMKTOETGDEGKPLHLLIGKLQKAVSEEC	1199								
<i>Macaca mulatta</i>	DKALCSLKEELISAQEEKIKELQKIHQLELQNTKTOETGDEGKPLHLLIGKLKRVSEEC	1199								
<i>Callithrix jacchus</i>	DKALCSLKEELISAQEEKIKELQKIHQLELQNTKTEETGDEAKPLHLLIGKLKRVSEEC	1196								
<i>Canis lupus familiaris</i>	DKALCSLKEELISAQEEKIKELQEIHQLELQNIKAQETGGKAKPLMLIGKLKRVSEEC	1189								
<i>Equus caballus</i>	GKALCSLKEELISAQEEKIKELEKRHOLELQNIKTQETGDEVKSLQVLVGVKLRKAVSEEC	1198								
<i>Bos taurus</i>	DKALCSLKQELISAQEEKIKELQKIHQLELQNIKTQETG-EVKPLMLIGKLHKAVSEEC	1200								
<i>Rhinatrema bivittatum</i>	ENELCSLRVELVITQEKEMQELQKLYQOEILDLRQADDEAKSSQKLIKLRKTVSEEC	1253								
<i>Xenopus tropicalis</i>	ENELCSLKKEMLKIQELKIKELHDVHQELQALQLOQTGGDTKSCOVLLIDLNKRISDER	1208								
<i>Danio rerio</i>	QSNTDASSEGFLSRDVAADRLRMFSADTEIDEGLETSLKDAQELQQAELQLEREFFQ	1174								
	.....1270.....1280.....1290.....1300.....1310.....1320								

	:	:	:	.	.	.	:	:	:
Pavo_muticus	SRLTQIFCDSWNEKS	STVIEAGDEGKIDIFNR--PAAEKENLDVELTTHRGOIQAMOEHME	1276						
Pavo_cristatus	SRLTQIFCDSWNEKS	STVIEAGDEGKIDIFNR--PAAEKENLDVELTTHRGOIQAMOEHME	1276						
Gallus_gallus	SRLTQIFCDSWNEKS	STVIEATGDKEODIFSR--PAAEKENLDMELTRHRGOIQAMOEHME	1275						
Mus_musculus	FHISKILNNVFDECYTP-LKCEMNIEEKENS--GVYTSONQSPELREYRYEVODFOENMQ	1201							
Rattus_norvegicus	FHISKILNNVFDECYTP-LKCEMNIEEKENS--GVYTSONQSPELREYRYEVODFOENMQ	1245							
Homo_sapiens	SYFLOTLCISVLGEYYTPALKCEVNAEDKENS--GDYISENEDPELODYRYEVODFOENMH	1257							
Pan_troglodytes	SYFLOTLCISVLGEYYTPALKCEVNAEDKENS--GDYISENEDPELODYRYEVODFOENMH	1257							
Macaca_mulatta	SYFLOTLCISVLGEYYTPALKCEVNAEDRENS--GDYTSENEDSELODYRYEVODFOENMH	1257							
Callithrix_jacchus	SYFSQTLCNVLGEYYAPILKYEVNAERESS--CDYTSGNEDPELODYRDEVODFOENMY	1254							
Canis_lupus_familiaris	SYFTQTFCNVLGEHYTPALKCEVNVEERESS--GVHTSENQELELODYKYEVDFOENMQ	1247							
Equus_caballus	SYFAQTFGNVLGERYPVLKCEVDGEERENC--DVHTSENQELELODYRYEVODFOENMQ	1256							
Bos_taurus	AHFTQTFCNVHGHEHYTPALKCEVNGEEKETS--GVHSSENQEQLVLQDYRCEVDFOENMH	1258							
Rhinatrema_bivittatum	SWLSQFLFSAVGEEKCIAIVKCEITVGDKETSNTAADKRACDPTDVNIHIMEAVLQTNMQ	1313							
Xenopus_tropicalis	DHIENIRRSFLEKKLENIDGTENTIESSSQE-----SSYPVALEHHLTQVOTKYTQMT	1261							
Danio_rerio	TISISTRLQSAVEKLIIAITEISTOLEHARIT-----QTELLREKFRHNEEMELLRRQE	1228							
1330.....1340.....1350.....1360.....1370.....1380								

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Pavo_muticus	ALLHKILEEYSRLRALQ	TQLMKDCKQ	-VKEPWLSSSEPERRKEEESNYLETRKESLHAS	1335
Pavo_cristatus	ALLHKILEEYSRLRALQ	TQLMKDCKQ	-VKEPWLSSSEPERRKEEESNYLETRKESLHAS	1335
Gallus_gallus	ALLHKILEEYSRLKALQ	TQLVKDCKQ	-VKELWLSSSEPERRKEEESNCLERKESLHAS	1334
Mus_musculus	VLLGKVITECKRLSLG	LTRLGKIHQ	-QTDGVALEFAEQNAAEFEAGLLSGCSQSLQS	1259
Rattus_norvegicus	ILLGKVITECKSKLLVL	QTRLNKINEQ	-QVDGVTFEFAEENVAEVEAGLLSGRSQSLQG	1303
Homo_sapiens	TLLNKVTEEYNKLLVL	QTRLSKIWGO	-QTDGMKLEFGEENLPKEETEFLSIHSQMTNLE	1315
Pan_troglodytes	TLLNKVTEEYNKLLVL	QTRLSKIWGO	-QTDGMKLEFGEENLPKEETEFLSIHSQMTNLE	1315
Macaca_mulatta	TLLNKVTEEYNKLLVL	QTRLSKIWGO	-QTDGMKLEFGEENLPKEETKFLSIHSQMTSLE	1315
Callithrix_jacchus	TLLNKVTEEYNKLLVL	QARLSKIWGO	-QTDGMKLEFGEENLPKEETEFLSIRSQMTSLE	1312
Canis_lupus_familiaris	TLLNKVTEEYNKLLVL	QTRLSKIQGR	-QTEDEVKLKFAEENLPKEETEFLS-ASQMTSLQD	1305
Equus_caballus	TLLNKVTEEYNKLLVL	QQLSKLQGG	-QTDDEVKLEFAEENLPNEETEFLSTHSQMTNLQ	1314
Bos_taurus	TLLSKAAEAYSRLVVL	QSRLSKIERQ	-QACNMKLGFAEENLPKKQTDFLSTHPQMTNSQ	1316
Rhinatrema_bivittatum	TLMDNIIIEYNRLMALH	QTLTDFKK	-IENLQTLYTELEHRKEEDITNLRMQIESSRACS	1372
Xenopus_tropicalis	NFLEYFLKEYKQ	TINCYSNLEIERA	QTRDDLDVTITTESLTTKHSPVAGIVDVQGAATS	1321
Danio_rerio	ELQERVCEERAREQ	LALHRAEGLID	QYSERRALEQVCERAEQLHLEQELQVHS	1287
1390.....1400.....1410.....1420.....1430.....1440			

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Pavo_muticus      QSLMDPKIHEHCWK-----EMENVKTQLEEQHQAQAVEHLRSYFQQQLKSEERY 1384
Pavo_cristatus    QSLMDPKIHEHCWK-----EMENVKTQLEEQHQAQAVEHLRSYFQQQLKSEERY 1384
Gallus_gallus     HNLMDPKIHELCKW-----EMENVKTQLEEQHQAQAVEHLRSYFQQQLKDSEVRY 1383
Mus_musculus      ---TDVSLESKVSS-----LPASEKSRCECEROVQELQSPVAAGQLQLTETEA 1305
Rattus_norvegicus ---ADVSHESKVS-----EYERQVQELQSLVAAGQLQLKETEANY 1340
Homo_sapiens      --DIDVNHKSKLSS-----LQDLEKTK-LEEQVQELSLISSLQQQLKETEONY 1361
Pan_troglodytes   --DIDVNHKSKLSS-----LQDLEKTKOLEEQVQELSLISSLQQQLKETEONY 1362
Macaca_mulatta    --DSDVNHKSKLSS-----LQHLEKTEQLEEQVQELSLISSLQQQLKETEQSY 1362
Callithrix_jacchus --DIDVSHKSKLSS-----LQDFEKTKRLEEQVQELSLISSLQQQLKETEONY 1359
Canis_lupus_familiaris I-DIDVSHKSKLST-----LQDSEKIKOLEGQVQELNLISSLQQQLKETE VNY 1353
Equus_caballus    --DIDVSHKSKLST-----LQDMEKIKOLEGQVQELNLISSLQQQLKETEENY 1361
Bos_taurus        --DIDVSHKSKLST-----LQDTEKTKOLEGQVHELESRVSSLQQQLKETEENY 1363
Rhinatrema_bivittatum QDLIDLKEQLKIRSSCLEETIEKQKMEFSRQRGQLEEQHQAQDVEHRSYFQQQLKETEERY 1432
Xenopus_tropicalis QSEEVEKLMKMFSSH-----QRAQLEEKHSQETIEHLRFYFQQQLKENEERY 1366
Danio_rerio       -----TRLQLEEQERCSLLEHTELMSRQDAMRD 1316
.....1450.....1460.....1470.....1480.....1490.....1500

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Pavo_muticus      TAEIALLDQKLSDEVSSDYTSISPESQMKLKES----- 1418
Pavo_cristatus    TAEIALLDQKLSDEVSSDYTSISPESQMKLKES----- 1418
Gallus_gallus     TAEIAHLQDKLRSEEVSSDYTSISAESQMKLKES----- 1417
Mus_musculus      RAETESLQQRLEAVSEAPVQPSLSIDSVVFKGSG----- 1339
Rattus_norvegicus RAEIQCLQERLQAVSEATVQPSLSMDSVVFKGSG----- 1374
Homo_sapiens      EAEIHCLQKRLQAVSESTVPPSLPVDVSVVITESD----- 1395
Pan_troglodytes   EAEIHCLQKRLQAVSESTVPPSLPVDVSVVITESD----- 1396
Macaca_mulatta    EAEIHCLRKRLQAVSESTVPPSFPVDVSVVITESD----- 1396
Callithrix_jacchus NAEIHCLQKKLQAVSESTVPPSFSIDSVVITESD----- 1393
Canis_lupus_familiaris GAEIHCLQERLQAVSESTVQPSFSIDSMVITESD----- 1387
Equus_caballus    EAEIHGLQERLQAMSESTIQPSFSVDSMTITESD----- 1395
Bos_taurus        EAEIHSQERLQAVNESAVQPSFFVDVSVVITESD----- 1397
Rhinatrema_bivittatum TTEIIHLQERLQDVSEPALQFRRLAESLVSSDQEKTESPDNIYTSSEEDVLELDEMKLVEA 1492
Xenopus_tropicalis TTEIIHLQEHQNVSETSLDFREL SKMQPGVEVGLYEAIDFKITLSTQVTATLKMDEQGV 1426
Danio_rerio       SAGGGPELRLVEAALDAAPEADLLEETEKLLQEK----- 1350
.....1510.....1520.....1530.....1540.....1550.....1560

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Pavo_muticus      ----- 1418
Pavo_cristatus    ----- 1418
Gallus_gallus     ----- 1417
Mus_musculus      ----- 1339
Rattus_norvegicus ----- 1374
Homo_sapiens      ----- 1395
Pan_troglodytes   ----- 1396
Macaca_mulatta    ----- 1396
Callithrix_jacchus ----- 1393
Canis_lupus_familiaris ----- 1387
Equus_caballus    ----- 1395
Bos_taurus        ----- 1397
Rhinatrema_bivittatum GPVKSSQSGPIQQLQTLRQVLHTKYTEEVNALKKQHSEELQLIANLKLHSLNLAALREE 1552
Xenopus_tropicalis GGKPKVKPSGSIYHQLOTLRQAFVARYLEEVSALKKQHEAELIQLRDLGKYYQENATL 1486
Danio_rerio       ----- 1350
.....1570.....1580.....1590.....1600.....1610.....1620

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Pavo_muticus      -FRKVKCTENPHQPR-----DVALELANEIEEMKNDLDVVQLLEKQYQERLEEEI AKVIVS 1473
Pavo_cristatus    -FRKVKCTENPHQPR-----DVALELANEIEEMKNDLDVVQLLEKQYQERLEEEI AKVIVS 1473
Gallus_gallus     -FRKVKCTENPHQGE-----DVALELANEIEEMKNDLDVVQLLEKQYQERLEEEI AKVIVS 1472
Mus_musculus      -AQKPVYCGSCLRECV-----DGTAKFSDRFEVRQETNMVNLMEKQYQERLEEEI AKVIVS 1394
Rattus_norvegicus -AQKPVYCGSCLREQV-----DGTAEFSDGFEVRQETNMVKLMEKQYQERLEEEI AKVIVS 1429
Homo_sapiens      -AQRTMYPGSCVKKNI-----DGTIEFSGEFGVKEETNIVKLLEKQYQERLEEEI AKVIVS 1450
Pan_troglodytes   -AQRTMYPGSCVKKNI-----DGTIEFSGEFGVKEETNIVKLLEKQYQERLEEEI AKVIVS 1451
Macaca_mulatta    -AQRTMYPGSCVKKNI-----DGTIEFSGEFGVKEETNIVKLLEKQYQERLEEEI AKVIVS 1451
Callithrix_jacchus -AQRTMYPGSCVKKNI-----DGTIEFS-----SEETNMVKLLEKQYQERLEEEI AKVIVS 1444
Canis_lupus_familiaris -VQKTIYPGSCVNQNI-----DGTIEFCNDFGVKEETNVVKLLEKQYQERLEEEI AKVIVS 1442
Equus_caballus    -IQKTVYPGSCCLKQNI-----DGTIEFSGEFGVKEETNMVTLLEKQYQERLEEEI AKVIVS 1450
Bos_taurus        -VQKATYPAGCLEQNI-----DGAAEYSGEFGVKEETNMVKLLEKQYQERLEEEI AKVIVS 1452
Rhinatrema_bivittatum IVQLTKYKQENLNGAFR---TASLLLAGDLEEKEHMDIVQLLEKRYQEKVEEEI AKVIVE 1609
Xenopus_tropicalis KEQIKLLTKAEQEDPIGNIQKLQRSFVNDTEGKTPADVNLLEERYQERIQEEV AKVIVE 1546
Danio_rerio       ----VEVQRQAQKQSS-----ELQAQVKQLEAQLEEQQMRLQEQLQRSQEEDLQQ 1398
.....1630.....1640.....1650.....1660.....1670.....1680

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Pavo_muticus      LSVAFAKQSELSR-----IARQKKEETQAQVHQQGMRFEMKRECSIEEVDG PLKKA 1525
Pavo_cristatus    LSVAFAKQSELSR-----IARQKKEETQAQVHQQGMRFEMKRECSIEEVDG PLKKA 1525
Gallus_gallus     MSVAFAKQSELSR-----IARQKKEETQTQIEHRQGMHFEMRRECSIEEVDG PLKKA 1524
Mus_musculus      MSIAFAQQTELSR-----LSEKENTIQSEQAHTLCSN-KHQLNDIT-SQSOVGLQ 1444
Rattus_norvegicus MSIAFAQQTELSR-----LSEKENVIOSEQAHALCSN-EHHLNDIT-SQCOVGLQ 1479
Homo_sapiens      MSIAFAQQTELSR-----ISGGKENTASSKQAHAVCQQE-QHYFNMKLSQDQIGFQ 1501
Pan_troglodytes   MSIAFAQQTELSR-----ISGGKENTASSKQAHAVCQQE-QHYFNMKLSQDQIGFQ 1502
Macaca_mulatta    MSIAFAQQTELSR-----ISGGKENTTSSKQAHAVCHQEKQHYFNMKLSQDQTGFQ 1503
Callithrix_jacchus MSIAFAQQTELSRR-----ISGGKNTTSSQAHAHVCCQE-QRYFNERKLSQDQIPFQ 1496
Canis_lupus_familiaris MSIAFAQQTELSR-----ISGEKENTTLKQAHAFCCQE---LNEVKLSQG----Q 1487
Equus_caballus    MSIAFAQQTELTR-----ISGEKEDTSSKQAALCQQEERCLNEMKLSQGGQIGFQ 1502
Bos_taurus        MSIAFAQQTELSR-----ISGEKEDSPSS-EASTLCQEH--YLNEMKLSQGGQAGFQ 1501
Rhinatrema_bivittatum LSVAFAKQTELAR-----IARQKENVDDGKKCGKNEQDKNIEDKNITGQNTLLEKV 1661
Xenopus_tropicalis MTVAFAQKTELARLAAPIDGGTARFSKGSQGTGTGTIEMREDNKYQLCHGKEESLRPSES 1606
Danio_rerio       QIQALEKQTEENHR-----RFIDEQAADREHERDVFQEIFNLEQQKLNPTKTGTGSE 1450
.....1690.....1700.....1710.....1720.....1730.....1740

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Pavo_muticus      TEKSKHEELKSLCKELSEESGEMGLLG-EQLCSNSKSGYVLGQTTHESVTSEGLFSHVQG 1584
Pavo_cristatus    TEKSKHEELKSLCKELSEESGEMGLLG-EQLCSNSKSGYVLGQTTHESVTSEGLFSHVQG 1584
Gallus_gallus     TEKSKHEELKSLCKELSEESGEMGLLG-EQLCSNSQSGYVLRQTTRESVTSEERLFSHVQG 1583
Mus_musculus      TFEATDKNFKEEFKPLSKELGEYRKA--VPLSHDDLDLILKSEEHGLAISEEIFSKDET 1502
Rattus_norvegicus TVEATGKNLKEEFKPLSKELGEYRKA--VPLSNHDDLDDVLKSEEHGLTISEEIFSKDET 1537
Homo_sapiens      TFETVDVKFKEEFKPLSKELGEHGKE--ILLNSND-PHDIPESKDCVLTISEEMFSKDKT 1558
Pan_troglodytes   TFETVDVKFKEEFKPLSKELGEHGKE--ILLNSND-PHDIPESKDCVLTISEEMFSKDKT 1559
Macaca_mulatta    TFETVDVKFKEEFKPLSKELGEHGKE--ILLNSND-PDDIRESKDCVLTISEEMFSKDKT 1560
Callithrix_jacchus TFETVDVKFKEEFKPLSKELGEHGKD--VLLSNND-PDDMLETKDCVLTISEEMFSKDKT 1553
Canis_lupus_familiaris TFEAMEMKFKEEFKPLSKELGEDGTE--VLLNSNDNLDDILESKDRELTISEEMFSKDKT 1545
Equus_caballus    TFKAADMKFKEEFKPLSKELGEDGKE--VLLSNNDNLDDILELKDHELTISEEIFSKDKT 1560
Bos_taurus        TFEATDRKFKEEFKPLSKELGEDGKE--VLLSKDHLDDILESKDFELTISEEMSSKDKT 1559
Rhinatrema_bivittatum LKKKRDKHVSTEQQPSSEPGCVELVEQAVFQSNPEHPHPEQLLSHSDQDLMSVESFSKDK- 1720
Xenopus_tropicalis SSDRMHLQDGTVELNVCVTSYVTAVSTDITNTSLSQELNDDLHPKDQDKNVTVDSHFSEKT 1666
Danio_rerio       RRDREVQELSAALQEKSDRCSELLLS-----SEQLQRDVKDREETIQLAARVHQLQEH 1504
.....1750.....1760.....1770.....1780.....1790.....1800

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      .      : :      .      :::      : : : * : *      *:
Pavo_muticus      HTAEETLCNDVMAASDMETSSQLLIYEERLEDMRQELVRQYQEHQQATELLRQGHMQOME 1644
Pavo_cristatus    HTAEETLCNDVMAASDMETSSQLLIYEERLEDMRQELVRQYQEHQQATELLRQGHMQOME 1644
Gallus_gallus     HTAEETLCNNVVAASDMETSSQLLIYEERLEDMRQELVRQYQEHQQATELLRQGHMQOME 1643
Mus_musculus      FIVRKSMHDEVLVSS-MDTSRQLILN-EQLEDMRQELVRQYEEHQQATEMLRQAHMQOME 1560
Rattus_norvegicus FLVRNSSPDEVLVSN-MDTSRQLILN-EQLEDMRQELVRQYEEHQQATELLRQAHMQOME 1595
Homo_sapiens      FIVRQSIHDEISVSS-MDASRQLMLNEEQLEDMRQELVRQYQEHQQATELLRQAHMROME 1617
Pan_troglodytes   FIVRQSIHDEISVSS-MDASRQLMLNEEQLEDMRQELVRQYQEHQQATELLRQAHMROME 1618
Macaca_mulatta    FIVRQSIHDEISVSS-MDASRQLMLNEEQLEDMRQELVRQYQEHQQATELLRQAHMROME 1619
Callithrix_jacchus FIIRRESIHDEISVSS-IDASRQLMLNEEQLEDMRQELVRQYQEHQQATELLRQAHMROME 1612
Canis_lupus_familiaris FLVREPIHDEILVSS-MDASRQLMLNEEQLEDMRQELVRQYQEHQQATELLRQAHMROME 1604
Equus_caballus    FIARESIIHEEILVSS-MDASRQLMLNEEQLEDMRQELVRQYQEHQQATELLRQAHMROME 1619
Bos_taurus        FMVRESLHDEILVSS-MDASRQLMLNEEQLEDMRQELVRQYQEHQQATELLRQAHMROME 1618
Rhinatrema_bivittatum FILNNTVCNKLMSVSS-SETSGQLMLCEQRVEDMRQELVKLDQEHQQATEALRQAHMLOME 1779
Xenopus_tropicalis VVLKEEDYNRMLAMG-AENAKLRPLYEEHVEDMRQELVRLEQEHQQSVEALKYSHMEQLE 1725
Danio_rerio       LMHEVQEVQHVSMAG-----RVDVTLEAQLQTEREALDRKEKEIVNLEEQL 1551
      .....1810.....1820.....1830.....1840.....1850.....1860

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      :      : * :      * : : : * *      .      .      .
Pavo_muticus      RQKENQEQLLAELESCLKVLAERVSMENDNLAAERERMLLEELKSLRQHPVPGKEGLFRE 1704
Pavo_cristatus    RQKENQEQLLAELESCLKVLAERVSMENDNLAAERERMLLEELKSLRQHPVPGKEGLFRE 1704
Gallus_gallus     RQKENQEQLLAELESCLKVLAERVSMENDNLAAERERMLLEELKSLRQHPVPGKERLFCF 1703
Mus_musculus      RQREDQEQLQEEIKRLNEQLAKSSIDTEHVVSERERVLLLEEALQKPLAGRKELCCE 1620
Rattus_norvegicus RQREDQEQLQEEIKRLNQQLTORSSIDTEHVVSERERVLLLEEALQKRLSLAGRKELCCE 1655
Homo_sapiens      RQREDQEQLQEEIKRLNRQLAQRSSIDNENLVSERERVLLLEEALQKSLAGREKLCCE 1677
Pan_troglodytes   RQREDQEQLQEEIKRLNRQLAQRSSIDNENLVSERERVLLLEEALQKSLAGREKLCCE 1678
Macaca_mulatta    RQREDQEQLQEEIKRLNRQLAQRSSIDNENLVSERERVLLLEEALQKSLAGREKLCCE 1679
Callithrix_jacchus RQREDQEQLQEEIKRLNRQLAQRSSIDNENLVSDRERVLLLEEALQKSLAGREKLCCE 1672
Canis_lupus_familiaris RQREDQEQLQEEIKRLNRQLAQRSSIDNENLVSERERVLLLEEALQKSLAGREKLCCE 1664
Equus_caballus    RQREDQEQLQEEIKRLNRQLAQRSSIDNENLVSERERVLLLEEALQKSLAGREKLCCE 1679
Bos_taurus        RQREDQEQLQEEIKRLNEQLAQRSSIDNENLVSERERVLLLEEALQKSLAGREKLCCE 1678
Rhinatrema_bivittatum RQREDQEQLLAEELDRKLFQAKSALVSENLAEREKMLLEEALQKSLAGREKLCCE 1839
Xenopus_tropicalis RQMYDQEQLLSELHVMRAQLNVNASISS--QTSESEELLEFPQSPETENWAG---IVQD 1780
Danio_rerio       QFREELLENKSEEVNQLNMQLQIQSKEISRYQQLQTHNTLTQVLEEKERQISVLNQIQISK 1611
      .....1870.....1880.....1890.....1900.....1910.....1920

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      .      .      : : : :      .
Pavo_muticus      LQNSSTQTE-NENENQNDVREQISEDEDEGRKPDEVSSDI-LSKER----- 1748
Pavo_cristatus    LQNSSTQTE-NENENQNDVREQISEDEDERRKPDDEVSSDI-LSKER----- 1748
Gallus_gallus     LQNSSTQTE-NENENQNDVREQITEDEDEGRKPDEVSSAL-LSKER----- 1747
Mus_musculus      LRHSSTQTD-DGHDDQ-EVEEQTLKDKTLERSPEDALLDRNLSNER----- 1664
Rattus_norvegicus LQHSSTQTD-DGNDNQ-EVEEQTLKDKTLERKPEDIPLDINLSNER----- 1699
Homo_sapiens      LRNSSTQTD-NGNENQGEVEEQTFKEKELDRKPEDVPPET-LSNE----- 1720
Pan_troglodytes   LRNSSTQTD-NGNENQGEVEEQTFKEKELDRKPEDVPPET-LSNESLHGGIWPLRFWLPH 1736
Macaca_mulatta    LRNSSTQTD-NGNENQGEVEEQTFKEKELDRKPEHVPPET-LSNESLHGGIWPLRFWLPH 1737
Callithrix_jacchus LRNSSTQTD-NGSENQGELEETTFKEKELDRKPDVPPET-LSNESLHGGIWPLRFWLPH 1730
Canis_lupus_familiaris LRNSSTQTDQNGNENQEEIEEETTFKEKELDRKPEDVLPDI-LTSE----- 1709
Equus_caballus    LRNSSTQTD-NGNENQGEVEEQTFKEKELDRKPEDVPPDI-LSNESLHGGIWPLRFWLPH 1737
Bos_taurus        LRNSSTQTD-NGNENQGEVEEQTFKEKELDRKPEVPPET-VSNER----- 1722
Rhinatrema_bivittatum LQTRSTQTD-DENESRDESEETTVKEAAETANERPKEITSVVLIER----- 1884
Xenopus_tropicalis NSSQTLEEHVAESESKEDEFWDGVSKKEEGNKESGDLPEPICDRK----- 1826
Danio_rerio       RQHAGTHPEEEAVEQKDEALGEMEALVECLKSEQ----- 1646
      .....1930.....1940.....1950.....1960.....1970.....1980

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                                : * * : . : * * . : . : :
Pavo_muticus      -----H V Y Q K A N E K L V K I L L E V V K T T V A V E E T I G R H V L V L L D R S G K- 1789
Pavo_cristatus    -----H V Y Q K A N E K L V K I L L E V V K T T V A V E E T I G R H V L V L L D R S G K- 1789
Gallus_gallus     -----H V Y Q K A N E K L M K I L L E V V K T T V A M E E T I G R H V L V L L D R S G K- 1788
Mus_musculus      -----Y A L K K A N N R L L K I L L E V V K T T S A A E E T I G R H V L G I L D R S S K- 1705
Rattus_norvegicus -----Y A L K K A N N R L L K I L L D V V K T T S A A E E T I G R H V L G I L D R S S K- 1740
Homo_sapiens      -----R Y A L Q K A N N R L L K I L L E V V K T T A A V E E T I G R H V L G I L D R S S K- 1762
Pan_troglodytes   W I I S M E R S Q Y G T Q T R K T V Y A L Q A N N R L L K I L L E V V K T T A A V E E T I G R H V L G I L D R S S K- 1795
Macaca_mulatta    W I I S M E R S Q Y G T Q T R K T V Y A L Q A N N R L L K I L L E V V K T T A A V E E T I G R H V L G I L D R S S K- 1796
Callithrix_jacchus W I I S M E R S Q Y G T Q T R K T V Y A L Q A N N R L L K I L L E V V K T T A A V E E T I G R H V L G I L D R S S K- 1789
Canis_lupus_familiaris -----F A L Q K A N N R L L K I L L E V V K T T A A V E E T I G R H V L G I L D R S S K- 1750
Equus_caballus    W I I S M E H S Q Y G T Q T R K T V Y A L Q A N N R L L K I L L E V V K T T A A V E E T I G R H V L G I L D R S S K- 1796
Bos_taurus        -----Y A L Q K A N N R L L K I L L E V V K T T A A V E E T I G R H V L G I L D R S S K- 1763
Rhinatrema_bivittatum -----Q S L Q K A Y N R L L K M L L E V A K T T V A V E E T I G C H V L G L L D K S T T K- 1926
Xenopus_tropicalis -----H L M R S N K O L L K I L L E I V K T T G A V E E T I G H H V L G L L D K P G R R- 1867
Danio_rerio       -----R L K K D N E D E V E Q L N A V I E K L Q Q E L S H I E A R D D H- 1679
.....1990.....2000.....2010.....2020.....2030.....2040

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Pavo_muticus      -I Q P S K P A G W D T E A E D S V K P S I C V G Y E K ---E S C S S Y H G S S M G D D D I T M W S G A T E E G -L L 1844
Pavo_cristatus    -I Q P S K P A G W D T E A E D S V K P S I C V G Y E K ---E S C S S Y H G S S M G D D D I T M W S G A T E E G -L L 1844
Gallus_gallus     -V Q P S K P A G W D T E A E D S V K P S I H V G Y E K ---E S C S S Y H G S S M G D D D I T M W S G T A E E G -L L 1843
Mus_musculus      -G Q T A S S L L W R S E A D A S A T T C A P E D C A R A M D E S I P S Y P G T A I A T H D S -I W S K V T E E G A E L 1763
Rattus_norvegicus -S Q P A T S L L W R S E T E A S A T V C V Q E E C A R A M D E S V P S Y P G S A I A T H D S -V W S K V T E E G A E L 1798
Homo_sapiens      -S Q S S A S L I W R S E A E A S V K S C V H E E H T R V T D E S I P S Y S G S D M P R N D I N M W S K V T E E G T E L 1821
Pan_troglodytes   -S Q S S A S L I W R S E A E A S V K S C V H E E H T R V T D E S I P S Y S G S D M P R N D I N M W S K V T E E G T E L 1854
Macaca_mulatta    -S Q S S A S L I W R S E A E A S V K S C V H E E H T R V T D E S I P S Y S G S D M P R N D I N M W S K V T E E G T E L 1855
Callithrix_jacchus -S Q S S I V I W R S E A E A S M K S R V H E E H T K V T D E S I P S Y S G S D M P K N D I S M W S K V T E E G T E L 1848
Canis_lupus_familiaris -V P S S A S L I W R S E A E T P V K S C I H E E H T R V T D E S I P S Y S G S D K P R N D S -M W S K V T E E G T D L 1808
Equus_caballus    -G Q S S A S L I W R S E A E T P L K S C V H E E H T G V T D E S I P S Y S G S D M P R N D S S M W S K V T E E G T E L 1855
Bos_taurus        -V Q S S A C L I R R S E A E P P I K S C V H E E Q T ---G D E S I P -Y S G S ---D S S M W S K A A E E G T E L 1814
Rhinatrema_bivittatum D Q P S S R V I V W N R E P E E P A K P C T L D G T S T ---E D P S D S Y H G S D V S G D D I S T W S G G T D E G L E L 1984
Xenopus_tropicalis -P S A P Q V L V W N P A N E D L G M T L D L E A P K T T G P I A L K D F I G S ---K D A D I W S E D T E E L D L 1922
Danio_rerio       ----- 1679
.....2050.....2060.....2070.....2080.....2090.....2100

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Pavo_muticus      S Q H L A E S ---G V E L D P E N E E L V L N I S S R L Q A A V E K L L E A I N E T S N O L E H A K I T Q T E L M R E 1901
Pavo_cristatus    S Q H L A E S ---G V E L D P E N E E L V L N I S S R L Q A A V E K L L E A I N E T S N O L E H A K I T Q T E L M R E 1901
Gallus_gallus     S Q H L A E S ---G V E L D P E N E E L V L N I S S R L Q A A V E K L L E A I N E T S N O L E H A K I T Q T E L M R E 1900
Mus_musculus      S Q R L V R S G F A G P V I D P E N E E L M L N I S S R L Q A A V E K L L E A I S E T N T Q L E H A K V T Q T E L M R E 1823
Rattus_norvegicus S Q R L V R S G F A G P V I D P E N E E L M L N I S S R L Q A A V E K L L E A I S E T S S Q L E H A K V T Q T E L M R E 1858
Homo_sapiens      S Q R L V R S G F A G T E I D P E N E E L M L N I S S R L Q A A V E K L L E A I S E T S S Q L E H A K V T Q T E L M R E 1881
Pan_troglodytes   S Q R L V R S G F A G T E I D P E N E E L M L N I S S R L Q A A V E K L L E A I S E T S T Q L E H A K V T Q T E L M R E 1914
Macaca_mulatta    S Q R L V R S G F A G T E I D P E N E E L V L N I S S R L Q A A V E K L L E A I S E T S S Q L E H A K V T Q T E L M R E 1915
Callithrix_jacchus S Q R L V R S G F A G T E I D P E N E E L M L N I S S R L Q A A V E K L L E A I S E T S S Q L E H A K V T Q T E L M R E 1908
Canis_lupus_familiaris S E R L V R S G F A G T E I D P E N E E L M L S I S S R L Q A A V E K L L E A I S E T S S Q L E H A K V T Q T E L M R E 1868
Equus_caballus    S Q R L V R S G F A G T E I D P E N E E L M L N I S S R L Q A A V E K L L E A I S E T S S Q L E H A K V T Q T E L M R E 1915
Bos_taurus        S Q R L A R S G F T G P E I D P E N E E L M L N I S S R L Q A A V E K L L E A I S E T S S Q L E H A K V T Q T E L M R E 1874
Rhinatrema_bivittatum S Q R L I D L ---A G I E K D P E N E D V L N I S T R L Q A A V E K L L E T I S E T S N O L E H A K A T Q T E L I R E 2042
Xenopus_tropicalis T D R W L A G ---A G L S S E D E A Q V L H I S A R L Q T A V E K L L E A I N E S N N O L E H V K A A Q T E L V R E 1978
Danio_rerio       -----E E M K Q R V D E L T S E C N T L R L Q Y E Q L Q E T R D H E E M R K K V E E L M S E C S S L 1727
.....2110.....2120.....2130.....2140.....2150.....2160

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Pavo_muticus      SFFKQEEATEFIRYQEELOERLSEETKAREQLALELSKAEGGLIDGYADEKAFLEKQLOEK 1961
Pavo_cristatus    SFFKQEEATEFIRYQEELOERLSEETKAREQLALELSKAEGGLIDGYADEKAFLEKQLOEK 1961
Gallus_gallus     SFFKQEEATEFIRYQEELOERLSEETKAREQLALELNKAEGGLIDGYADEKAFLEKQLOEK 1960
Mus_musculus      SFRQKQEATESLHLCLEELRERLQEESSRAREQLAEELNKAESVIDGYSDEKTLFERQIOEK 1883
Rattus_norvegicus SFRQKQEATESLHLCLEELRERLQEESSRAREQLAVELNKAESVIDGYSDEKTLFERQIOEK 1918
Homo_sapiens      SFRQKQEATESLKCQEELRERLHEESSRAREQLAVELSKAEGVIDGYADEKTLFERQIOEK 1941
Pan_troglodytes   SFRQKQEATESLKCQEELRERLHEESSRAREQLAVELSKAEGVIDGYADEKTLFERQIOEK 1974
Macaca_mulatta    SFRQKQEATESLKCQEDLRERLHEESSRAREQLAVELSKAEGVIDGYADEKTLFERQIOEK 1975
Callithrix_jacchus SFRQKQEATESRKQCEELQERLHEESSRAREQLAVELSKAEGVIDSYTDEKTLFERQIOEK 1968
Canis_lupus_familiaris SFRQKQEVTESLKCQEELRERLHEESSRAREQLAVELSKAEGVIDGYADEKTLFERQIOEK 1928
Equus_caballus    SFRQKQEATESLKCQEELRERLHEESSRAREQLAVELSKAEGVIDGYADEKTLFERQIOEK 1975
Bos_taurus        SFRQKQEVTESLKCQEDLRERLHEESSRAREQLAVELSKAEGVIDGYADEKTLFERQIOEK 1934
Rhinatrema_bivittatum SIKRKQEVSELIKCQEELQERLIEETRTREDLALSLRAEGLLDGYTDEKILLEKQMOEK 2102
Xenopus_tropicalis SIKRKQETADLLRCQEELQERLNEEAKAREHLALSLRAEGLLDGYSDERVFLEKQIOEK 2038
Danio_rerio       NLOYNQLQEEETRDHEEMRKIEELTIECNLSLOLYKQLOEETKDHEEMKQRMELTAES 1786
.....2170.....2180.....2190.....2200.....2210.....2220

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Pavo_muticus      IDVIDHLEQELLCTGNKLOELEAEQQQIQEEKELLARQKDMARADAGPVEQ----- 2012
Pavo_cristatus    IDVIDHLEQELLCTGNKLOELEAEQQQIQEEKELLARQKDMARADAGPVEQ----- 2012
Gallus_gallus     IDVIDHLEQELLCTGNKLOELEAEQQQIQEEKELLARQKDMARADAGPVEQ----- 2011
Mus_musculus      TDIIEHLEQEVLCMNRLQELSDORRVEEERQLLCRQREAMRAEAGPVEQ----- 1934
Rattus_norvegicus TDIIEHLEQELLCTNNRLQELSDORRVEEERELLSRQREAMRADAGPVEQRPPIAAAAGA 1978
Homo_sapiens      TDIIDRLEQELLCSNRLQELEAEQQQIQEERELLSRQKEAMKAEAGPVEQ----- 1992
Pan_troglodytes   TDIIDRLEQELLCSNRLQELEAEQQQIQEERELLSRQKEAMKAEAGPVEQRLVDAAVDA 2034
Macaca_mulatta    TDIIDRLEQELLCSNRLQELEAEQQQIQEERELLSRQKEAMKAEAGPVEQRLVDAAVDA 2035
Callithrix_jacchus SDIIDRLEQELLCSNRLQELEADQQQIQEERELLSRQKEAMKAEAGPVEQRLVDAAVDA 2028
Canis_lupus_familiaris TDIIDRLEQELLCSNRLQELEAEQQQIQEERELLSRQKEAMKAEAGPVEQRLVNAAVDA 1988
Equus_caballus    TEIIDRLEQELLCSNRLQELEAEQQQIQEERELLSRQKEAMKAEAGPVEQRLVDAAVDA 2035
Bos_taurus        TDIIDRLEQELLCSNRLQELEAEQQQIQEERELLSRQKEAMKAGAGPAEQRLVDAAVDA 1994
Rhinatrema_bivittatum TNLIHLEQELQSTGNRLQELQEDERQQIQDERELLSRQKADKADAGSAELS-VDAIDA 2161
Xenopus_tropicalis NDLVRHLEQELQSTGNRLQEFQELQQLQEEERELLSRQKNALRAEATPAEQSLVAAVDA 2098
Danio_rerio       NALRLQCEQVQVETRD-PEEMKLMEELTNESENTLQLODEQLQGGTRDHEEVKN----- 1839
.....2230.....2240.....2250.....2260.....2270.....2280

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Pavo_muticus      ----QLLEETEKLMKEKIEVQRAEKEYDDLQKQVKVLEIDLEEQVNRFFIELEQEKNAEL 2068
Pavo_cristatus    ----QLLEETEKLMKEKIEVQRAEKEYDDLQKQVKVLEIDLEEQVNRFFIELEQEKNAEL 2068
Gallus_gallus     ----QLLEETEKLMKEKIEVQRAEKEYDDLQKQVKVLEIDLEEQVSRFFIELEQEKNAEL 2067
Mus_musculus      ----QFLQETEKLMKEKLEVQCAEKVRGDLQKQVKALEIDVEEQVSRFFIELEQEKNAEL 1990
Rattus_norvegicus APGAELLQETEKLMKEKLEVQCAEKVRGDLQKQVKALEIDVEEQVSRFFIELEQEKNAEL 2038
Homo_sapiens      ----QLLEETEKLMKEKLEVQCAEKVRDDLQKQVKALEIDVEEQVSRFFIELEQEKNTL 2048
Pan_troglodytes   APGAELLQETEKLMKEKLEVQCAEKVRDDLQKQVKALEIDVEEQVSRFFIELEQEKNAEL 2094
Macaca_mulatta    AAGAELLQETEKLMKEKLEVQCAEKVRDDLQKQVKALEIDVEEQVSRFFIELEQEKNAEL 2095
Callithrix_jacchus APGAELLQETEKLMKEKLEVQCAEKVRDDLQKQVKALEIDVEEQVSRFFIELEQEKNAEL 2088
Canis_lupus_familiaris APGAELLQETEKLMKEKLEVQCAEKVRDDLQKQVKALEIDVEEQVSRFFIELEQEKNAEL 2048
Equus_caballus    APGAELLQETEKLMKEKLEVQCAEKVRDDLQKQVKALEIDVEEQVSRFFIELEQEKNAEL 2095
Bos_taurus        APGAELLQETEKLMKEKLEVQCAEKVRDDLQKQVKALEMDVEEQVSRFFIELEQEKNAEL 2054
Rhinatrema_bivittatum APQAELLLEETEKLMKEKIEVQRAEKEHDYLOKQVKGLEADLEEQVNSYIELEQERNAL 2221
Xenopus_tropicalis APTEELIEETEKLLKEKIEVQRAEKDSGDLYKQVKVLETELEEQMSRNLEIEQEKNSDL 2158
Danio_rerio       ----MEELTTECNLSRLQCEQLQEEETRDYKEMKQVVEELTKESNALRLQYEQLOEETRN 1894
.....2290.....2300.....2310.....2320.....2330.....2340

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Pavo_muticus      MDLRQONQALEKQLEKTRKFLDEQAVDREHERDVFQOEIQKLEQOLKVPQRSQPVNEHQ  2128
Pavo_cristatus    MDLRQONQALEKQLEKTRKFLDEQAVDREHERDVFQOEIQKLEQOLKVPQRSQPVNEHQ  2128
Gallus_gallus     MDLRQONQALEKQLEKTRKFLDEQAVDREHERDVFQOEIQKLEQOLKVPQRSQPVNEHQ  2127
Mus_musculus      TDLRQOSQALEKQLEKMRKFLDEQAIDREHERDVFQOEIQKLEHOLKAVPRIQPVSEHQ  2050
Rattus_norvegicus IDLRQOSQALEKQLEKMRKFLDEQAIDREHERDVFQOEIQKLEHOLKAVPRLLPVSEHQ  2098
Homo_sapiens      MDLRQONQALEKQLEKMRKFLDEQAIDREHERDVFQOEIQKLEQOLKVVPRFQPISEHQ  2108
Pan_troglodytes   MDLRQONQALEKQLEKMRKFLDEQAIDREHERDVFQOEIQKLEQOLKVVPRFQPISEHQ  2154
Macaca_mulatta    MDLRQONQALEKQLEKMRKFLDEQAIDREHERDVFQOEIQKLEQOLKVVPRFQPISEHQ  2155
Callithrix_jacchus MDLRQONQALEKQLEKMRKFLDEQAIDREHERDVFQOEIQKLEQOLKVVPRFQPISEHQ  2148
Canis_lupus_familiaris MDLRQONQALEKQLEKMRKFLDEQAIDREHERDVFQOEIQKLEQOLKVVPRFQPISEHQ  2108
Equus_caballus    MDLRQONQALEKQLEKMRKFLDEQAIDREHERDVFQOEIQKLEQOLKVVPRFQPISEHQ  2155
Bos_taurus        MDLRQONQALEKQLEKMRKFLDEQAVDREHERDVFQOEIQKLEQOLKVVPRFQPVSEHQ  2114
Rhinatrema_bivittatum EDVRQONQALEKQLEKMRKFLDEQAVDREHERDVFQOEIQKLEQOLKTPQRLQPISEHQ  2281
Xenopus_tropicalis EDLQKKNLSLEKQLEKTRKFLDEQAVDREHERDVFQOEILKLEQOLKMPQRHQPVTDHQS  2218
Danio_rerio       HEEMKKKMEELTNDNSNALRLQYEQLAETRDHEEMKQKVEELTTECNLHLQYEQLOEET  1954
      .....2350.....2360.....2370.....2380.....2390.....2400

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Pavo_muticus      REVEQLTNHLKEKTDKCSSELLSKEQLORDIQERNEEIEKLECRIRELEQALIIISADNLQ  2188
Pavo_cristatus    REVEQLTNHLKEKTDKCSSELLSKEQLORDIQERNEEIEKLECRIRELEQALIIISADNLQ  2188
Gallus_gallus     REVEQLTNHLKEKTDKCSSELLSKEQLORDIQERNEEIEKLECRIRELEQALIIISADNLQ  2187
Mus_musculus      REVEQLTNHLKEKTDKCSSELLSKEQLORDIQERNEEIEKLECRVRELEQALLASAEFPF  2110
Rattus_norvegicus REVEQLTNHLKEKTDKCSSELLSKEQLORDVQERNEEIEKLECRVRELEQALLATADFPF  2158
Homo_sapiens      REVEQLANHLKEKTDKCSSELLSKEQLORDIQERNEEIEKLEFRVRELEQALLVSADTFQ  2168
Pan_troglodytes   REVEQLANHLKEKTDKCSSELLSKEQLORDIQERNEEIEKLEFRVRELEQALLVSADTFQ  2214
Macaca_mulatta    REVEQLTNHLKEKTDKCSSELLSKEQLORDIQERNEEIEKLEFRVRELEQALLVSADTFQ  2215
Callithrix_jacchus REVEQLTNHLKEKTDKCSSELLSKEQLORDIQERNEEIEKLEFRVRELEQALLVSADTFQ  2208
Canis_lupus_familiaris REVEQLTNHLKEKTDKCSSELLSKEQLORDIQERNEEIEKLEFRVRELEQALLVSADTFQ  2168
Equus_caballus    REVEQLTNHLKEKTDKCSSELLSKEQLORDVQERNEEIEKLEFRVRELEQALLVSADTFQ  2215
Bos_taurus        REVEQLTNHLKEKTDKCSSELLSKEQLORDIQERNEEIEKLEFRVRELEQALLVSADTFQ  2174
Rhinatrema_bivittatum KEVEQLTNYLKEKTDKCSSELLLAQEQHLRDVQEHNEEIEKLESRIRELEQALIIISADDLQ  2341
Xenopus_tropicalis NALEKLETNLKEKTDKCNELLCKEQFORDIQERNEEIEKLECRIRELEQALLISDDTLK  2278
Danio_rerio       RDHEDMKKKIEELTNEFNTLRLOYDLOEETRDHEKMKLMEAVTTECNTLRIRYEQLOE  2014
      .....2410.....2420.....2430.....2440.....2450.....2460

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Pavo_muticus      KVEERKQFGTIIIVKGELPLEVQLAEREAVDRKEKEVTNLEEQLQFREELKNKNEEVQQ  2248
Pavo_cristatus    KVEERKQFGTIIIVKGELPLEVQLAEREAVDRKEKEVTNLEEQLQFREELKNKNEEVQQ  2248
Gallus_gallus     KVEERKQFGTIIIVKGELPLEIQLAEREAVDRKEKEVTNLEEQLQFREELKNKNEEVQQ  2247
Mus_musculus      KVEDQKRSQAVEADPELSLEVQLQVERDATDRKQKEITNLEEQLQFREELKNKNEEVQ  2170
Rattus_norvegicus KVEEQKRPQAVEVDPPELSLEVQLQVERDATDRKQKEITNLEEQLQFREELKNKNEEVQ  2218
Homo_sapiens      KVEDRKHFQAVEAKPELSLEVQLQVERDAIDRKEKEITNLEEQLQFREELKNKNEEVQ  2228
Pan_troglodytes   KVEDRKHFQAVEAKPELSLEVQLQVERDAIDRKEKEITNLEEQLQFREELKNKNEEVQ  2274
Macaca_mulatta    KVEDRKQFGAVEAKPELSLEVQLQVERDAIDRKEKEITNLEEQLQFREELKNKNEEVQ  2275
Callithrix_jacchus KVEDRKQFGAIEVKSLELSLEVQLQVERDAIDRKEKEITNLEEQLQFREELKNKNEEVQ  2268
Canis_lupus_familiaris KVEDQKQCGAVEAKAELSLEVQLQVERDAIDRKEKEITNLEEQLQFREELKNKNEEVQ  2228
Equus_caballus    KVEDQKQFGSIDAKAELSLEVQLQVERDAIDRKEKEITNLEEQLQFREELKNKNEEVQ  2275
Bos_taurus        KVEDRKHFQAVEAKAELSLEIQLAVERDAIDRKEKEITNLEEQLQFREELKNKNEEVQ  2234
Rhinatrema_bivittatum KAEERELHSAFDVKEELPLEAQLRVEREIDRKEKEITNLEEQLQFREELVKNKNEEVQ  2401
Xenopus_tropicalis KVELRRQSIVISSKGEIPLAQLOVERDAIDRKEKEITNLEEQLQFREELKNKNEEVQ  2338
Danio_rerio       ETRDHEEMG-----KKMQEVSNSNTLRLOYEQLAEMKDHHEMKQKMEGMTTERDS  2066
      .....2470.....2480.....2490.....2500.....2510.....2520

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Pavo_muticus      LHMQLQIQRKESTTHLQELQENKLFKDEMEILGLAIQKSEDAIKDHHLVAGKLAHIMQ 2308
Pavo_cristatus    LHMQLQIQRKESTTHLQELQENKLFKDEMEILGLAIQKSEDAIKDHHLVAGKLAHIMQ 2308
Gallus_gallus     LHMQLQIQRKESTTHLQELQENKLFKDEMEILGLAIQKSEDAIKDHHLVAGKLAHIMQ 2307
Mus_musculus      LLMQLQIQRKESTTRRLQELQENKLFKDEIEKLGFMKESDSVSTRDQPMFLFGKFAQLIQ 2230
Rattus_norvegicus LLMQLQIQKKESTTRRLQELQENKLFKDEIEKLGFMKESDSLSTQDQPMFLFGKFAQLIQ 2278
Homo_sapiens      LHMQLQIQKKESTTRRLQELQENKLFKDDMEKLGLAIKESDAMSTQDQHVLFHGKFAQLIQ 2288
Pan_troglodytes   LHMQLQIQKKESTTRRLQELQENKLFKDDMEKLGLAIKESDAMSTQDQHVLFHGKFAQLIQ 2334
Macaca_mulatta    LHMQLQIQKKESTTRRLQELQENKLFKDDMEKLGLAIKESDAVSTQDQHVLFHGKFAQLIQ 2335
Callithrix_jacchus LHMQLQIQKKESTTRRLQELQENKLFKDDMEKLGLAIKESDAVSTQEQHVLFHGKFAQLIQ 2328
Canis_lupus_familiaris LHMQLQIQKKESTTRRLQELQENKLFKDEMEKLGVAIKESDAIPTQDQHVLFHGKFAQLIQ 2288
Equus_caballus    LHMQLQIQKKESTTRRLQELQENKLFKDEMKKLGFAIKESDAVSTQDQHVLFHGKFAQLIQ 2335
Bos_taurus        LHMQLQIQKKESTTRRLQELQENTLFDKDEMEKLGFIKESDAISTQDQHVLFHGKFAQLIQ 2294
Rhinatrema_bivittatum LHMQLQIQKKESTTRRLQELQENKIFKDDMENLQTVQEPEDSILKDRHLVPGKFAQLIQ 2461
Xenopus_tropicalis LHMQLQIQRKESSTRLLLELQENKVLKDENVDH-----DNQSSAIKTHHMKPEEFEDILF 2393
Danio_rerio       LHLOYERLHQETLLELQELREKTAASVVMQAQVQALEESAARVDSLRRVEELQECVFE 2126
.....2530.....2540.....2550.....2560.....2570.....2580

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Pavo_muticus      EKEQEIDNLHEQIAKLQQQLEGTTDNKIFEEQNEHIRELEAQVECLKSDQERVKKKNDEE 2368
Pavo_cristatus    EKEQEIDNLHEQIAKLQQQLEGTTDNKIFEEQNEHIRELEAQVECLKSDQERVKKKNDEE 2368
Gallus_gallus     EKEQEIDNLHEQIAKLQQQLEGTTDNKIFEEQNEHIRELEAQVECLKSDQERVKKKNDEE 2367
Mus_musculus      EKEIEIDRLNEQFIKLQQQLKLTDDNKVIEEQKEIQDLETQIERLMSEREHEKKQREEE 2290
Rattus_norvegicus EKEIEIDRLNEQFIKLQQQLKLTDDNKVIEEQKDDQIRDLETQIECLMSQEQELMKKQRAEE 2338
Homo_sapiens      EKEVEIDQLNEQVTKLQQQLKITDDNKVIEEKNELIRDLETQIECLMSDQECVKRNREEE 2348
Pan_troglodytes   EKEVEIDQLNEQVMKLQQQLKITDDNKVIEEKNELIRDLETQIECLMSDQECVKRNREEE 2394
Macaca_mulatta    EKEVEIDQLNEQIMKLQQQLKITDDNKVIEEKNELIRDLETQIECLMSDQECVKRNREEE 2395
Callithrix_jacchus EKEVEIDQLNEQIMKLQQQLKITDDNKVIEEKNELIRDLETQIECLMSDQECVKRNREEE 2388
Canis_lupus_familiaris EKEIEIDRLNEQIAKLQYQLKITDDNKVIEEKNELIRDLETQIECLMSDQERVKKNREEE 2348
Equus_caballus    EKEVEINRLNEQITKLQHLKIAATDNKVIEEKNELIRNLETQIECLMSDQERGKKNKEEE 2395
Bos_taurus        EKEVEIDRLNEQIMKLQHLKMTDDNKVIEEKNELIRDLETQIECLMSDQERVKKNREEE 2354
Rhinatrema_bivittatum EKEQEIDQLNEQVLKLQQQLELVIDNKVEE-QNDLIRELEAQTFLYRSDQDRLRKDSEEE 2520
Xenopus_tropicalis LKEQEIDQLNEHVGRLLQALETATDNKTTIEDKINQIKEYKSQIKCLKSDQERLKRNSEEE 2453
Danio_rerio       EKDRELRLR-----ACRMRVEQAQTDAGGLYDKVAQLEDNLREKVAAVLVSAQLEAVQTOT 2181
.....2590.....2600.....2610.....2620.....2630.....2640

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* . : : : : : : : : : : :
Pavo_muticus      IEQLNDVIDKLQQLANIEQIP-ADITAFHEDADSLKHTLETVLAKEALEKQVESINLE 2427
Pavo_cristatus    IEQLNDVIDKLQQLANIEQIP-ADITAFHEDADSLKHTLETVLAKEALEKQVESINLE 2427
Gallus_gallus     IEQLNDVIDKLQQLANIEQIP-SDITAFHEDADSLKHTLETVLAKEALEKQVESINLE 2426
Mus_musculus      VEQLTGVEKLLQQLQEVVSTEQQR-EGARTLPEDDEESFKHQLDKVTAEKLVLEQQVETTNQV 2349
Rattus_norvegicus AEQLNGVIEKLQQLVSTEQQR-EGARALPEDEESFKHQLDRVTVEKLGLEKQVETTNQV 2397
Homo_sapiens      IEQLNEVIEKLQQLANIGQKTSMNAHSLSEEDADSLKHQLDVMVIAEKLALQVETTNEE 2408
Pan_troglodytes   IEQLNEVIEKLQQLANIGQKTSMNAHSLSEEDADSLKHQLDVMVIAEKLALQVETTNEE 2454
Macaca_mulatta    IEQLNEVIEKLQQLANIGQKTLVDAHSLPEEADSLKHQLDMVIAEKLALQVETTNEE 2455
Callithrix_jacchus IEQLNEVIEKLQQLANIGQKTSVDAHSLAEEADSLKHQLDMVIAEKLALQVETTNEE 2448
Canis_lupus_familiaris IEQLNEVIEKLQQLANIEQKTSVDANSFPEEADSLKHQLDMVIAEKLALQVETTNEE 2408
Equus_caballus    IEQLNEVIEKLQQLAHIEQKTSVDASSLPEEADSLKHQLDMVIAEKLALQVETTNKE 2455
Bos_taurus        IEQLNEVIEKLQQLANIEQKTSVVANSFPEEADSLKHQLDMVIAEKLALQVETTNKE 2414
Rhinatrema_bivittatum IEQLNEVIEKLQQLAKIEQKVPVDFSSSQDADSLKHQLDMVIAEKEILQOEMDKNNAE 2580
Xenopus_tropicalis IEKLNEVIEKLQDELASIDNKVSVDVTSMTEDADSSKHQLETIMAEDKLLQKKVELSDTE 2513
Danio_rerio       KELHAEAIVGSGTQLQEG-----IWMQDDLMAQVGLRVQKSLRMQEDFTVQEGLEVQEGR 2236
.....2650.....2660.....2670.....2680.....2690.....2700

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      :      :::      :      :.
Pavo_muticus      ASQTKNELEETKLEMNQLKQEI----- 2450
Pavo_cristatus    ASQTKNELEETKLEMNQLKQEI----- 2450
Gallus_gallus     ASQTKNELEETKLEMNQLKQEI----- 2449
Mus_musculus      MTHMNNVLKEINFKMDQITQSLC----- 2372
Rattus_norvegicus LTDLKNVLKEINFKMDHMTQALC----- 2420
Homo_sapiens      MTFMKNVLKETNFKMNQLTQELF----- 2431
Pan_troglodytes   MTFMKNVLKETNFKMNQLTQELF----- 2477
Macaca_mulatta    MTFTKNILKETNFKMNQLTQELF----- 2478
Callithrix_jacchus MSFTKNLLKETNFKMSQLTQELF----- 2471
Canis_lupus_familiaris MAFTKNVLEETNFKMNQLTQELC----- 2431
Equus_caballus    MAFTKNVLKETNFKMNQLTQELC----- 2478
Bos_taurus        MALTKNALKETNFKMNQLTEELY----- 2437
Rhinatrema_bivittatum VALSKSEVEDTRVKMNLKEELD----- 2603
Xenopus_tropicalis LAITRTALEETRTIEILLKTELKSVREGQIASQVYEECNVILEFRNDKEEEAEATSEP 2573
Danio_rerio       TTLEGLTVQEGLTMLPGLTMOEG----- 2259
      .....2710.....2720.....2730.....2740.....2750.....2760

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Pavo_muticus      ----- 2450
Pavo_cristatus    ----- 2450
Gallus_gallus     ----- 2449
Mus_musculus      ----- 2372
Rattus_norvegicus ----- 2420
Homo_sapiens      ----- 2431
Pan_troglodytes   ----- 2477
Macaca_mulatta    ----- 2478
Callithrix_jacchus ----- 2471
Canis_lupus_familiaris ----- 2431
Equus_caballus    ----- 2478
Bos_taurus        ----- 2437
Rhinatrema_bivittatum ----- 2603
Xenopus_tropicalis LENSLLYVQHEAMQDTIHGLESKLQELKQTIKEKDIELLQYDKVKLVEEQSQVIDQLNQ 2633
Danio_rerio       ----- 2259
      .....2770.....2780.....2790.....2800.....2810.....2820

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Pavo_muticus      ----- 2450
Pavo_cristatus    ----- 2450
Gallus_gallus     ----- 2449
Mus_musculus      ----- 2372
Rattus_norvegicus ----- 2420
Homo_sapiens      ----- 2431
Pan_troglodytes   ----- 2477
Macaca_mulatta    ----- 2478
Callithrix_jacchus ----- 2471
Canis_lupus_familiaris ----- 2431
Equus_caballus    ----- 2478
Bos_taurus        ----- 2437
Rhinatrema_bivittatum ----- 2603
Xenopus_tropicalis VIRKLQEESTAADSVFNSIEVSDISECONKTTLAEEMSLSSESASSKHELLNTELEETQA 2693
Danio_rerio       ----- 2259
      .....2830.....2840.....2850.....2860.....2870.....2880

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Pavo_muticus      ILRKEHEEVTEKYKCALMKGDREKTEVGSSRKTEKADEVSCENTELLDOTQLRSSDENTR 2510
Pavo_cristatus    ILRKEHEEVTEKYKCALMKGDREKTEVGSSRKTEKADEVSCENTELLDOTQLRSSDENTR 2510
Gallus_gallus     ILRKEREVEVEKYKCGLMKGDREKTEVGSNRKTEKVEGSCENTELLDOTQLRSSDENTR 2509
Mus_musculus      NLNKECASNEELPSLPKESVHMTVHELGSNDLOPEDAPADVTKPLEKOTSLTRLQKSPF 2432
Rattus_norvegicus NLN-----KELPNVPKESVHVTVHELGCCKLQPEGASADASQPLESOTSLMCLQESTK 2474
Homo_sapiens      SLKRERESVEKIQSIPENSVNVAIDHLSKDKPELEVVLTEDALKSLENQTYFKSFEENGK 2491
Pan_troglodytes   SLKRERESMEKIQSIPENSVNVAIDDLSDKDKPELEVVLTEDALKSLENQTYFKSFEENGK 2537
Macaca_mulatta    SLKRERESMEKIQSIPGKSVNMAIDDMKDKPELEVVLTEDALKSLENQTYLKSFEENGK 2538
Callithrix_jacchus SLKRERESMENIRSIPEKTLNTAVDDLSDKDKPELEVVLTEDALKSLENQTYLKSFEENSK 2531
Canis_lupus_familiaris SLKRERENMEKIRSVPEKSVNMAMDDLSDKDKPELEVVLAEALNALKPLENQTFTSFEENSK 2491
Equus_caballus    SLKRERENMEKIQTVPEKNIDMAIDLSKHKPELEVVLPPDALKPLVNTYVKSFEENSK 2537
Bos_taurus        NLKRERERESEKIHSSIPGKSVNLAIDDLNKNKPGLEVVLPEDALQPLENQTLYNSFEENSK 2497
Rhinatrema_bivittatum TLKKKLESITKGREYVDTKNDNVKGERKKTELEETLRDKTAQFLTQEILLRSMEEHTH 2663
Xenopus_tropicalis ELKSLKEELEKLKQSPENANAKWEGKAKYDIKKLENALREKTAELLASCALLSSVQDVTQ 2753
Danio_rerio       -----FRAQAKASGGKVNLLTEKLKELEEGGLIVMQKDQELQKELLCSSEFEVM 2307
.....2890.....2900.....2910.....2920.....2930.....2940

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Pavo_muticus      VTISNMEVOLQQLQACIKEKD----- 2531
Pavo_cristatus    VTISNMEVOLQQLQACIKEKD----- 2531
Gallus_gallus     VTISKMEVOLQQLQACIKEKD----- 2530
Mus_musculus      ASRT-QEIESLAS--SVGAKD----- 2450
Rattus_norvegicus ASQI-LEIKSLPLQSGSGTKD----- 2494
Homo_sapiens      GSIINLETRLLQLESTVSAKD----- 2512
Pan_troglodytes   GSIINLETRLLQLESTVSAKD----- 2558
Macaca_mulatta    GSIINLETRLLQLESTVRAKD----- 2559
Callithrix_jacchus GFIINLETRLLQLESTVSAKD----- 2552
Canis_lupus_familiaris GSISLETQVLEGTVSEKD----- 2512
Equus_caballus    VSISLETQVLESTVSAKD----- 2558
Bos_taurus        VSISLETQVLESTVSAKD----- 2518
Rhinatrema_bivittatum DNISSELMKLQELQAVTKHKD----- 2684
Xenopus_tropicalis STIQNLESQVQNLQKIVEEKDSELLOYAVQKQLEKQAVELEQLNGVIESLHOKLSKAKQ 2813
Danio_rerio       EYESRLSVMMDDLQSMKTKPS----- 2328
.....2950.....2960.....2970.....2980.....2990.....3000

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Pavo_muticus      ----- 2531
Pavo_cristatus    ----- 2531
Gallus_gallus     ----- 2530
Mus_musculus      ----- 2450
Rattus_norvegicus ----- 2494
Homo_sapiens      ----- 2512
Pan_troglodytes   ----- 2558
Macaca_mulatta    ----- 2559
Callithrix_jacchus ----- 2552
Canis_lupus_familiaris ----- 2512
Equus_caballus    ----- 2558
Bos_taurus        ----- 2518
Rhinatrema_bivittatum ----- 2684
Xenopus_tropicalis IKSPEKVERAKDLVTDKMOKENRILOTAELNGEETAFVKIELENAKEETKHLRGELDRLQ 2873
Danio_rerio       ----- 2328
.....3010.....3020.....3030.....3040.....3050.....3060

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Pavo_muticus	-----SELCSY	2538
Pavo_cristatus	-----SELCSY	2538
Gallus_gallus	-----SELCSY	2537
Mus_musculus	-----VELTQCR	2457
Rattus_norvegicus	-----FELAQCH	2501
Homo_sapiens	-----LELTQCY	2519
Pan_troglodytes	-----LELTQCY	2565
Macaca_mulatta	-----LELTQCY	2566
Callithrix_jacchus	-----LELTQCY	2559
Canis_lupus_familiaris	-----LELTQCY	2519
Equus_caballus	-----LELTQCY	2565
Bos_taurus	-----LELTQCR	2525
Rhinatrema_bivittatum	-----LELSQCY	2691
Xenopus_tropicalis	ASLFKSEEALEKAVQPLENQALSAAEEAMQAMKNMESQLQGLQIDFDRKDLLELLQCS	2933
Danio_rerio	-----	2328
	.....3070.....3080.....3090.....3100.....3110.....3120	

Pavo_muticus	NKIKDLKEQGKAEREMLGNKILELEKTLVEKVAAALVSQVQLNAVQEQGKFLQEIQEASK	2598
Pavo_cristatus	NKIKDLKEQGKAEREMLGNKILELEKTLVEKVAAALVSQVQLNAVQEQGKFLQEIQEASK	2598
Gallus_gallus	NEIKDLKEQGKAERDMLGNKILELEKALVEKVAAALVSQVQLNAVQEQGKFLQEIQKASK	2597
Mus_musculus	EQTETIQEQAQSETDRLOKKLTDLORSLEK-FAAALVSQVQMEAAQEVVPHQEK--QPV	2514
Rattus_norvegicus	KQIDTIQEQDQSEIGMLQKKITNLQKILEK-FSAALVSWVQMEAAQDRVQLYQEKQOTV	2560
Homo_sapiens	KQIKDMQEQGQFETEMLOKKIVNLQKIVEEKVAAALVSQIQLEAVQEQYAKFCODN--QTI	2577
Pan_troglodytes	KQIKDMQEQGQFETEMLOKKIVNLQKIVEEKVAAALVSQIQLEAVQEQYAKFCODN--QTI	2623
Macaca_mulatta	KQIKDMQEQGQSEIEVLQKKILNLQKILEEKVAAALVSQIQLEAVQEQYAKFCODN--QTI	2624
Callithrix_jacchus	KQIKDIQEQSQSETEMLQKKIVNLQKILEEKVAAALVSQIQLEAVQEQYAKFCODN--QRI	2617
Canis_lupus_familiaris	KQIKDMQEQGQSETEMLKRRKIVNLQKILEEKVAAALVSQVQLEAVKEYAKFCODE--QAV	2577
Equus_caballus	KQIKDVQEQGQSETEMLKKKIVTLQNLLEEKVAAALVSQVQLEAVKEYAKFCODK--QAI	2623
Bos_taurus	KQIKDMQEQGQSEKEVLNKKIVNLQNTLEEKVAAALVSQVQLEAVKEYAKFCODK--QST	2583
Rhinatrema_bivittatum	SQIETMKEQVQAEREVHEQKLLEMEDSLREKVAAALVSQVQLKAVQEQIKVRLLMETATT	2751
Xenopus_tropicalis	NEIELLEEQVKTERNRHDEVMLAMENTLREKVAAALVSEAVKATQLMQKTEDSYILQEE	2993
Danio_rerio	-ALRPLPSSQGSQAEVRLQEVKDKSALIEVDLGISRLQEQIOMKESMTAQLOALREAS	2387
	.....3130.....3140.....3150.....3160.....3170.....3180	

Pavo_muticus	CLEEPSKHPQTEGLSDITENEVESELSLLTQKLREVEEQAKTNHSLILEKENVKATQQE	2658
Pavo_cristatus	CLEEPSKHPQTEGLSDITENEVESELSLLTQKLREVEEQAKTNHSLILEKENVKATQQE	2658
Gallus_gallus	CLEEASKHPLTEGWNDITENEVESEVSLTQRLREVEEQAKTNHSLILEKENVKVTQQE	2657
Mus_musculus	SSA--PGSTDIQNANGLTGASTESLIPTVTLRLAEVESRVAEVHSGTMSEK-LVGIVGKN	2571
Rattus_norvegicus	SSA--PERTDTQNVNCLAENNLESHVPTLAVRPAELESRVAEVLSDIMSEK-HMETVGN	2617
Homo_sapiens	SSE--PERTNIQNLNQLREDELGSDISALTLRISELESQVVMHTSLILEKEQVEIAEKN	2635
Pan_troglodytes	SSE--PERTNIQNLNQLREDELGSDISALTLRISELESQVVMHTSLILEKEQVEIAEKN	2681
Macaca_mulatta	SSE--PERTNIQNLNQLREDESGSNISALTLRISELESQVVMHTSLILGKEQVEIAEKN	2682
Callithrix_jacchus	SSE--PERTNTQNLSQLREDESVSNSALTLRISELESQVVMHPSLILEKEQVEIAEKN	2675
Canis_lupus_familiaris	SSE--LERTNVQNLNQVTDNEMESNVLALTLRISELESQVVMQTSLILEKEQVEIAEKN	2635
Equus_caballus	SLE--PERAHIQNLNQLTENEMESNVLALTLRISELESQVVMQASLILEKEQVEIAEKN	2681
Bos_taurus	SSK--PERTNIQNLTLTENEMESNVSALTLRISELESQVVMQTSLILEKEQVEIAEKN	2641
Rhinatrema_bivittatum	DNEEATRLRQAKNTTHKIDELTESKLSVLTIKVLELEHKLDELHKQLEFEKEQVCIAQKE	2811
Xenopus_tropicalis	SKG-----TQTSKSHHEEVAESNLSALSLRLLOLEKQLSDLHEELQVERERATAANHQ	3046
Danio_rerio	SGP-----SGAAETPELIQELQEVKGRAASTHQELQEVKGQLEEVKGQSAHLEEL	2437
3190.....3200.....3210.....3220.....3230.....3240	

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      *  :  *:  *:  ..
Pavo_muticus      SKLKEERLLELQOLLEEVQEKHRSEIQKYIKQE-ETOMYLVGQOLTERQNDNAISNE--L 2715
Pavo_cristatus    SKLKEERLLELQOLLEEVQEKHRSEIQKYIKQE-ETOMYLVGQOLTERQNDNAISNE--L 2715
Gallus_gallus     SKLKEERLLELQOLLEEVQEKHRSEIQKYIKQE-ETQTYLVEAQOLTERQNDNAISNE--L 2714
Mus_musculus      ASETTEKRVIELQKLLLEEAERP-EEGGEQSSR-----DGE----- 2605
Rattus_norvegicus ASETTEKEVVALQKLLLEAAKRL-KEEREQSPR-----DRERTAQOLTHAGGSGSFFS----G 2667
Homo_sapiens      VLEKEKKLLELQKLLLEGNEKKQREKEKKRSPQ--DVEVLKTTTELPHSNEESGFF----N 2689
Pan_troglodytes   VLEKEKKLLELQKLLLEGNEKKQREKEKKRSPQ--DVEVLKTTTEPHSNEESGFF----N 2735
Macaca_mulatta    VLEKEKKLLELQKLLLEGNEKKQGGKERKRSPQ--DFEVLKTTTELPHSNEESGFF----N 2736
Callithrix_jacchus ALEKEKKLLELQKPLEGNEKKQGGKERKRSPQ--GFEVLKTTAKLFHTNEESGFF----N 2729
Canis_lupus_familiaris ALEKEKKLLELQRLLEE-EKKQGNKERKRSPQ--DFEILKTTAELIHTSEESGFF----C 2689
Equus_caballus    ALEKEKKLLELQKLLLEDNEKKQGGKERRRSPQ--DFEVLRTTTKLTHNEESGFF----G 2736
Bos_taurus        ALEKEKKLLELQKLLLEDNEKKQGSKERERSPPG--DFEILKTTAELFHTNEESGLF----G 2696
Rhinatrema_bivittatum TMDKEKKLSELQHVLCQLKDRHLEKEVAAEKLKKEKMDMFKVVAEPNVDKEENGYIAELLEL 2871
Xenopus_tropicalis VAEKEQKLTELQQLLDCSNSRSDEKLKEKISS-----KLIHDPLOSNVLEN--- 3092
Danio_rerio       LQDREMSLALLKQDLNRSQDADQPMaelloEL----- 2470
.....3250.....3260.....3270.....3280.....3290.....3300

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      :::  *  .  .:  .:::  :  :
Pavo_muticus      ELEKVKEEAAAAKEELS SYREETEKLOKELSVKEANLVHLREDLCKVKEKLVQVEEKLAN 2775
Pavo_cristatus    ELEKVKEEAAAAKEELS SYREETEKLOKELSVKEANLVHLREDLCKVKEKLVQVEEKLAN 2775
Gallus_gallus     ELEKVKEEAAAAKEELS SYREETEKLOKELSVKEANLVHLREDLCKVKEELVQVEEKLAN 2774
Mus_musculus      -----VRESYMTSLQKDLGQVKDPLTEAKEKLSY 2634
Rattus_norvegicus GLETFEAESATS--ELASYKERAEKLEEDLLVKESYITSLQKDLGQVKDQLTEAKEKLSH 2725
Homo_sapiens      ELEALRAESVATKAELASYKEKAEKLOEELLVKETNMTSLQKDLQVRDHLAEAKEKLS- 2748
Pan_troglodytes   ELEALRAESVATKAELASYKEKAEKLOEELLVKETNMTSLQKDLQVRDHLTEAKEKLS- 2794
Macaca_mulatta    ELEALRAESVATKAQLTGYKEKTEKLOGELLIKETNMASLQKDLQVRDHLAEAKEKLS- 2795
Callithrix_jacchus ELEALRAESVATKAELDSYKEKTEKLOEELLVKETNMVSLQKDLQVRDHLTEAKEKLS- 2788
Canis_lupus_familiaris QLEAFKAESSAIKEELANYKEKAEKLOEELLVKETNMASLQKDLQVRNQLTEAKEKLSY 2749
Equus_caballus    QLEALRAESAATKEELATYREKAEKLOEELLVKETNIAFLQKDLLQVRDQLTEAEKLS- 2796
Bos_taurus        QLETVRAESAATKEELASYKEKAEKLOEELLVKETNIAFLQKDLQVRDQLKKAEEKLS- 2756
Rhinatrema_bivittatum ELEKIKLEAATAKEELNSYREKAEKLEQQLSVKEASIVQLQEELYHVKENLTQADLKIAL 2931
Xenopus_tropicalis QLERLQAEAKASNEELAHFRNMAEKLKEELLVKEASIGHLEKDVCHVRKSLVEAEQOLKA 3152
Danio_rerio       --LEVRGQAASANEDLICREKISQLOEEIQIRDASITELRVKVOELQESSAOSTERQOP 2528
.....3310.....3320.....3330.....3340.....3350.....3360

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      *
Pavo_muticus      YVRMEKDMAKTE-SRKDAEILCDLLTSEFILTGKSTSSQTDKTVNVSSY-IQTSFVLVKN 2833
Pavo_cristatus    YVRMEKDMAKTE-SRKDAEILCDLLTSEFILTGKSTSSQTDKTVNVSSY-IQTSFVLVKN 2833
Gallus_gallus     YMRMEKNMAKTE-SRKDAEILCDLLTSESISTGKSTSSQTDKTVNVSSY-IQTSFVLVKN 2832
Mus_musculus      SLEKEKRTGEQ-----ESREAPIPEPPSVEVGGC-SGLTERIDKVVSSSGNQTLOILLRD 2687
Rattus_norvegicus YLEKENGTEGEQ-----ESRRVPIPEPSVEGGGG-SGMERTGKVSSS-NQTPQILVRH 2777
Homo_sapiens      ILEKEDETEVQ-----ESKKACMFPEPLPIKLSKSIASQTDGTLKISS-NQTPQILVKN 2801
Pan_troglodytes   ILEKEGETEVQ-----ESKKAYMFEPLPIKLSKSIASQTDGTLKISS-NQTPQILVKN 2847
Macaca_mulatta    ILEKEDKTAVQ-----ENKKACMFKPLPVKLSKSIASQTDGTLKVNS-NQTPQILVKN 2848
Callithrix_jacchus ILEKEDEIEVQ-----ENKKICMFEPRIKLSKSIASQTDGTLKVNS-NQTPQILVKN 2841
Canis_lupus_familiaris FLEKEDKTKVQ-----ENRIVCVSEPLPINMGASLASQTEGTLKVNS-SQPPQVLVRN 2802
Equus_caballus    FSEKEDKTSVLH-----EHENRKVRILEPLPIKVGKSSASQTEGTVKVNS-NQTPQILVRN 2852
Bos_taurus        FSERENNTVQ-----EDRKVCTLEPLPIKVGQSSASQTDGTLKVSS-NQTPQVLVRN 2809
Rhinatrema_bivittatum LITQEEQVKKLGNQTTVNENPSAASKEKAHLISRNSSQTDKVMNINNS-NQAPPLVIKD 2990
Xenopus_tropicalis YIKMESQQEDK-----KPTPLQTKTSSSQTKKIQSINNS-NQTPQVCLTD 3196
Danio_rerio       KNPAEGHAEGR-----HPGTDVTKHPGIDVREHAGMDLR--EHAELDLQE 2572
.....3370.....3380.....3390.....3400.....3410.....3420

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Pavo_muticus	AETQIDL---	QSACSSEETIAEIIREFNEKIEQM	QELHAAEIMDMETRHI	SESEALKREKF	2890					
Pavo_cristatus	AETQIDL---	QSACSSEETIAEIIREFNEKIEQM	QELHAAEIMDMETRHI	SESEALKREKF	2890					
Gallus_gallus	AETQID----	CSSEETIAEIIREFNEKIEQM	QELHAAEIMDMETRHI	SESEALKREKF	2885					
Mus_musculus	AAIQITDL---	QESSQEIVRDTINQLTKMHEIQ	ELHAAEILDMESRHILETESL	KKEHY	2744					
Rattus_norvegicus	AGVQITDL---	QSERSQEELRDITINQFTEKMERI	QELHAAEILDMESRHILETESL	KKEHS	2834					
Homo_sapiens	AGIQINL---	QSECSSSEEVTEIISOFTEKIEKM	QELHAAEILDMESRHISETETL	KREHY	2858					
Pan_troglodytes	AGIQINL---	QSECSSSEEVTEIISOFTEKIEKM	QELHAAEILDMESRHISETETL	KREHY	2904					
Macaca_mulatta	AGIQITDL---	QSECSSSEEVTEIISOFTEKIEKM	QELHAAEILDMESRHISETETL	KREHY	2905					
Callithrix_jacchus	AGIQITDL---	QSECSSSEEVTEIISOFTEKIEKM	QELHAAEILDMESRHISETETL	KREHY	2898					
Canis_lupus_familiaris	AGTQITDL---	RSECSSSEEVTEIISOFTEKIEQM	ELHAAEILDMESRHISETETL	KREHY	2859					
Equus caballus	AGIQITDL---	QNECSSSEEVTEIISOFTEKIEQM	ELHAAEILDMESRHISETETL	KREHY	2909					
Bos_taurus	AGIQITDL---	RRECSSSEEVTEIISOFTEKIEQM	ELHAAEILDMESRHISEAETL	KRDHY	2866					
Rhinatrema_bivittatum	AETQITDLPFFQ	NGYSSEEITEVINQYTEKFEQM	ELHAAEIMDMETRHITESEVL	KREQ	3050					
Xenopus_tropicalis	KGVNVLDEEHWGS	PSDEVAAITKOYTEKIGOMODL	HAAEILDMEARHISEADSLRRD	QY	3256					
Danio_rerio	HAGMDVR-----	EHSGMDLQEHICGLQKIQQM	ELHAAEIMDMETRHI	SESLELRQ--	2625					
	.....3430.....	3440.....	3450.....	3460.....3470.....	3480				

	: * . ** : *: . : . : . **:	
Pavo_muticus	VAVQVLITDECNALKEVIESLRAKEEIPISGLVRSPPYQARDGGSSDSRSDWSOGMYLAQT	2950
Pavo_cristatus	VAVQVLITDECNALKEVIESLRAKEEIPISGLVRSPPYQARDGGSSDSRSDWSOGMYLAQT	2950
Gallus_gallus	VAVQVLITDECNALKEVIESLRAKEGIPISGLVRSPPYQARDGGSSSDSSDWSOGMYLTQT	2945
Mus_musculus	VAIQLLTKECETLKEMTOYLCKEGSSIPELADSVAYQSREVVYSSDSESDDWGQ-----S	2798
Rattus_norvegicus	VAIQLLTKECETLKDMTQYLRCKKGSSIIDLADSVAYQSREVYSDDSESDDWGQ-----S	2888
Homo_sapiens	VAVQLLKEECGTCLKAVIQCLRSKEGSSIPELAHSDAYQTREICSSDSGSDWGOGIYLTHTS	2918
Pan_troglodytes	VAVQLLKEECGTCLKAVIQCLRSKEGSSIPELAHSDAYQTREICSSDSGSDWGOGIYLTHTS	2964
Macaca_mulatta	VAVQLLKEECGTCLKAVIQRRLSRKESSAIPELTHSDAYQTREICSSDSGSDWGOGIYLTHTS	2965
Callithrix_jacchus	VAVHLLTECGTLKAVIQCLRSKEGSSIPELTHSDAYQTREICSSDSGSDWGOGIYLTHTS	2958
Canis_lupus_familiaris	VAVQLLMEECGTLKAVIQCLRSKEGSSVPLELTHSDAYQTREICSSDSGSDWGOGIYLTQS	2919
Equus caballus	VTVOLLTEECGALKAVIQCLRSKEGSSVPELIHSDAYQTREICSSDSGSDWGOGIYLTQS	2969
Bos_taurus	VTVOLLTEECSTLKAVIQCLRSKEGSSIPGLTHSDAYQTREICSSDSGSDWGOGIYLSQS	2926
Rhinatrema_bivittatum	VAVQALTEECDALKAMIESLTAK-GVIIIPGAQPIPSYQIRDGYPSDTSSDWSOGETYSVHS	3109
Xenopus_tropicalis	VAVQALTEECEALKAVIESMRATAGGVKPDSVLPITSYQIFVDTTSSDTSGSOWSQ---AYV	3313
Danio_rerio	--NQLEDDECRALDAIHTLSHTQGPAVRS-ERPVSFPFKDYTSDSSEWSORTIGLDHT	2682
	.....3490.....3500.....3510.....3520.....3530.....3540	

	:	.	.	*	:	.	**	:	.	**	:	.	*****	:	:																																												
Pavo_muticus	QGS	D	T	I	S	E	G	P	--	D	E	G	E	T	S	T	D	L	L	P	Q	K	I	K	G	L	L	R	A	V	H	R	E	G	V	Q	V	L	S	L	T	E	F	F	Y	G	E	R	E	M	--	P	P	L	K	O	G	3007	
Pavo_cristatus	QGS	D	T	I	S	E	G	P	--	D	E	G	E	T	S	T	D	L	L	P	Q	K	I	K	G	L	L	R	A	V	H	R	E	G	V	Q	V	L	S	L	T	E	F	F	Y	G	E	R	E	M	--	P	P	L	K	O	G	3007	
Gallus_gallus	QGS	D	T	I	S	E	G	P	--	D	E	G	E	T	S	T	D	L	L	P	Q	K	I	K	G	L	L	R	A	V	H	R	E	G	V	Q	V	L	S	L	T	E	F	F	Y	G	E	R	E	M	--	P	P	L	K	O	G	3002	
Mus_musculus	QGF	D	I	A	I	E	G	R	--	E	E	G	E	S	A	D	L	F	P	K	K	I	K	G	L	V	K	A	V	H	S	E	G	M	Q	V	L	S	S	P	L	C	D	D	G	E	D	--	R	S	I	O	Q	L	2855				
Rattus_norvegicus	QGF	D	I	A	I	E	G	R	--	E	E	G	E	S	--	D	L	F	P	K	K	I	K	G	L	V	K	A	V	H	S	E	G	M	Q	V	L	S	S	N	P	L	C	D	D	G	E	D	--	R	S	V	O	Q	L	2944			
Homo_sapiens	QGF	D	I	A	S	E	G	R	G	--	E	E	S	E	S	A	T	D	S	F	P	K	K	I	K	G	L	L	R	A	V	H	N	E	G	M	Q	V	L	S	L	T	E	S	P	Y	S	D	G	E	D	--	H	S	I	O	Q	V	2976
Pan_troglodytes	QGF	D	I	A	S	E	G	R	G	--	E	E	S	E	S	A	T	D	S	F	P	K	K	I	K	G	L	L	R	A	V	H	N	E	G	M	Q	V	L	S	L	T	E	S	P	Y	S	D	G	E	D	--	H	S	I	O	Q	V	3022
Macaca_mulatta	QGF	D	T	A	S	E	G	R	G	--	E	E	S	E	S	A	T	D	S	F	P	K	K	I	K	G	L	L	R	A	V	H	N	E	G	M	Q	V	L	S	L	T	E	S	P	Y	N	D	G	E	D	--	H	S	I	O	Q	I	3023
Callithrix_jacchus	QGF	D	T	A	S	E	G	R	G	--	E	E	G	E	S	--	I	D	S	F	P	K	K	I	K	G	L	L	R	A	V	H	N	E	G	M	Q	V	L	S	L	T	E	S	P	Y	S	D	G	E	D	--	H	S	I	O	Q	A	3016
Canis_lupus_familiaris	QGF	D	T	A	S	E	E	R	G	--	D	E	G	E	S	S	T	D	S	F	P	K	K	I	K	G	L	L	R	A	V	H	N	E	G	M	Q	V	L	S	L	T	E	S	P	Y	S	D	G	E	D	--	H	S	V	O	Q	V	2977
Equus_caballus	QGF	D	T	A	S	E	G	Q	G	--	E	E	G	E	N	S	T	D	L	F	P	K	K	I	K	G	L	L	R	A	V	H	N	E	G	M	Q	V	L	S	L	T	E	S	P	Y	S	D	G	E	D	--	H	S	V	O	Q	V	3027
Bos_taurus	QGF	D	T	A	S	E	G	Q	G	--	E	E	G	E	S	S	G	D	S	F	P	K	K	I	K	G	L	L	R	A	V	H	N	E	G	M	Q	V	L	S	L	T	E	S	P	C	S	D	G	E	D	--	H	S	A	O	Q	T	2984
Rhinatrema_bivittatum	QMF	D	T	A	S	E	D	S	K	--	E	E	A	K	M	S	V	D	L	L	P	N	K	I	K	R	L	L	N	A	V	H	Q	E	G	I	Q	V	L</																				

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      . *  ** .      : :*:~* :~* :      ***.*** . *.**
Pavo_muticus      PESWLEERK--AFLSTISSLKDLISKMLHREAETIASSEPEEGDS DWRGELLRAIQQVF 3065
Pavo_cristatus    PESWLEERK--AFLSTISSLKDLISKMLHREAETIASSEPEEGDS DWRGELLRAIQQVF 3065
Gallus_gallus     PESWLEERK--AFLSTISSLKDLISKMLHREAETIASSEPEEGDS DWRGELLRAIQQVF 3060
Mus_musculus      SESWLKERQ--AYLNTISSLKDLISKMOVRETEVYDRCH----LSDWRGELLACQRFV 2909
Rattus_norvegicus SESWLKERQ--TYLNTISSLKDLISKMOVRETEVYDSCQSHDSFSDWRGELLACQRFV 3002
Homo_sapiens      SEPWLEERK--AYINTISSLKDLITKMLQREAEVYDSSQSHEFSFSDWRGELLALQQVF 3034
Pan_troglodytes   SESWLEERK--AYINTISSLKDLITKMLQREAEVYDSSQSHEFSFSDWRGELLALQQVF 3080
Macaca_mulatta    SESWLEERK--AYLSTISSLQDLITKMLQREAEVYDSSQSHEFSFSDWRGELLALQQVF 3081
Callithrix_jacchus SESWLEERK--AYLSTISSLKDLITKMLQREAEVYDSSQSHEFSFSDWRGELLALQQVF 3074
Canis_lupus_familiaris SESWLEERR--AYLSTISSLKDLITKMOVORDAEVYEGSQSHETFPDWRGELLALQQVF 3035
Equus_caballus    SEFWLEERR--AYLSTISSLKDLITKMQEOREAEVFDSSQPHKSFSDWRGELLALQQVF 3085
Bos_taurus        SESWLEERR--AYLSTISSLKDLITKMOVREAKVYDSSQPHSTSDWRGELLAVQQVF 3042
Rhinatrema_bivittatum SHFWLEERK--VFLGAIASLKDVIAKMOVQPQEE--ESPESSTHIQDWRGELLHAIQEVF 3223
Xenopus_tropicalis MEPWLKERK--TLLETIASLKDLIGKMQIHKEAKASESPDLVYDLPDWRGELLRAIQEVF 3430
Danio_rerio       THTWSAERERDAFC SAVETLKSLSRLOSDTQAAG-----DWRSELLSVVQQVF 2791
.....3610.....3620.....3630.....3640.....3650.....3660

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      * .:: :.~* * . :. :. : *~* :~* * : : *** ** *~*
Pavo_muticus      VGEQNVLLAVFQTELAELGTRDAVILMTQLEHRLQEQAINQRTAMDCLHDADRRSLLMEI 3125
Pavo_cristatus    VGEQNVLLAVFQTELAELGTRDAVILMSQLEHRLQEQAINQRTAMDCLHDADRRSLLMEI 3125
Gallus_gallus     VTEQNVLLAVFQTELAELGTRDAVILMSQLEHRLQEQAINQRTAMDCLHDADRRSLLMEI 3120
Mus_musculus      IKERSVLLATFQTELTSLSTRDVGLLNSLEQRIQEQGIEYHTAMDCLQKADRRSLLAEI 2969
Rattus_norvegicus IKERSVLLATFQTELTSLSTRDADGVLNSLEQRIQEQGIEYQTAMDCLQKADRRSLLTEI 3062
Homo_sapiens      LEERSVLLAAFRTELTA LGTTDAVGLLNCLEQRIQEQGVEYQAAMECLQKADRRSLLSEI 3094
Pan_troglodytes   LEERSVLLAAFRTELTA LGTTDAVGLLNCLEQRIQEQGVEYQAAVECLQKADRRSLLSEI 3140
Macaca_mulatta    LEERSVLLAAFRTELTA LGTTDAVGLLNCLEQRIQEQGVEYQAAMEYLQKADRRSLLSEI 3141
Callithrix_jacchus LKERSVLLAAFRTELTA LGTTDAVGLLNCLEQRIQEQGVEYQAAMECLQKADRRSLLSEI 3134
Canis_lupus_familiaris LKERSVLLAAFRTELTA LGTTDAVGLLNCLEQRIQEQGVEYQAAMECLQKADRRSLLSEI 3095
Equus_caballus    LKERSVLLAAFRTELTA LGTTDAVGLLNCLEQRIQEQGVEYQAAMECLQKADRRSLLSEI 3145
Bos_taurus        LKERSVLLAAFRTELTA LGTTDAVGLLNCLEQRIQEQGVEYQAAMECLQKADRRSLLAEI 3102
Rhinatrema_bivittatum LKEANVLRAAFHTQLAALGTTAAAILVSQLEDRLKEQIEHAAMDCIQADRRSLLLEI 3283
Xenopus_tropicalis DREQDVLLSAFHTQLASLGTCDAALMNQMHRLQEQGMEQVNAMDCIQADRRSLLLEV 3490
Danio_rerio       VRERELLKSVLFAHLERLDSADALIHNLQLERALAEQDVQHREAMGVLYSADRSSLCSEI 2851
.....3670.....3680.....3690.....3700.....3710.....3720

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      : *~* :~*      .      :      :~* :~*
Pavo_muticus      QVLHAQMN SMKNNPKREQEIDSK-----SQEMLEYSMQK-QSQILEMQVELRSVK 3175
Pavo_cristatus    QVLHAQMN SMKNNPKREQEIDSK-----SQEMLEYSMQK-QSQILEMQVELRSVK 3175
Gallus_gallus     QVLHAQMN SMKNNPKREQEIDSK-----SQEMLEYSMQK-QSQIVEMQVELRSVK 3170
Mus_musculus      EDLRAQINGGKMTLEREQTEKS-----SQELLDSCSMQK-QSQ--LEMQLSLSLR 3017
Rattus_norvegicus EDLRAQINGRKMTLEREQEIEKP-----SQELLDSCNLQK-QSHVLEMQLSLSLR 3112
Homo_sapiens      QALHAQMN GRKITLKRQESEKP-----SQELLEYNIQK-QSQMLEMQVELSSMK 3144
Pan_troglodytes   QALHAQMN GRKITLKRQESEKP-----SQELLEYNIQK-QSQMLEMQVELSSMK 3190
Macaca_mulatta    QALHAQMN GRKITLKRQENESK-----SQELLEYNIQK-QSQMLEMQVELSSMK 3191
Callithrix_jacchus QALHAQINGRKITPKREQENESK-----SQELLEYNIQK-QSQMLEMQVELSNVK 3184
Canis_lupus_familiaris QALHAQMN GRKITLKRQENDQP-----SQELLEYNIMQK-QSQMLEMQVELSSVK 3145
Equus_caballus    QALHAQMN GRKITLKRQENDQP-----SQELLEYNIMQK-QSQMLEMQVELSSVK 3191
Bos_taurus        QALHSQMSIKKITLKRQEIDQP-----SQEPFDYSMQK-QSQILEMQVELGSVK 3152
Rhinatrema_bivittatum QALRSEINWLKMEKMKPHVDSK-----SQEQSAHVMLQ-EQS---PLLVELNSVK 3330
Xenopus_tropicalis QDLRSQLLSLRNDVAAKPPSVSL-----AEDMAYQNLEQDHTHTIQEMHQLNRMS 3541
Danio_rerio       QQLRDQLHTLTSEHTHASGMLSSDRLEERLLSSDRLEERLLSSDRLEERLLSSDRLEERL 2911
.....3730.....3740.....3750.....3760.....3770.....3780

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      .*:::* *.
Pavo_muticus      DRAAELQEQLNSE----- 3188
Pavo_cristatus    DRAAELQEQLNSE----- 3188
Gallus_gallus     DRAAELQEQLNSE----- 3183
Mus_musculus      DRAAELQEQLSSE----- 3030
Rattus_norvegicus DRAAELQEQLSSE----- 3125
Homo_sapiens      DRATELQEQLSSE----- 3157
Pan_troglodytes   DRATELQEQLSSE----- 3203
Macaca_mulatta    DRATELQEQLSSE----- 3204
Callithrix_jacchus DRATELQEQLSSE----- 3197
Canis_lupus_familiaris DRAAELQEQLSSE----- 3158
Equus_caballus    DKATELQEQLSSE----- 3204
Bos_taurus        DRATELQEQLSSE----- 3165
Rhinatrema_bivittatum GRVAELQDQLNSE----- 3343
Xenopus_tropicalis VRSSELEEQLSSE----- 3554
Danio_rerio       LSSDRLEERLLSSDRLEERLLSSDRPEERLLSSDRPEERLLSSDRPEERL 2971
      .....3790.....3800.....3810.....3820.....3830.....3840

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      *: .** ::*:** ::*. **.*****::* *
Pavo_muticus      -----RMMNAELKNELAQAKLELETTTLKAQHKHFKDLETIRTE 3226
Pavo_cristatus    -----RMMNAELKNELAQAKLELETTTLKAQHKHFKDLETIRTE 3226
Gallus_gallus     -----RMMSAELKNELAQAKLELETTTLKAQHKHFKDLETIRTE 3221
Mus_musculus      -----KMOVVAELKSELAQAKLELGTTTLKAQHKRLKELEAFRSE 3068
Rattus_norvegicus -----KMOVVAELKSELAQAKLELGTTTLKAQHKRLKELEAFRSE 3163
Homo_sapiens      -----KMOVVAELKSELAQTKLELETTTLKAQHKHLKELEAFRLE 3195
Pan_troglodytes   -----KMOVVAELKSELAQTKLELETTTLKAQHKHLKELEAFRLE 3241
Macaca_mulatta    -----KMOVVAELRSELAQTKLELETTTLKAQHKHLKELEAFRLE 3242
Callithrix_jacchus -----KMOVVAELKSELAQTKLELETTTLKAQHKHLKELEAFRLE 3235
Canis_lupus_familiaris -----KMOVVAELKSELAQTKLELETTTLKAQHKHLKELEAFRLE 3196
Equus_caballus    -----KMOVVAELKSELAQTKLELETTTLKAQHKHLKELEAFRLE 3242
Bos_taurus        -----KMOVVSELKSELARTKLELEATTLKAQHKHLKELEAFRLE 3203
Rhinatrema_bivittatum -----KMLVAELTNELAQAKLELGTTTLKAQHKHFKLELETLRLE 3381
Xenopus_tropicalis -----RHLGTEVKNELAQTKIELESALSQHKHFKLELESLRLE 3592
Danio_rerio       LSSDRLEERLLSSDRPEERLLSSDRLEEMKSELNHTKLELESALNTQHTHLRELDTLRSE 3031
      .....3850.....3860.....3870.....3880.....3890.....3900

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Pavo_muticus      VKEKAAELDVLKDTMASEQKKSRELOWALEKEKAKMERSEERRREELEDLKFSLEDQOK 3286
Pavo_cristatus    VKEKAAELDVLKDTMASEQKKSRELOWALEKEKAKMERSEERRREELEDLKFSLEDQOK 3286
Gallus_gallus     VKEKAAELDVLKDTMASEQKKSRELOWALEKEKAKMERTEERRREELEDLKFSLEDQOK 3281
Mus_musculus      VKEKTDEIHFLSDTLAREQKKSLELOWALEKEKAKSGHHEGREKEELEDLKFSLEDQKRR 3128
Rattus_norvegicus IKEKTDEIHFLSDTLAREQKKSLELOWALEKEKAKSGHHEWEKEELEDLKFSLEDQKRR 3223
Homo_sapiens      VKDKTDEVHLLNDTLASEQKKSRELOWALEKEKAKLGRSEERDKEELEDLKFSLESQOR 3255
Pan_troglodytes   VKDKTDEVHLLNDTLASEQKKSRELOWALEKEKAKLGRSEERDKEELEDLKFSLESQOR 3301
Macaca_mulatta    VKDKTDEVHLLNDTLASEQKKSRELOWALEKEKAKLGRSEERDKEELEDLKFSLESQOR 3302
Callithrix_jacchus VKDKTDEVHLLNDTVASEQKKSRELOWALEKEKAKLGRSEERDKEELEDLKFSLESQOR 3295
Canis_lupus_familiaris VKDKTDEVHLLNDTLASEQKKSRELOWALEKEKAKLGRNEERDKEELEDLKFSLEGQOR 3256
Equus_caballus    VKDKTDEVHLLNDTLASEQKKSRELOWALEKEKAKLGRSEERDKEELEDLKFSLEGQOR 3302
Bos_taurus        VKDKTEEVHLLNDTLASEQKKSRELOWALEKEKAKQGRSEERDKEELEDLKFSLEGQOR 3263
Rhinatrema_bivittatum VAEKASEVDRLNDTLANEQKRMRELHWALEKEKAKMERMEEREKEELEDLRFSLEDONLK 3441
Xenopus_tropicalis IKQRSDELDAVSETLENEQKKTRELOWALEKEKAKVERSEERGKEELEDLKMLVDTQSEK 3652
Danio_rerio       VSLRVSEVDTLTDLRAEEQKRGRELOWALEKQKHRLDRKEEADREEVEELRLALEEORSR 3091
      .....3910.....3920.....3930.....3940.....3950.....3960

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Pavo_muticus      NLQLNELLEEEKQLSSDLQOKIESQEALSAALSRERGRNSELQVLLSEKVRAL EISSA 3346
Pavo_cristatus    NLQLNELLEEEKQLSSDLQOKIESQEALSAALSRERGRNSELQVLLSEKVRAL EISSA 3346
Gallus_gallus     NLQLNELLEEEKQLSSDLQOKIESQEALSAALSRERGRNSELQVLLSEKVRAL EISSA 3341
Mus_musculus      NTQLNLLLEQQKQLLNESQOKIESQKMLHDAQLSEEQGRNLGLQALLESEQVRIQEMKST 3188
Rattus_norvegicus NTQLNLLLEQQKQLLNESQOKMESQKMLHDAQLSEEQGRNLGLQALLESEQVRIQEMKST 3283
Homo_sapiens      NLQLNLLLEQQKQLLNESQOKIESQRMLYDAQLSEEQGRNLELQVLLSEKVRIREMSST 3315
Pan_troglodytes   NLQLNLLLEQQKQLLNESQOKIESQRMLYDAQLSEEQGRNLELQVLLSEKVRIREMSST 3361
Macaca_mulatta    NLQLNLLLEQQKQLLDSESQOKIESQRMLYDAQLSEEHGRNLELQVLLSEKVRIREMSST 3362
Callithrix_jacchus NLQLNLLLEQQKQLLNESQOKIESQRMLYDAQLSEEQSRNLELQVLLSEKVRIREMSST 3355
Canis_lupus_familiaris NIQLNLLLEQQKQLLNESQEKIESQRVLHDAQLSEERGRNLELQVLLSEKVRIQEMSST 3316
Equus_caballus    NIQLNLLLEQQKQLLNESQOKIESQRVLHDAQLSEERGRNLELQVLLSEKVRIQEMSST 3362
Bos_taurus        NIQLSOLLEQQKQLLNESHOKIESQORALHEAQLAEERGRNLELQVLLSEKVRIREMTST 3323
Rhinatrema_bivittatum NLQLSKLLEQEKQLVSELQOKMESQKGLHESQLSQEQGNSEFKVLLAEKIRAFELATA 3501
Xenopus_tropicalis IKEISNLLLENKQKVKDLQERMESREIAFVAELSQEKSAAELQAFLDDEEKTRCKELVNA 3712
Danio_rerio       VSELSISLEQQKQISDQREIQHSDVSELQVLDACRARCALSGALEKEKQLNTQLIQR 3151
      .....3970.....3980.....3990.....4000.....4010.....4020

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Pavo_muticus      LEREKELCAQLQSAE-----HKGOAGTPNPSEELLKELQKQMDKHDRIVELVSEM 3397
Pavo_cristatus    LEREKELCAQLQSAE-----HKGOAGTPNPSEELLKELQKQMDKHDRIVELVSEM 3397
Gallus_gallus     LEREKELCAQLQSAE-----HKGOAGTPNPSEELLKELQKQMDKHDRIVELVSEM 3392
Mus_musculus      LDKERELYAQLQSR-----DGGOPPPALPSEDLLKELQKQLEEKHSRIVELLSET 3239
Rattus_norvegicus LDKERELYAQLQSRD-----DGGQPLPVLPSDDLKELQKQLEEKHTRIVELLSET 3334
Homo_sapiens      LDRERELHAQLQSSD-----GTGQSRPPLPSEDLLKELQKQLEEKHSRIVELLNET 3366
Pan_troglodytes   LDRERELHAQLQSSD-----GTGQSRPPLPSEDLLKELQKQLEEKHSRIVELLNET 3412
Macaca_mulatta    LDRERELHAQLQSN-----GTGQSRPPLPSEDLLKELQKQLEEKHSRIVELLNET 3413
Callithrix_jacchus LDRERELHAQLQNN-----STGQPRLSLPSDDLKELQKQLEEKHSRIVELLNET 3406
Canis_lupus_familiaris LDRERELHAQLQSSD-----DSGQPRPSLPSDDLKELQKQLEEKHSRIVELLNET 3367
Equus_caballus    LDRERELRAQLQSKD-----DSGQPRPSLPSDDLKELQKQLEEKHSRIVELLNET 3413
Bos_taurus        LDRERELHAQLQSSD-----DSGQPRPSLPSDDLKELQKQLEEKHSRIVELLNET 3374
Rhinatrema_bivittatum LEREKELRVQLKIHE-----GSGEGEMQKQOEELLKDLQSLQDEKHNRIVELIGET 3552
Xenopus_tropicalis LDCRTKLHTQLQKCE-----GGEQSDSHSQADDLLKDLQSLQLEVKKHRIVELVGEM 3763
Danio_rerio       FQSGSSHTHTLPSGTQNTLLEAEATCSQVEAGVESVESLLQTLQSLQMEKQTVVQMMMEEM 3211
      .....4030.....4040.....4050.....4060.....4070.....4080

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      *  *:  *:  *:  *:  ::::  :  ...:  .  ::::  :  :  :
Pavo_muticus      EKYKLESVQVRQOMEKERQIQRKALQAEQDANVITQKKLHELESKVEDLQWLQKEQEV 3457
Pavo_cristatus    EKYKLESVQVRQOMEKERQIQRKALQAEQDANVITQKKLHELESKVEDLQWLQKEQEV 3457
Gallus_gallus     EKYKLESVQVRQOMEKERQIQRKALQAEQDANIITQKKLHELESKVEDLQWLQKEQEV 3452
Mus_musculus      EKYKLDLQTRQOMEKDRQVHQKTLQTEQEAANTQGGKMQELQSKVEELQRLQEKROQV 3299
Rattus_norvegicus EKYKLDLQTRQOMEKDRQVHQKTLQTEQEAANTQGGKMQELQSKVEELQRLQEKROQV 3394
Homo_sapiens      EKYKLDLQTRQOMEKDRQVHRKTLQTEQEAANTQGGKMHQELQSKVEDLQRLQEEKROQV 3426
Pan_troglodytes   EKYKLDLQTRQOMEKDRQVHRKTLQTEQEAANTQGGKMHQELQSKVEDLQRLQEEKROQV 3472
Macaca_mulatta    EKYKLDLQTRQOMEKDRQVHRKTLQTEQEAANTQGGKMHQELQSKVEDLQRLQEEKROQV 3473
Callithrix_jacchus EKYKLDLQTRQOMEKDRQVHRKTLQTEQEAANTQGGKMHQELQSKVEDLQRLQEEKROQV 3466
Canis_lupus_familiaris EKYKLDLQTRQOMEKDRQVHRKTLQTEQEAANTQGGKMHQELQSKVEDLQRLQEEKROQV 3427
Equus_caballus    EKYKLDLQTRQOMEKDRQVHRKTLQTEQEAANTQGGKMHQELQSKVEDLQRLQEEKROQV 3473
Bos_taurus        EKYKLDLQTRQOMEKDRQVHRKTLQTEQEAANTQGGKMHQELQSKVEDLQRLQEEKROQV 3434
Rhinatrema_bivittatum ERYKLECVQMRQKLEDEKIQKRALQAEQEAANNQATRKVQQLASEVKDLQGVVEEKIRHV 3612
Xenopus_tropicalis EAYKLECVQLRRSIEEEKQSHRRQIEAESDSGKAAHIQAEQELKTMVDDLOOKLNAKTVEL 3823
Danio_rerio       EKQOLEALQHRRSQEEERSALARTAAEHQSAQTARESLREMOSQLQAERENGRRMETER 3271
      .....4090.....4100.....4110.....4120.....4130.....4140

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      *:      *:      ::      .      :      :      .      .
Pavo_muticus      HKLGNETKKLQEVIOELQMKQEQSEGKKEAERTPSHNQNE----- 3497
Pavo_cristatus    HKLGNETKKLQEVIOELQMKQEQSEGKKEAERTPSHNQNE----- 3497
Gallus_gallus     HKLGNETKKLQEVIKELQMKQEQSEGKKEAERTPSHNQNETT-WDTPNERTRNWVLQOKM 3511
Mus_musculus      YKLDLEGKRLQGLMQEFQKQELEPEEKPGSRGLVDONLNEPATWNFTDDTRTNWVLQOKM 3359
Rattus_norvegicus YKLDLEGKRLQGLMQEFQKQELEPEEKPGSRGLVYQNLNEPATWSWFTDDTRTNWVLQOKM 3454
Homo_sapiens      YKLDLEGQRLQGLMQEFQKQELEREERKRESRRILYQNLNEPTTWSLTSDDRTRTNWVLQOKI 3486
Pan_troglodytes   YKLDLEGQRLQGLMQEFQKQELEREERKRESRRILYQNLNEPATWSLTSDDRTRTNWVLQOKI 3532
Macaca_mulatta    YKLDLEGQRLQGLMQEFQKQELEREERKRESRRILYQNLNEPATWSLTSDDRTRTNWVLQOKI 3533
Callithrix_jacchus YKLDLEGKRLQGLMQEFQKQELEREERKRESRRILYQNLNEPATWSLTSDDRTRTNWVLQOKI 3526
Canis_lupus_familiaris YKLDLEGKRLQGLMQEFQKQELEREERKRESRRILYQNLNEPTTWSLTSDDRTRTNWVLQOKI 3487
Equus_caballus    YKLDLEGKRLQGLMQEFQKQELEREERKRESKRILCQNLNEPTTWSLTSDDRTRTNWVLQOKI 3533
Bos_taurus        YKLDLEGKRLQGLMQEFQKQELEREERKRESRRILYQNLNEPTAWSLTNDRTRTNWVLQOKM 3494
Rhinatrema_bivittatum QKLQQEEKLLQVKIQDLQHKKRDREEKQEPET--TTRQDLQETTWDSQCDTRTNWVFOOKT 3670
Xenopus_tropicalis QKVKADEKRLKETIIGLENN--NQGVITEHRSARRELGASTSGWKSTTDTPRSNGHQQSE 3881
Danio_rerio       EKLQETLTLLLEDRLHSHHTARNHDGQPVGDTRDWVLQHEPANILNLESTCVQQTADPKHM 3331
.....4150.....4160.....4170.....4180.....4190.....4200

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Pavo_muticus      ----- 3497
Pavo_cristatus    ----- 3497
Gallus_gallus     EGA-ETNESTYATLTGGGGDLAATAILEAVRQKLQSASPKLKQLAQKAASRLQFEAADD 3570
Mus_musculus      G---EAKDRNFTKLIIEINGGELDHNDLEMIROTLQHVASKLQHVAKACSRLQFETAGD 3416
Rattus_norvegicus G---ETKDTNFTKLIIEING-ELDHNDLEVIROTLQHVASKLQHVAKACNRLQFETASD 3510
Homo_sapiens      EG--ETKESNYAKLIEMNGGGTGCNHELEMIROKLQCVASKLQVLPOKASERLQFETADD 3544
Pan_troglodytes   EG--ETKESNYAKLIEMNGGGTGCNHELEMIROKLQCVASKLQVLPOKASERLQFETADD 3590
Macaca_mulatta    EG--ETKESNYAKLIEMNGGGTGCNHELEMSRQKLQCVASKLQVLAQKASKRLQFEIADD 3591
Callithrix_jacchus EG--ETKESNYAKLVEMNNGGGTGCNHELEMIROKLQCVASKLQVLAQKASTRLQFETADD 3584
Canis_lupus_familiaris EG--ETKESNYAKLIEMNGGGTGCNHELEMIROKLQCVASKLQVLAQKASNRLQFETADD 3545
Equus_caballus    EG--ETKESNYAKLIEMNGGGTGCNHELEMIROKLQCVASKLQVLAQKASDRLQFETADD 3591
Bos_taurus        G---ETKESNYAKLIEMNGGGTGCNHELEMIROKLQCVASKLQVLAQKASNRLQFETADD 3551
Rhinatrema_bivittatum EGE-ETKQSSNSPQLNGVDIVTGSNQALESIKRQLQKVSQKLKHLATKAASRVPFEAADD 3729
Xenopus_tropicalis ESTGSSLRQIPSIALNGDYIGGGGPFVETIRERLQKVSQKLKHLATKAASRVPFESVDH 3941
Danio_rerio       EK-----SSDPKHMHDHILSRQLIAAKINSLTSQSPHRLPGEQPD 3372
.....4210.....4220.....4230.....4240.....4250.....4260

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Pavo_muticus      ----- 3497
Pavo_cristatus    ----- 3497
Gallus_gallus     QDFIAIQNAIEEVISELQKLPGVSCLEELKLALPPGTPSSSLTERLLRQNAELTGFFVSRL 3630
Mus_musculus      DAFIWIQENIDGIILQKLQKLTGQ--PGDEHSLGPPSSSCGSLTESLMRQNTLTRLINQL 3474
Rattus_norvegicus DAFIWIQENIDGIILQKLQKLTGQ--PGDEHSLAPPSSSCGSLTESLMRQNTLTRLINQL 3568
Homo_sapiens      EDFIWIQENIDEIILQKLQKLTGQ--QGEEPSLVSPSTSCGSLTERLLRQNAELTGHHISQL 3602
Pan_troglodytes   EDFIWIQENIDEIILQKLQKLTGQ--QGEEPSLVSPSTSCGSLTERLLRQNAELTGHHISQL 3648
Macaca_mulatta    EDFIWIQENIDEIILQKLQKLTGQ--QGEEPSLVSPSTSCGSLTERLLRQNAELTGHHISQL 3649
Callithrix_jacchus EDFIWIQENIDEIILQKLQKLTGQ--QGEEPSLVSPSTSCGSLTERLLRQNAELTGHHISQL 3642
Canis_lupus_familiaris EDFIWIQENIDEIILQKLQKLTGQ--PGEEPSLVSPSTSCGSLTERLLRQNAELTGHHISQL 3603
Equus_caballus    EDFIWIQENIDGIILQKLQKLTGQ--PGEEPSLVSPSTSCGSLTERLLRQNAELTGHHISQL 3649
Bos_taurus        EDFVWQENIDRIILQKLQKLTGQ--PGEEPSLVSPSTSCGSLTERLLRQNAELTGHHISQL 3609
Rhinatrema_bivittatum GDFVWQENIDRIILQKLQKLTGQ--PGEEPSLVSPSTSCGSLTERLLRQNAELTGHHISQL 3787
Xenopus_tropicalis EDLTWSKNSIQEIIYQLGQVAVLS-LDGENFVFPFGISTNTLTKLLTQNAELTGHHISQL 4000
Danio_rerio       DSLAWLHNSNVQDVMSLLQHIPSAAPALPESVSLLSAGSCSLNRLRQNAELTGFFVSRL 3432
.....4270.....4280.....4290.....4300.....4310.....4320

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Pavo_muticus ----- 3497
Pavo_cristatus ----- 3497
Gallus_gallus SEEKNNLRNAVVKLEELRRYQLRRISGEHSS-KHSSDLGVNIDTLVASEKENWNREKLS 3689
Mus_musculus TEEKNTLRISIVIKLEELNRCYWHITGASRDCCS-RFSFIDPADIEAIIASEKEVWNREKLS 3533
Rattus_norvegicus TEEKNTLRISIVVKLEELNRCHWHTGAGRDCCS-RFSFIDPADIEAIIASEKEVWNREKLS 3627
Homo_sapiens TEEKNDLRNMVMKLEEQIRWYROTGAGRDNSS-RFSLNGGANIEAIIASEKEVWNREKLT 3661
Pan_troglodytes TEEKNDLRNMVMKLEEQIRWYROTGAGRDNSS-RFSLNGGANIEAIIASEKEVWNREKLT 3707
Macaca_mulatta TEEKNDLRNMVMKLEEQIRWYROTGAGRDNSS-RFSLNGGANIEAIIASEKEVWNREKLT 3708
Callithrix_jacchus TEEKNDLRNMVMKLEEQIRWYROTGAGRDHSS-RFSLNGGGNIEAIIASEKEVWNREKLT 3701
Canis_lupus_familiaris TEEKNDLRNTVMKLEEQIRRYRQIGAGRDYSS-RFSFSGGASIEAIIASEKEIWNREKLT 3662
Equus_caballus TEEKNDLRNTVMKLEEQIKWYQQTGAGRDYSS-RFSFSGGANIGAIASEKEVWNREKLT 3708
Bos_taurus TEEKNDLRNMIMKLEEQIRWHROAGTGRDYSS-RFSLSGGPNIETITSEKEVWNREKLA 3668
Rhinatrema_bivittatum TEEKNDLRNALIKLEELRVYKQRPSPGDHVC-RHSLDNEVNVLDALLASEREISSKEKHA 3846
Xenopus_tropicalis TEEKNDLRNALLRLEEEACRHLRGPSPGDHSGPLSVENTANIDMLIASERELWIREKIK 4060
Danio_rerio TEEKNELRNQILKLEDELRRYRQHRDNTHTAWSRAVGRQD--LLSSSERESWAQERN 3490
.....4330.....4340.....4350.....4360.....4370.....4380

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Pavo_muticus ----- 3497
Pavo_cristatus ----- 3497
Gallus_gallus LQKSLKQADAELSKLRAELRSEAFRELGSSENVILRRIYGYLRAESFRKALIYQKKY 3749
Mus_musculus LQKALKRAEAKVYKLKAE LRNDALLRNLGPDTHAALQKIYNKYLRASSFRKALIYQKKY 3593
Rattus_norvegicus LQKALKRAEAKVYKLKAE LRNDALLRSLSPDSEHAALQKIYNKYLRASSFRKALIYQKKY 3687
Homo_sapiens LQKSLKRAEAEVYKLKAE LRNDLLQTLSPDSEHVTLKRIYGYLRAESFRKALIYQKKY 3721
Pan_troglodytes LQKSLKRAEAEVYKLKAE LRNDLLQTLSPDSEHVTLKRIYGYLRAESFRKALIYQKKY 3767
Macaca_mulatta LQKSLKRAEAEVYKLKAE LRNDLLQTLSPDSEHVTLKRIYGYLRAESFRKALIYQKKY 3768
Callithrix_jacchus LQKSLKRAEAEVYKLKAE LRNDLLQTLSPDSEHVTLKRIYGYLRAESFRKALIYQKKY 3761
Canis_lupus_familiaris LQKSLKRAEAEVYKLKAE LRNETLLHNLSPDSEHAAIKRIYGYLRAESFRKALIYQKKY 3722
Equus_caballus LQKSLKRAEAEVYKLKAE LRNEALLQNLSPDSE-ATIKRIYGYLRAESFRKALIYQKKY 3767
Bos_taurus LQKSLKRAEAEVYKLKAE LRNEALLQNLSPDSEHAAIKRIYGYLRAESFRKALIYQKKY 3728
Rhinatrema_bivittatum LQKSLKLAAEELSKLKADLRNDSFLRDLGPDSENLALKRIYGYLRSSEYRKALIYQKKY 3906
Xenopus_tropicalis LQKSLKQTEAEELSKVKAELRNETTQKDFGRESENTALKRVYSKYLRRAESFRKALVYQKKY 4120
Danio_rerio LQKSLRQTEAEELNRVRSELRCDTLRDLSSADPDNTALKRMYGYLRAESFRKALIYQKKY 3550
.....4390.....4400.....4410.....4420.....4430.....4440

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Pavo_muticus ----- 3497
Pavo_cristatus ----- 3497
Gallus_gallus LLLLLGGFQECCEATLALIARMGGQPSYTDLEIITHHSGKFTRFRSAVRVSI AISRMKFL 3809
Mus_musculus LLLLLGGFQECEDVTLGVLARMGGHLALKDSKITINHPKAFSRFRSAVRVSI AISRMKFL 3653
Rattus_norvegicus LLLLLGGFQECEDATLGVLARMGGHPALKDPKTIITSHPKGFTFRFRSAVRVSI AISRMKFL 3747
Homo_sapiens LLLLLGGFQECEDATLALLARMGGQPAFTDLEVIITNRPKGFTFRFRSAVRVSI AISRMKFL 3781
Pan_troglodytes LLLLLGGFQECEDATLALLARMGGQPAFTDLEVIITNRPKGFTFRFRSAVRVSI AISRMKFL 3827
Macaca_mulatta LLLLLGGFQECEDATLALLARMGGQPAFTDLEVIITNRPKGFTFRFRSAVRVSI AISRMKFL 3828
Callithrix_jacchus LLLLLGGFQECEDATLALLARMGGQPAFTDLEVIITNHPKGFTFRFRSAVRVSI AISRMKFL 3821
Canis_lupus_familiaris LLLLLGGFQECEDATLALLARMGGQPAFTDLEVIITNRPKGFTFRFRSAVRVSI AISRMKFL 3782
Equus_caballus LLLLLGGFQECEDATLALLARMGGQPAFTDLEVIITNRPKGFTFRFRSAVRVSI AISRMKFL 3827
Bos_taurus LLLLLGGFQECCEATLALLARMGGQPAFTDLEVIITNRPKGFTFRFRSAVRVSI AISRMKFL 3788
Rhinatrema_bivittatum LLLLLGGFQECEQATLSLIARMGGQPCYTDLEIITNHSRAFTFRFRSAVRVSI AISRMKFL 3966
Xenopus_tropicalis LLLLLGGFQECCEATLALIARMGGQPSYTDLEVIITHHTRAFTRFRSAVRVSI AISRMKFL 4180
Danio_rerio LLLLLGGFQECEDATLTLLISHMGALPGHCSP--HTQQRGITFRFRSAARVSI AISRMKFL 3608
.....4450.....4460.....4470.....4480.....4490.....4500

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Pavo_muticus          ----- 3497
Pavo_cristatus        ----- 3497
Gallus_gallus         VRRWHRVTGSGILSLSRDVFSONTG-----NELRPSFSSGMDLYGEQRHS-YRSR 3859
Mus_musculus          VRRWQOVTSTSSININRDGFGLSPG-----IEKTDPFYHSSPGGLQLYGEPRHTMYRSR 3706
Rattus_norvegicus     VRRWQOVTSTSSININRDGFGLSPG-----IEKTDPFYHSSGGLELYGEPRHTTYRSR 3800
Homo_sapiens          VRRWHRVTGSVSININRDGFGLNQG-----AEKTDSEFYHSSGGLELYGEPRHTTYRSR 3834
Pan_troglodytes       VRRWHRVTGSVSININRDGFGLNQG-----AEKTDSEFYHSSGGLELYGEPRHTTYRSR 3880
Macaca_mulatta        VRRWHRVTGSGSININRDGFGLNQG-----AEKTDSEFYHSSGGLELYGEPRHTTYRSR 3881
Callithrix_jacchus    VRRWHRVTGSGSININRDGFGLNQG-----AEKTDSEFYHSSGGLELYGEPRHTTYRSR 3874
Canis_lupus_familiaris VRRWQRTVSSGSININRDGFGLNPG-----GAEKTDPFYHSSGGLELYGEPRHTTYRSR 3835
Equus_caballus        VRRWHRVTSSGSININRDGFGLSPGAFWITLGAERTEPFYRPSGGLELYGEPRHSTYRSR 3887
Bos_taurus            VRRWHRVTSSGSININRDGFGLNPGTFWITLGAEKTDTFYHSSGGLELYGEPRHTAYRSR 3848
Rhinatrema_bivittatum VRRWQRAIGASSITSNRNDFGQSSG-----NEVRAGSPYFPPGGLDLYGEQRLSSSR 4020
Xenopus_tropicalis    VRRWQRTATGSSPSSINRNVFQGITG-----NELRTESEYPPAGSLELYGEQRHLACRSR 4234
Danio_rerio           VKRWQRASGGSTTPQILSRNGLAHG-----TGADVRNESSFLSPAARELYRD-RRATSRGR 3663
.....4510.....4520.....4530.....4540.....4550.....4560

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Pavo_muticus          ----- 3497
Pavo_cristatus        ----- 3497
Gallus_gallus         SDMESPRSPINPQKFKFSMHADLNPVSFACSQLQNYDPERALTDYIHRLEALQRRIGSVQ 3919
Mus_musculus          FDLDYPRSLPLPLQNRYPGTPGDLNSISMASQLHQYNPKSLTDYVTRLEALRRRLGAIQ 3766
Rattus_norvegicus     FDLDYPRSLPLPLQNRYPGAP-DLNSTSMASQLHQYNPKSLTDYVTRLEALKRRRLGAIQ 3859
Homo_sapiens          SLDLYIRSPLPFPQNRYPGTPADFNPGSLACSOLQNYDPPDRALTDYITRLEALQRRIGTIQ 3894
Pan_troglodytes       SLDLYIRSPLPFPQNRYPGAPADFNPGSLACSOLQNYDPPDRALTDYITRLEALQRRIGTVQ 3940
Macaca_mulatta        SLDLYIRSPLPFPQNRYPGTPADFIPIGSLACSOLQNYDPPDRALTDYITRLEALQRRIGTIQ 3941
Callithrix_jacchus    SLDLYIRSPLPFPQNRYPGIPADFNPGSLACSOLQNYDPPDRALTDYITRLEALQRRIGTVQ 3934
Canis_lupus_familiaris SELDYPRSLPFPQNRYPGPPADLNPSLACSOLQNYDPPDRALTDYITRLEALQRRIGTVQ 3895
Equus_caballus        SLDLDCPRSPLPFPQNRYPGLPADLNPGSLACSOLQNYDPPDRALTDYITRLEALQRRIGTVQ 3947
Bos_taurus            SLDLYPRSLPFPQNRYPGLPADLNPGSLACSOLQNYDPPDRALTDYITRLEALQRRIGTVQ 3908
Rhinatrema_bivittatum SDLESPRSTVTSQHRYQVIPADLSP----CSHLQNYDPPDRALTDYINRLESLORRIGSAQ 4076
Xenopus_tropicalis    SEFDSPOSTVNSQHRY-NAVSDVSP----CSYLQNYDPPDRALTDYITRLEALQKRLGSAH 4289
Danio_rerio           TGRESRPSAASVQHRFVGVPGEAGG--LSCSHLQNYDPPDRALTDYISRLEALQRRIGSVQ 3721
.....4570.....4580.....4590.....4600.....4610.....4620

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Pavo_muticus          ----- 3497
Pavo_cristatus        ----- 3497
Gallus_gallus         SVSTS-YTQLHSAMRR----- 3934
Mus_musculus          SGS---TTQFHFGMRR----- 3779
Rattus_norvegicus     SGS---TTQFHFGMRR----- 3872
Homo_sapiens          SGS---TTQFHAGMRR----- 3907
Pan_troglodytes       SGALSLTTSWQHHSARPTAPLSLKFFHTH- 3969
Macaca_mulatta        SGALSLTTSWQHHSARPTAPLFLKFFHTHH 3971
Callithrix_jacchus    SGALSLTTPWQHHSARPTAILSLKLLHTHH 3964
Canis_lupus_familiaris SGS---TQFHAGMRR----- 3907
Equus_caballus        SGS---TQFHAGMRR----- 3959
Bos_taurus            SGS---TQFHAGMRR----- 3920
Rhinatrema_bivittatum SGS-TTSTQLHYGTRR----- 4091
Xenopus_tropicalis    TGS---SNTSHYSTRR----- 4302
Danio_rerio           SGS---SSYAHFSVRR----- 3734
.....4630.....4640.....4650

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