

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/UIMCats Tue Feb 1 14:50:37 2022

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Species	Sequence	Position
Pavo_muticus	-----MPRR	4
Pavo_cristatus	-----MPRR	4
Gallus_gallus	-----MPRR	4
Chelonia_mydas	-----MPRK	4
Mus_musculus	-----MPRR	4
Rattus_norvegicus	-----MTGCVSETGETRMLVTSEMLGKRMPPRR	28
Canis_lupus_familiaris	-----MPRR	4
Equus_caballus	-----MPRR	4
Bos_taurus	-----MPRR	4
Homo_sapiens	-----MPRR	4
Pan_troglodytes	-----MKVCFWNQIHSASTLSPLPAYQLFALKKKKKOOPRISLGRIDMFTMLKLPTRWHDKRMPPRR	60
Macaca_mulatta	-----MPRR	4
Callithrix_jacchus	-----MVRR	4
Rhinatrema_bivittatum	-----MPRK	4
Xenopus_tropicalis	-----	

[illegible]

	:	:	:	..:***		.*:**						
Pavo_muticus	TKR	TKQ	QLD	RTKFAAKRK	IA-----	QMTE	84					
Pavo_cristatus	TKR	TKQ	QLD	RTKFAAKRK	IA-----	QMTE	84					
Gallus_gallus	TKR	TKQ	QLD	RTKFAAKRK	IA-----	QMTE	84					
Chelonia_mydas	KKR	TKQ	QLD	RVKFAAKRK	IA-----	QMTE	82					
Mus_musculus	KTK	TKQ	S-	NRSKCLAKRK	VA-----	HMSE	81					
Rattus_norvegicus	KMK	TKQ	S-	NRSKCLAKRK	IA-----	QMSE	105					
Canis_lupus_familiaris	KMK	TKQ	S-	NRTKCLAKRK	IA-----	QMTE	81					
Equus_caballus	KMK	TKQ	S-	NRAKCLAKRK	IA-----	QMTE	81					
Bos_taurus	KTK	AKQ	S-	NRAKCLAKRK	IAPHQAPLSMGFSRQ	EYWSGLPCLSPGVERRSLKSALTE	EMTE	117				
Homo_sapiens	KTK	TKQ	S-	NRAKCLAKRK	IA-----	QMTE	81					
Pan_troglodytes	KTK	TKQ	S-	NRAKCLAKRK	IA-----	QMTE	137					
Macaca_mulatta	KMK	TKP	S-	NRAKCLAKRK	IA-----	QMTE	81					
Callithrix_jacchus	KMK	TKQ	S-	NRTKYLAKRK	IA-----	QMTE	80					
Rhinatrema_bivittatum	KRR	TKP	QLD	RRAKLAVRRR	IA-----	QMTE	88					
Xenopus_tropicalis	FGK	NIQAQ	PDG	RRTSVKRR	IA-----	QMTE	59					
	130	140	150	160	170	180

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      :*:***:***** .. :*:***:**** **:.
Pavo_muticus      EEQFALALKMSEQEAEQVNCQEEEEEEELLRKAIAESLNSCQPSDS SATPOLP-VEVLDT 143
Pavo_cristatus    EEQFALALKMSEQEAEQVNCQEEEEEEELLRKAIAESLNSCQPSDS SATPOLP-VEVLDT 143
Gallus_gallus     EEQFALALKMSEQEAEQVNCQEEEEEEELLRKAIAESLNSCQPLDS SATPOLP-VEVLDT 143
Chelonia_mydas    DEQFALALKMSEQEAEQVNCREEEEEELVRKAIAESLNSYQPLDSPAETSAPPPAPTTCV 142
Mus_musculus      EEQFALALKMSEQEAEVNNQEEKEEEELLRKAIAESLNSCWSAASATR----- 130
Rattus_norvegicus EEQFALALKMSEQEAEVNNQEEKEEEELLRKAIAESLNSRWSSDASAAR----- 154
Canis_lupus_familiaris EEQFALALKMSEQEAEVNNQEEKEEEELLRKAIAESLNSCRPSDASATR----- 130
Equus_caballus    EEQFALALKMSEQEAEVNSQEEEEEEELLRKAIAESLNSCRPSDASATR----- 130
Bos_taurus        EEQFALALKMSEQEAEVNSQAEAAAAELLRKAIAESLNSCRPSDASATR----- 166
Homo_sapiens      EEQFALALKMSEQEAEVNSQEEEEEEELLRKAIAESLNSCRPSDASATR----- 130
Pan_troglodytes   EEQFALALKMSEQEAEVNSQEEEEEEELLRKAIAESLNSCRPSDASATR----- 186
Macaca_mulatta    EEQFALALKMSEQEAEVNSQEEEEEEELLRKAIAESLNSCRPSDASATR----- 130
Callithrix_jacchus EEQFALALKMSEQEAEVNSQEEEEEEELLRKAIAESLNSCRPSDASATR----- 129
Rhinatrema_bivittatum EEQLALAVKMSEQEASHMSQEEEEEEELLRKAIAESLNSCYPSDSWEQSTALP----- 141
Xenopus_tropicalis EEQLALAVRMSEQEANHVNYSQEEDEELLRKAIAESLNSCTVSEPCNT----- 108
.....190.....200.....210.....220.....230.....240

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Pavo_muticus      QGQSHPAEQEDDGILGGLAPCPDTPRSKGSSSHQSTRADGSGQIDVARSPLVVLKRLSQE 203
Pavo_cristatus    QGQSHPAEQEDDGILGGLAPCPDTPRSKGSSSHQSTRADGSGQIDVARSPLVVLKRLSQE 203
Gallus_gallus     QSQSHPAEQEGCGILGGLAPCPDTPRSKGSSSHQSTRADGSGQIDVARSPLVVLKRLSQE 203
Chelonia_mydas    PAQSHPAERKGAEIHGAVPPGPDSPQSDCSSHRSRSTKADGNGQADVAKSPLVVLKRLSQE 202
Mus_musculus      ---SRPLAAEL-----SSHSQENTKDSG-----TTEGVWLVPVPS 163
Rattus_norvegicus ---PRPLSTGP-----SSHPHDS TKDSG-----TTEGIWQLVPPS 187
Canis_lupus_familiaris ---SRPLATGP-----SSQSHQEKTTDSG-----TTEGIWQLVPPS 163
Equus_caballus    ---SRPVATGP-----SSQSHQEKTTDSG-----TTEGIWQLVPPS 163
Bos_taurus        ---SRPLATGP-----SSQSHQOKTTDSG-----TTEGIWQLVPPS 199
Homo_sapiens      ---SRPLATGP-----SSQSHQEKTTDSG-----LTEGIWQLVPPS 163
Pan_troglodytes   ---SRPLATGP-----SSQSHQEKTTDSG-----LTEGIWQLVPPS 219
Macaca_mulatta    ---SRPLATGP-----SSQSHQEKTTDSG-----ITEGIWQLVPPS 163
Callithrix_jacchus ---SRPLTTGP-----SSQSHQETADSG-----ITEGIWQLVPPP 162
Rhinatrema_bivittatum ---EQAMQVEEVHLEVLG-----FTEAISDLSESTQATSDGQTAVAKSPVVLKRLSQD 193
Xenopus_tropicalis ---TQNTNTLHSTNR-----TLAAEDCSEKHP 133
.....250.....260.....270.....280.....290.....300

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      : .. *.
Pavo_muticus      IVESSLVSSIIIVSPGKSOPLTRSSEKSSPPKSDSSNMLPSTLREDLISLSPTFGRVPSG 263
Pavo_cristatus    IVESSLVSSIIIVSPGKSOPLTRSSEKSSPPKSDSSNMLPSTLREDLISLSPTFGRVPSG 263
Gallus_gallus     IVESSLVSSIIIVSPGKSOPLTRSSEKSSPPKSDSSNMLPSTLREDLISLSPTFGRVPSG 263
Chelonia_mydas    IVESSLSSIIIVPPGKSOPLTKSNEKPSSPARNSRDTLPSPSGEKLISLSPTFARFTPG 262
Mus_musculus      LCKGSHVSSQGNEAEQRKEPDWHDN-ENTEEEPVSGS-----SG 199
Rattus_norvegicus LCKGSHISQGNEAEERGKEPDWHDN-ENPEEEPLSGS-----SG 223
Canis_lupus_familiaris LFKGSHISQGNEAEEREPEPDWHT-ENTEEEPVSGS-----SG 199
Equus_caballus    LFKGSHISQGNEAEEREPEPDWHT-ENTEEEPVSGS-----SG 199
Bos_taurus        LFKGSHISQGNEAEEREPEPDWHT-ENTEEEPVSGS-----SG 235
Homo_sapiens      LFKGSHISQGNEAEEREPEPDWHT-EKTEEEPVSGS-----SG 199
Pan_troglodytes   LFKGSHISQGNEAEEREPEPDWHT-EKTEEEPVSGS-----SG 255
Macaca_mulatta    LFKGSHISQGNEAEEREPEPDWHT-EKTEEEPVSGS-----SG 199
Callithrix_jacchus LFKGSHISQGNEAEEREPEPDWHT-EKTEEEPVSGS-----SG 198
Rhinatrema_bivittatum IVDS---SSIILSPGRENLFALIKELTLPVSDS-----SD 227
Xenopus_tropicalis ISQNCSLSEPPNNITVQOVYKETLSTNEPVKLQEH-----AE 170
.....310.....320.....330.....340.....350.....360

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      :      :*
Pavo_muticus      SWRLTPR-RLFTSPSGSSKAADHEPKQPLPCSGHSAGEAGAGSSAQLLKSWTTEQGGIP 322
Pavo_cristatus    SWRLTPR-RLFTSPSGSSKAADHEPKQPLPCSGHSAGEAGAGSSAQLLKSWTTEQGGIP 322
Gallus_gallus     SWRLTPR-RLFTSPSGSSKAADHKPKEQPLPCSGHPAGEASAGNSAQLFKSWTTEQGGSP 322
Chelonia_mydas    TWQLTPR-RLFSGSCSTSKAMGGERDKOPPAATGSSAGEPAAGSSAVLRKSRALGLGSP 321
Mus_musculus      SWDQSSQ-PVFENE--NVKCFDR-----CTGHLAEHTQCGKPOES-----TGSGYAF 243
Rattus_norvegicus SQDQSSR-PVFENE--KVKCFDR-----CTGHLAEHTQCGKPOES-----TGSGCAF 267
Canis_lupus_familiaris SWDQSSQ-PVFENE--NVKCFDR-----CTGHLAKHTQCEKPOES-----TGRGCAF 243
Equus_caballus    SWDQSSQ-PVFENE--NVKCFDR-----CTGRLAERTQCGKPOES-----TGRGCAF 243
Bos_taurus       SWDQSSQ-PVFENE--NVKCFDR-----CTGHLAEHTQCGKPOES-----TGRGCAF 279
Homo_sapiens      SWDQSSQ-PVFENV--NVKSFDR-----CTGHSAEHTQCGKPOES-----TGRGSAF 243
Pan_troglodytes   SWDQSSQ-PVFENV--NVKSFDR-----CTGHLAEHTQCGKPOES-----TGRGSAF 299
Macaca_mulatta    SWDQSSQ-PVFENV--NVKSFDR-----CTGHLAEHTQCGKPOES-----TGRG-SF 242
Callithrix_jacchus SWDQSSQ-PVFENV--NIKSFDR-----CTGHLAEHTQCGKPOES-----TGTGCTF 242
Rhinatrema_bivittatum SLCSSPCSPIIFPCR-----SLDQ-----LVPRKLFADSGTRIQAESQLDKCSDIAGS 275
Xenopus_tropicalis EKSFSQVSALFELP-----SGAAEQMNKEAHS-----TERPVVT 205
.....370.....380.....390.....400.....410.....420

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      :      :
Pavo_muticus      RMSGAGAGTKHSLQSRRAAVCVTTTEQAEQNEASDSSPELCMLNVAEEKH-EEEARDTVH 381
Pavo_cristatus    RMSGAGAGTKHSLQSRRAAVCVTTTEQAEQNEASDSSPELCMLNVAEEKH-EEEARDTVH 381
Gallus_gallus     RMSGAGAGTKHTLQSRRAATVCVTTTEQAEQNEVSDSSPELCMLNVAEEKH-EEEARDTVH 381
Chelonia_mydas    RKNCGAGGPECAPPRGHSGQGSVCGEHVERTEGPDKAPELCTLMADEKCKQEDARDTVH 381
Mus_musculus      SKAVQGRG-----DTSRQCLPTPADTKG-LQDTGGTVH 275
Rattus_norvegicus PKAVQGRG-----DTSRQCLPTPADTKG-LQDIGGTVH 299
Canis_lupus_familiaris HRAAQGRG-----DMSRHCLPTPGDTRG-LQDVGGTVH 275
Equus_caballus    HKAAQGRG-----DTSRHCLPTPADAKG-LQDIGGTVH 275
Bos_taurus       HKAAQGRG-----DTSRHCLPTPADAKG-LQDIGGTVH 311
Homo_sapiens      LKAVQSG-----DTSRHCLPTLADAKG-LQDTGGTVN 275
Pan_troglodytes   LKAVQSG-----DTSRHCLPTLADAKG-LQDTGGTVN 331
Macaca_mulatta    LRAAQSG-----DTSRHCLPTLADAKG-LQDIGGTVN 274
Callithrix_jacchus LKAAQGRG-----DTSRHCLPTLADAKG-LQDIGGTVH 274
Rhinatrema_bivittatum PKLEPSAG-----SQPKQDYRAEEKEQAGTGKGAVH 306
Xenopus_tropicalis GDVVEEG-----HLSQTFVVSSTPLSATQEMNTIED 235
.....430.....440.....450.....460.....470.....480

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      : . . * . : . : . . : * . . : : . :
Pavo_muticus      YYWGIPFCPKGVDPNQYTNVILCOLEVYQKSLKQAQROLLHKKEFGNPVPPSSS-LSQNE 440
Pavo_cristatus    YYWGIPFCPKGVDPNQYTNVILCOLEVYQKSLKQAQROLLHKKEFGNPVPPSSS-LSQNE 440
Gallus_gallus     YYWGIPFCPKGVDPNQYTNVILCOLEVYQKSLKQAQROLLHKKEFGNPVPPSSS-LSQNE 440
Chelonia_mydas    YYWGIPFCPKGVDPNQYTNVILCOLEVYQKSLKQAQROLLQKKEFGDPVVPCCSSPLSNE 441
Mus_musculus      YYWGIPFCPAGVDPNQYTNVILCOLEVYQKSLKMAQROLVKKRGFGPEVLPVPPFLIENE 335
Rattus_norvegicus YYWGVVFCPAGVDPDQYTSVILCOLEVYQKSLKMAQROLVKKRGFGPEVLPVPPFLIENE 359
Canis_lupus_familiaris YFWGIPFCPAGVDPNQYTKVILCOLEVYQKSLKMAQROLFKKRGFGPEVLPVPPSLIENE 335
Equus_caballus    YFWGIPFCPAGVDPNQYTKVILCOLEVYQKSLKMAQROLFKKRGFGPEVLPVPPSLIENE 335
Bos_taurus       YFWGIPFCPDGVDPNQYTKVILCOLEVYQKSLKMTQROLKKKRGFGPEVLPVPPSLIENE 371
Homo_sapiens      YFWGIPFCPDGVDPNQYTKVILCOLEVYQKSLKMAQROLNKKRGFGPEVLPVPPSLIENE 335
Pan_troglodytes   YFWGIPFCPDGVDPNQYTKVILCOLEVYQKSLKMAQROLKKKRGFGPEVLPVPPSLIENE 391
Macaca_mulatta    YFWGIPFCPDGVDPNQYTKVILCOLEVYQKSLKMAQROLKKKRGFGPEVLPVPPSLIENE 334
Callithrix_jacchus YFWGIPFCPNGLDPNQYTKVILCOLEVYQKSLKMAQROLKKKRGFGPEVLPVPPSLIENE 334
Rhinatrema_bivittatum YYWGIPFCPRGVDPNQYTNVILCOLEVYQKSLKMAQROLQKKEYGPEVLPCTSAIRLSE 366
Xenopus_tropicalis FTTSATFVTEEVGEALTQYSTVSSQSRHKSPPVLLMRLSQDIVESSSVILSPKCRDFSD 295
.....490.....500.....510.....520.....530.....540

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Pavo_muticus	LGKGEQISREN-GVADDTEDGDPGTQKECESITWLLPSKKREAE-SPGHNVVEEKNSTSD	498
Pavo_cristatus	LGKGEQISREN-GVADDTEDGDPGTQKECESITWLLPSKKREAE-SPGHNVVEEKNSTSD	498
Gallus_gallus	LRKGEQISREN-GVADDTEDGDPGTQKECESITWLLPSKKREAE-SPGHNVVEEKNSTSD	498
Chelonia_mydas	HGKGERINREN-GVPDDTEDG-----RKEPES TAWLLSTKNREPEQNPQNLEEEKNSTSE	496
Mus_musculus	CGQEDQTSQDKNEGISEDMDGEAKEERQESRASVWHSETK--DFQKSPIKSLKOK--LLLL	391
Rattus_norvegicus	CGQEEQTSEKHGELSEDVRAGAREERQSGSGASVWHSETK--DSQKSPITSLKQR--LLLL	415
Canis_lupus_familiaris	CGQGDQASEKNEVISIEDMGDEDKEERQESRASVWHSKTK--DFQESPIKSLKEK--LLLL	391
Equus_caballus	CGQGDQASEKNEGISEDMGDEDKEERQESRASVWHSKTK--DFQESPIKSLKEK--LLLL	391
Bos_taurus	CGQGDQASEKNEGISEDVGDEKQESRASVWHSKTK--DFQESPIKSLKEK--LLLL	427
Homo_sapiens	CGQGEQASEKNECISEDMGDEDKEERQESRASDWHSKTK--DFQESSIKSLKEK--LLLL	391
Pan_troglodytes	CGQGEQASEKNECISEDMGDEDKEERQESRASDWHSKTK--DFQESSIKSLKEK--LLLL	447
Macaca_mulatta	CGQGEQASEKNECISEDMGDEDKEERQESRASDWHSKTK--DFQESSIKSLKEK--LLLL	390
Callithrix_jacchus	CGQGEQASEKNEGISEDMGDEDKEERQESRASDWHSKTK--DFQESPIKSLKEK--LLLL	390
Rhinatrema_bivittatum	HDKGNEKDVESGATEEAGQEEK-RGEEAGPAGWQSYVNSNKLSPVHDQEAVERSEP	425
Xenopus_tropicalis	MESGMASCPSE-----NSNFVSM LPHKALTSPVFPKQLPRRLGLS	337
550.....560.....570.....580.....590.....600	

			.	.	*		
Pavo_muticus	DEPTTSYCO-----ASQVLSTEGVRGD-----GEPMQTAQSVCMLTPLGSR	539					
Pavo_cristatus	DEPTTSYCO-----ASQVLSTEGVRGD-----GEPMQTAQSVCMLTPLGSR	539					
Gallus_gallus	DEPTTSYCO-----ASHVLTEDVGRD-----GEPMQTAQSVCILTPLGSK	539					
Chelonia_mydas	DEPTTSYCOGPTCATHOPPAKASQAALFAEDMPED-----GEPMQTQSISALTLPFGSK	549					
Mus_musculus	EEPTTSRGQ-----SSQGLFVEETSEEGLKSSEGDNSVPITQSIAAALT--SK	436					
Rattus_norvegicus	EEPTTGRCQ-----SSQGLFVEETSEEVLKSSEGDDAVPASQSIIVLTI--SK	460					
Canis_lupus_familiaris	EEPTTSHGQ-----SSQGLFVEETSEE-----GNVSVPASQSIAAALT--SK	429					
Equus caballus	EEPTTSHGQ-----SSQGLFVEETSEE-----GNVSVPASQSIIIVFI--SK	429					
Bos_taurus	EEPTTSHGQ-----SSQGLFVEETSEE-----GTVSVPASQSIAAALT--SK	465					
Homo_sapiens	EEPTTSHGQ-----SSQG-IVEETSEE-----GNVSVPASQSVAALT--SK	428					
Pan_troglodytes	EEPTTSHGQ-----SSQG-IVEETSEE-----GNVSVPASQSVAALT--SK	484					
Macaca_mulatta	EEPTTSHGQ-----SSQG-VVEETSEE-----GNVSVPASQSVAPLI--SK	427					
Callithrix_jacchus	EEPTASHGQ-----SSQG-IVEETSEE-----GNVSVPASQSVAALT--NK	427					
Rhinatrema_bivittatum	ADTAASNGLQ-----SSQALFVEETTPED-----EENEQVALSTVALAAESDG	467					
Xenopus_tropicalis	PRKLFOGAS-----LTSDSKEQ-----EVDDQCSSHSES-----	366					
 610 620 630 640 650 660						

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	. : :: .. *	.	
Pavo_muticus	---SADRTLSEGNHTAADHVPCLPCRGRFPAAEIELHAMYCNGIVGGDAATDSP-----	641	
Pavo_cristatus	---SADRTLSEGNHTAADHVPCLPCRGRFPAAEIELHAMYCNGIVGGDAATDSP-----	641	
Gallus_gallus	---SADRTLSEGNHPADHVPCPLCDRGRFPAAEIELHAMYCNGIVGDEAATDSP----	641	
Chelonia_mydas	----EAGNMASECSPSADDVSVCPLCDRGFPATEIHELHAMYCNGIVAQDASEVDPDAWRAG	658	
Mus_musculus	NREDCKENPPPAVVSSSTRVSCPLCNQDFPPTKIEQHAMYCNGLMEQET-----	540	
Rattus_norvegicus	NRE-AGKDSRPAPVASARVSCPLCNQDFPPTKIEQHAMYCTGLMEPET-----	563	
Canis_lupus_familiaris	NRGNAEKEIPISTVSSSTQVSCPLCDQGFPPTKIERHAMYCNGLIGODT-----	532	
Equus caballus	NREDTEKEIPTSTFSSTTRISCPVCGQGFPRSKIEQHAMYCNGPMGQDS-----	531	
Bos_taurus	NKKDAEKEISTSIFSSSNQVSCPLCDQRFPPTKIERHAMYCNGLMGQDT-----	571	
Homo_sapiens	NKEDAেকেইবাইSTFSSSNQVSCPLCDQCFPPTKIERHAMYCNGLMEEDT-----	532	
Pan_troglodytes	NKEDAেকেইআISTFSSSNQVSCPLCDQHFPPTKIERHAMYCNGLMEEDT-----	588	
Macaca_mulatta	NKEDAKকেইবাইSTFSSSNQVSCPLCNQSFPPTKIERHAMYCNGLMGEDTVVQLKFYSYP	542	
Callithrix_jacchus	NKEDAKকেইআISTLSSSTQVSCPLCDQSFTPTKIERHAMYCSGLMGEDT-----	531	
Rhinatrema_bivittatum	-----DTIDGEYVQCPLCGQDFPPVKIELHAAYCDGOAKLEEKQHS-----	561	
Xenopus_tropicalis	--NSCLDSQRQSGSTVHYHYGVFFCPKGEDP-NLYTQVILCLEVYEKS-----	457	
730.....740.....750.....760.....770.....780		

		* : :: .	
Pavo_muticus	-----VLTRGRRE--SRSKAAG--GESSQTS	SDCVKCEKCY	673
Pavo_cristatus	-----VLTRGRRE--SRSKAAG--GESSQTS	SDCDKCEKCY	673
Gallus_gallus	-----VLTRGRRE--SRSKAAG--GESSQTS	SDSDKCEKCY	673
Chelonia_mydas	LRRCLLAPLFRTLVWKDCSSYWQSALAQRQRE--	TRSRAGR--GRDIPTPVDVDKCEKCY	714
Mus_musculus	-----VLTRRRRRE--AKNKSDG--RTAAQPALDANRKEKCY		572
Rattus_norvegicus	-----VLTRRRRRE--AKKKSDG--RTAAQPALDISRKEKCY		595
Canis_lupus_familiaris	-----VLTRRQRE--AKSKSDS--GTAAQTS	SLDIDKNEKCY	564
Equus_caballus	-----VLTRRQRE--AKSKSKSKSGTAAQTFLDIDKNEKCY		565
Bos_taurus	-----VLTRSORE--ALNRRDS--VTTAQTS	SLDIDKDEKCY	603
Homo_sapiens	-----VLTRRQRE--AKTKSDS--GTAAQTS	SLDIDKNEKCY	564
Pan_troglodytes	-----VLTRROKEAKAKTKSDS--GTAAQTS	SLDIDKNEKCY	622
Macaca_mulatta	VSEILC---WMLRVRRSGPKDPKDVLTRROKE--AKTKSDS--GTAAQTS	SLDIDKNEKCY	595
Callithrix_jacchus	-----VLTRROKE--AKTKSDS--GTAAQTS	SLDIDKSEKCY	563
Rhinatrema_bivittatum	-----VLTRROKG--KQNQVPS--GPDVAAS	LQIGRCEKCY	593
Xenopus_tropicalis	-----LKKAQRQLLRKMNFGEF		474
790.....800.....810.....820.....830.....840		

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Pavo_muticus	RGLLSMLELSESKSAG-----	ADTGTHIPGVDDQRNPALPHGAEDEE--	757
Pavo_cristatus	RGLLSMLELSESKSAG-----	ADTGTHIPGVDDQRNPALPHGAEDEE--	757
Gallus_gallus	GGLLSMLELSESKSAG-----	ADTGTHIPAVDDQRNPALPPGAEDEQ--	757
Chelonia_mydas	GRLLSMLEMSCKSAD-----	ADAGAMLAAGGD---PRHTPSGAEEEA--	795
Mus_musculus	GRLLSLLEQSEHRTT-----	GVEKKPKYSEVRTIFRMPSPVEVEEA--	671
Rattus_norvegicus	GRLLSLLEQSEHRTT-----	GVERTPKCSHAGAFRMPSPDVEEA--	694
Canis_lupus_familiaris	GRLLSLLEQSEHKTA-----	DAEIKTKSSETG-FRMPSPGMEEA--	660
Equus_caballus	GRLLSLLEQTEHKTA VAVVNIPWMOMEEDLWLKP	DAEIKTKSSEIGAFRLSPGMEEA--	681
Bos_taurus	GRLLRLLEQSEYKTT-----	DAEIKTKFSETGAFRVSSPGLEEA--	700
Homo_sapiens	GRLLSFLEQSEHKTS-----	DADIKS-SETGAFRVSPGMEEA--	659
Pan_troglodytes	GRLLSFLEQSEHKTS-----	DADIKS-SETGAFRVSPGMEEA--	717
Macaca_mulatta	GRLLSFLEQSEHKTS-----	DADIKS-SETGAFRVSPGMEEA--	690
Callithrix_jacchus	GRLLSFLEQSERKTS-----	DGEIKS-SERGAFRMPSPGMEEA--	658
Rhinatrema_bivittatum	GRLLSMLEQSESKCWD-----	TIPDAEVKSSAPELGAQRAFPSGAEEHE	680
Xenopus_tropicalis	VDSEKPMNQCVSSSS-----	---RQPAESLEEE--	541
910.....920.....930.....940.....950.....960		

Pavo_muticus	--KAEHSARSLI-----PPTSGAPPPGSPP-----XXXPPRAGRRRKR	793
Pavo_cristatus	--KAEHSARSLI-----PPTSGAPPPGSPP-----XXXPPRAGRRRKR	793
Gallus_gallus	--KAERSARSLP-----PPPAGAPPPGSPP-----DPPRRGGRRRKR	793
Chelonia_mydas	--GCSLARESPILPHLAFSDLPPIPFVSAPAEAGYPGGFOOQ---AARSQQQNKGSRRRRR	850
Mus_musculus	--SCSREMOSTLSQLNLNESPIKSFVPVSEATNCLVDFKEQFAFR---SRTKSGRGRRR	725
Rattus_norvegicus	--GCSRERQSSLSKLNLDNESPIKSFVPVSEATNCLVDFKGFQFAFR---SQTKSGRGRRR	748
Canis_lupus_familiaris	--GCSKEMQSSLAHLDLNESEPIKSFVSISEATDCLVDFKKQLNVRQGSRTIRTKAGRGRRR	718
Equus_caballus	--GCSREMQSSLAHLDLNESEPIKSFVSISEATDCLVDFKKQLTVRPVSRIRTKAGRGRRR	739
Bos_taurus	--GCSREMQSSLTHLDSNESPIKSFVSVSEATDCLVDFKKQLTVRPHSQITQTKAGRGRRR	758
Homo_sapiens	--GCSREMQSSFTRRDLNESPVKSFVSISEATDCLVDFKKQVTVQPGSRTIRTKAGRGRRR	717
Pan_troglodytes	--GCSREMQSSFTRRDLNESPVKSFVSISEATDCLVDFKKQVTVHPGSRIRTKAGRGRRR	775
Macaca_mulatta	--GCSREMQSSFTHRLDNESPIKSFVSISEATDCLVDFKKQVTVQPGRRIRTKVGRGRRR	748
Callithrix_jacchus	--GCSREMQSSFTHLDLNESEPIKSFVSISEATDCLVDFKKQVVIQPGSRTIRTKAGRGRRR	716
Rhinatrema_bivittatum	AAGCSHHAWSPITVDFQLSESPIKSFVGISEATDCLVDFKQOQFSKRPNSSGCISRAGRGRRK	740
Xenopus_tropicalis	-----SPIPAQDEQDNNSQLILFLNNNSHSTSLPL-----	572
970.....980.....990.....1000.....1010.....1020	

Pavo_muticus	KF-	795
Pavo_cristatus	KF-	795
Gallus_gallus	KF-	795
Chelonia_mydas	KF-	852
Mus_musculus	KS-	727
Rattus_norvegicus	KS-	750
Canis_lupus_familiaris	KP-	720
Equus_caballus	KS-	741
Bos_taurus	KS-	760
Homo_sapiens	KF-	719
Pan_troglodytes	KF-	777
Macaca_mulatta	KF-	750
Callithrix_jacchus	KF-	718
Rhinatrema_bivittatum	RRT	743
Xenopus_tropicalis	---	572
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