

# CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep\_msa/POC3a Date: Tue Feb 1 14:20:45 2022

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Pavo_muticus	-SHHIRCSPTGIKQDHRAAPGLPGQHQLPSATTLGIPHPHHRAAPFTAAPVQHRPHQRP	59
Pavo_cristatus	-SHHIRCSPTGIKQDHRAAPGLPGQHQLPSATTLGIPHPHHRAAPFTAAPVQHRPHQRP	59
Gallus_gallus	MSHHIRRSPTGAKQYHRAAPGLPGQHQLQSPRIIPAIPHQHAAAHFTAPVPQHRPHQQL	60
Anas_platyrhynchos	-----	
Chelonia_mydas	-----	
Mus_musculus	-----	
Rattus_norvegicus	-----	
Canis_lupus_familiaris	-----	
Equus_caballus	-----	
Bos_taurus	-----	
Homo_sapiens	-----	
Pan_troglodytes	-----	
Macaca_mulatta	-----	
Callithrix_jacchus	-----	
Xenopus_tropicalis	-----	
Rhinatrema_bivittatum	-----	
Latimeria_chalumnae	-----	
	1.....10.....20.....30.....40.....50.....60	

Pavo_muticus	PTARAPGPGTELANQHAAPLTGRNRQVTRCSRAGRLCTPILLRPSSLIGYFSAKMPNQ	119
Pavo_cristatus	PTARAPGPGTELANQHAAPLTGRNRQVTRCSRAGRLCTPILLRPSSLIGYFSAKMPNQ	119
Gallus_gallus	PTARAPAPGTELANQHGAPLTVRNRQRLTYRSRGAGRLCTPFLSPCSLIGYFSAKMPNQ	120
Anas_platyrhynchos	-----	
Chelonia_mydas	-----	
Mus_musculus	-----	
Rattus_norvegicus	-----	
Canis_lupus_familiaris	-----	
Equus_caballus	-----	
Bos_taurus	-----	
Homo_sapiens	-----	
Pan_troglodytes	-----	
Macaca_mulatta	-----	
Callithrix_jacchus	-----	
Xenopus_tropicalis	-----	
Rhinatrema_bivittatum	-----	
Latimeria_chalumnae	-----	
	.....70.....80.....90.....100.....110.....120	

	***: : :. *	
Pavo_muticus	RVPCRSRLSLSERRFFFRGLGSLKPLCPAAAPTVARMSDEEK-STSPVLPKDSVGGSSV	178
Pavo_cristatus	RVPCRSRLSLSERRFFFRGLGSLKPLCPAAAPTVARMSDEEK-STSPVLPKDSVGGSSV	178
Gallus_gallus	RVSCRSRLSLSERCFFFRGLGSLKPLRPAAAPTVARMSDEEK-STSPVLPKDSVGGSSV	179
Anas_platyrhynchos	-----MSSDEEK-STSPVLPKDSVGGSSV	23
Chelonia_mydas	-----MSSDEET-STSPVLPKDSVGGSSV	23
Mus_musculus	-----MSSDEEK-CSLHVAHNDSR--SV	21
Rattus_norvegicus	-----MSSDEEK-CSLHVAHNDSR--SV	21
Canis_lupus_familiaris	-----MSSDEEK-CSLPVMQKDSQHSV	23
Equus_caballus	-----MSSDE-K-GSLPVVENDPDGSSV	22
Bos_taurus	-----MSSDGEM-CSPVLQKESDRGSSV	23
Homo_sapiens	-----MSSDEEK-YSLPVVQNDSSRGSSV	23
Pan_troglodytes	-----MSSDEEK-YSLPVVQNDSSRGSSV	23
Macaca_mulatta	-----MSSDEEK-YSLPVVQNDSSPGSSV	23
Callithrix_jacchus	-----MSSDEEK-YSLPVVQNDSSHQSSV	23
Xenopus_tropicalis	-----MSSDEEK-YSLPVVQNDSSHQSSV	23
Rhinatrema_bivittatum	-----MSSDEEK-CISLPVQNDSSRGSSV	23
Latimeria_chalumnae	-----MSSDEEK-STSPVLPKDSVGGSSV	24
	.....130.....140.....150.....160.....170.....180	

## CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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	* :*:**:***:*.:. . . : :..	
Pavo_muticus	SSDIQDEYEELLRYVVVTPKLELCVPKQSEPSSELRGKGRFS-----	220
Pavo_cristatus	SSDIQDEYEELLRYVVVTPKLELCVPKQSEPSSELRGKGRFS-----	220
Gallus_gallus	SSDIQDEYEELLRYVIVTPKFELCVPKQSEPSSELRGGRFS-----	221
Anas_platyrhynchos	SSDLQDEYEELLRYAVVTPNFEQCFPKWSEPVSSDLRAGRFP-----	65
Chelonia_mydas	SSDLQDEYEELLRYAVVTPKFEPVLVROSEPAALTAHDRFS-----	65
Mus_musculus	STDLOEEYEELLRYAIVNPNVCSASQPSHLRGEVAPD-RFP-----TLAGNN--	68
Rattus_norvegicus	STDLOEEYEELLRYAVVNPVNESGVSRPSSHLRGEVAPD-RFP-----VLG--SN---	67
Canis_lupus_familiaris	SSDLQEEYEELLRYAIVTPNVESDASQPCHSKGEVVPDVRVPTVIDDILHNOAGNSP---	80
Equus_caballus	SSDLQEEYEELLRYAVVTPNIESSVSQPSRSKGEVVPDGRVPPVIDDILDNOAGNSS---	79
Bos_taurus	SSDLQEEYEELLRYAIVTPNIEAGVSQPSHKAFAVDPDIKIPAIIDDILN-SGNSP---	79
Homo_sapiens	SSNLQEEYEELLHYAIVTPNIEPCASQSSHHPKGELVPDVRIS-TIHDILHSQGNNS----	78
Pan_troglodytes	SSNLQEEYEELLRYAIVTPNIEPGASQSSHHPKGELVPDVRIS-TIHDILHSQGNNS----	78
Macaca_mulatta	SSNLQEEYEELLRYAIVTPNIEPGASQSSHHPKGELVPDVRIS-TIHDILHSQGNNS----	78
Callithrix_jacchus	SLDLQEEYEELLRYAMVTQNVDSGASQSSHHPKAEVVPDARIS-SVHDILHSQGSNS----	78
Xenopus_tropicalis	SSDLQDEYDELLRYAVVTPRFQPHFLGQNQLITEQTRIDKVS-----SPKDP-----	70
Rhinatrema_bivittatum	SSDLQDEYEELLRYAVVTPKFQENVLRQTLTVEQPKDGKFSGVMNDQQAAGKLQLIH---	83
Latimeria_chalumnae	SSDLQDEYEELLRYAVVTPKFEPVILGQSHSSQPPADGRVS-----SSIDD-----	71
	.....190.....200.....210.....220.....230.....240	

Pavo_muticus	-----SVIDDTI-YHKTPDL-----LSVKEHT---	241
Pavo_cristatus	-----SVIDDTI-YHKTPDL-----LSVKERT---	241
Gallus_gallus	-----SVTDDTI-YNKTPGL-----LSVKECT---	242
Anas_platyrhynchos	-----GVTDDAI-YCKTPDL-----TSVKEPS---	86
Chelonia_mydas	-----SLMDEVINYPKTPVL-----TPVKGPS---	87
Mus_musculus	-----PVRDTELEVKGSDLNISSHSKSG-----SPRKPS---	98
Rattus_norvegicus	-----PLRETAIEVGKGSDLNISSLSKSG-----SPRKPP---	97
Canis_lupus_familiaris	-----VVRETRMEVGKGCDLNISSHSKTDGSSPVSSPRKPS---	116
Equus_caballus	-----VVRETRMEVGKGCDNFNISSHSKTDGLSPVSSPRKPS---	115
Bos_taurus	-----AVRETRMEVGKGCDLNTSSSHSKTD---AAASPRKPP---	112
Homo_sapiens	-----EVRETAIEVGKGCDFHISSHSKTDESSPVLSPRKPS---	114
Pan_troglodytes	-----EVRETAIEVGKGCDFHISSHSKTDESSPVLSPRKPS---	114
Macaca_mulatta	-----EVRETAIEVGKGCDNFNISSHSKTDESSPVLSPRKAS---	114
Callithrix_jacchus	-----EVREPAIEVGKGDFNISSHSKTDESSPVLSPRKPS---	114
Xenopus_tropicalis	-----VQDQSPAR-----NNSEENIPDCSAVS---TSQRR-----SPSTANEER	107
Rhinatrema_bivittatum	GGMSELDIGPSERELCTIOGLITVPEDNIPETSVRDPRTILERDGLAAPISGTESIGES	143
Latimeria_chalumnae	-----DLSQHSAGA-----ASEQESQHESSFVR---QLRTPGLATTGAADTPVAER	117
	.....250.....260.....270.....280.....290.....300	

[illegible]

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      .:*** ** .*****::** **:::.*: : :.....*.*. : * ..: .*.:: :
Pavo_muticus      NILDWLSGSLKTNVLSSELRKWKLSEFIEHHKHQMRQEKERHAEHVQKLNEMENLKELLRT 346
Pavo_cristatus    NILDWLSGSLKTNVLSSELRKWKLSEFIEHHKHQMRQEKERHAEHVQKLNEMENLKELLRT 346
Gallus_gallus     NILDWLSGSLKTNVLSSELRKWKLSEFIEHHKHQMRQEKERHAEHVQKLNEMENLKELLRT 347
Anas_platyrhynchos NILDWLSGSLKTNVLTSLRKWRLNFIEHHKLMQMRQEKERHAAHVRLTNQEMENLKELLRT 191
Chelonia_mydas    SILDWLSGSLKTNVLTSLRKWKLNFIEHHKLEMRQEKERHAAHVRLTNQEMENLRELLHT 193
Mus_musculus      NILDWSSGLKTNVLSSELKSWRLNFIDWHRMEMKKEKEKHAAVVKQLSNQISDLKELQKA 204
Rattus_norvegicus NVLDWSSGLKTNILSELKSWRLNFIDWHRMEMKKEKEKHAAVTVKQLSSQIADLKELQKA 203
Canis_lupus_familiaris NVLDWSSGLKTNIISELKSWRLNFIDWHRMEMKKEKEKHAAHLKQLCQINSKLQELQKA 222
Equus_caballus    NVLDWSSGLKTNILSELKSWRLNFIDWHRMEMKKEKEKHAAHLKQLCSQINSRLQELQKA 221
Bos_taurus        NVLDWSSGLKTNIISELKSWRLNFIDWHRMEMKKEKEKHAAHLKQLCQINSKLQELQKT 218
Homo_sapiens      NVLDWSSGLKTNIISELKSWRLNFIDWHRMEMKKEKEKHAAHLKQLCQINELQELQKT 220
Pan_troglodytes   NVLDWSSGLKTNIISELKSWRLNFIDWHRMEMKKEKEKHAAHLKQLCQINELQELQKT 220
Macaca_mulatta    NVLDWSSGLKTNIISELKSWRLNFIDWHRMEMKKEKEKHAAHLKQLCQINDLKELQKT 220
Callithrix_jacchus NVLDWSSGLKTNIISELKSWRLNFIDWHRMEMKKEKEKHAAHVQKLYNQINDLKELQKT 220
Xenopus_tropicalis DVLDWLSGTLKTNIMAELSKWRLTIIIEQHKLKLEIKNQNEKHVEQISQLSNQIDKLDLLQ 221
Rhinatrema_bivittatum SLDDTWSSGNLKTNVMSSELKSWRLTMIIEHKLKLEMRQEKERHAAHVQKLYKIDNLDLLRT 257
Latimeria_chalumnae NMLDAWSSGNLKTNVVTSLNKWRLTFIEQCRLEIKKEKERHTAEMATLMERTENLNEMLRA 237
      .....370.....380.....390.....400.....410.....420

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Pavo_muticus      YEISIGRKDEVITNMTALERKKEKIELMRKFTLWRIQQIKAKQEEYANRIADKQFOTAL 406
Pavo_cristatus    YEISIGRKDEVITNMTALERKKEKIELMRKFTLWRIQQIKAKQEEYANRIADKQFOTAL 406
Gallus_gallus     YEISIGRKDEVITNMTALERKKEKIELMRKFTLWRIQQIKAKQEEYANRIADKQFOTAL 407
Anas_platyrhynchos YEISIGRKDEVITNLTQALEMKKERIELMRKFTLWRIQQIKAKQEEYANRIADKQFOTAL 251
Chelonia_mydas    YEISIGRKDEVITNLSHAIDKQKERIELMKFTLWRIQHVEARQEEYANKLADRQFOIAL 253
Mus_musculus      FEISIGRKDEVISNLSRAIGKQKERIELMKSFFRWRIGHVKSROEYIEGKLADQYFOTL 264
Rattus_norvegicus YEISIGRKDEVISNLSRAIGKQKERIELMKSFFRWRIGHVKSROESYEGKLADQYFOTL 263
Canis_lupus_familiaris YEVSIGRKDEVISNLSHAIGKQKERIELMRTFFHWRIGHVKSRODVYEGKLADQYFOTL 282
Equus_caballus    YEVSIGRKDEVISNLSHALGRQKERIELMRTFFHWRIGHVKSRODVYEGKLADQYFOTL 281
Bos_taurus        YEVSIGRKDEVISNLSHAIGKQKERIELMRTFFHWRINHVKSRODVYESKLADQYFOTL 278
Homo_sapiens      FEISIGRKDEVISNLSHAIGKQKEKIELMRTFFHWRIGHVRRARQDVYEGKLADQYQOTL 280
Pan_troglodytes   FEISIGRKDEVISNLSHAIGKQKEKIELMRTFFHWRIGHVRRARQDVYEGKLADQYQOTL 280
Macaca_mulatta    FEISIGRKDEVISNLSHAIGKQKEKIELMRTFFHWRIGHVRRARQDVYEGKLADQYQOTL 280
Callithrix_jacchus FEISIGRKDEVISNLSHAIGKQKEKTELMTFFHWRIGHVRRARQDVYEGKLADQYQORAL 280
Xenopus_tropicalis YETSIQRKDEVISNLTALHLEKHKEKTELMTFTHWRLQLTEARQEDYSHSLADRHYKSTL 281
Rhinatrema_bivittatum YETSTQRKDEVISNLTALIERQKKKVELMRTFTHWRLQHADARQEAYMSNLATRHYYTLAL 317
Latimeria_chalumnae YETSIQRKDEVISNLTALHGIKKEKELTQLRGFSEWRLLQNEAKREAFEIGVADRYRMSL 297
      .....430.....440.....450.....460.....470.....480

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      :. * * : : * * : .** : *****::: : * . * : : : : :
Pavo_muticus      KKKVWTAWRSLSEERWKEKVAKACQLRAEDICVQLTNDYEAKIAELTATLEQTKAEILRL 466
Pavo_cristatus    KKKVWTAWRSLSEERWKEKVAKACQLRAEDICVQLTNDYEAKIAELTATLEQTKAEILRL 466
Gallus_gallus     KKKVWTAWRSLSEERWKEKVAKACQLRAEDVCVQLTNDYEAKIAELTATLEQTKAEILRL 467
Anas_platyrhynchos KKKVWTAWRSLSEERWKEKVAKACQLRAEDVCVQLTNDYEAKIAELTATLEQTKAEILRL 311
Chelonia_mydas    MKRVWAAWRSLSEARWKEKVAKACQRAEEVCQISNDYEAKIAELNVNLEAKADILRL 313
Mus_musculus      LKKVWKGWRSVVRQWKDVVERACQARAEEVCQISNDYEAKLAMLGALENAKAEIORM 324
Rattus_norvegicus LKKVWKGWRSVVRQWKDVVERACQARAEEVCQISNDYEAKLAMLGALENAKAEIORM 323
Canis_lupus_familiaris LKKVWKGWRSIVQKQWKDVVERACQARAEEVCQISNDYETRVAVLSGALENAKAEIORM 342
Equus_caballus    LKKVWRGWHSIVQKQWKDVVERACQARAEEVCQISNDYETKVAVLSGALENAKAEIORM 341
Bos_taurus        LKKVWRGWRAVVRQWKQKEVVERACQARAEEVCQISNDYEAKVALLTGALENAKAEIORM 338
Homo_sapiens      LKKVWVWRSVVRQWKQWKDVVERACQARAEEVCQISNDYEAKVAMLSGALENAKAEIORM 340
Pan_troglodytes   LKKVWKGWRSVVRQWKQWKDVVERACQARAEEVCQISNDYEAKVAMLSGALENAKAEIORM 340
Macaca_mulatta    LKKVWKGWRSIVQKQWKDVVERACQARAEEVCQISNDYEAKVAMLSGALENAKAEIORM 340
Callithrix_jacchus LKKVWKGWHSIVQKQWKDVVERACQARAEEVCQISNDYEAKFAMLSGALENAKAEIORM 340
Xenopus_tropicalis MKNWAKWRSVIESNWKDKIEQACRARAEEVCVELANDYESKLTQLNGALGEARAEVQRL 341
Rhinatrema_bivittatum KQKFWRAWHSVIKTTWKNRVEEACRARAEEICIQLYNDYEARTTELNGALDEARAEIQL 377
Latimeria_chalumnae KRKAUVAWYTVIEGNWVKVRVEKACQARAEEVCIRLSNDYEAKIAQLNDALAKAEIQL 357
      .....490.....500.....510.....520.....530.....540

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Pavo_muticus	HSEREQYEDTMKKAFMRGVCALNLEAMTMFOGKDNRTDP-DAGSRREDNGAIIAGRLPPS		525
Pavo_cristatus	HSEREQYEDTMKKAFMRGVCALNLEAMTMFOGKDNRTDP-DAGSRREDNGAIIAGRLPPS		525
Gallus_gallus	HSEKEQYEDTMKKAFMRGVCALNLEAMTMFOGKDNRMDF-DAGSRREDNGAIIAGRLPPS		526
Anas_platyrhynchos	HSEREQYEDTMKKAFMRGVCALNLEAMTMFOGKDSRGDP-DIGSRDDNGAIVAGILPPS		370
Chelonia_mydas	HSEREQYEGTMKKAFMRGVCALNLEAMTMFOGKESKTDH-DEVARREDPGTNTATGRLLPS		372
Mus_musculus	QQEKDHFEDSMKKAFMRGVCALNLEAMTIFONKNEAGID-FTNNKKEESGPGGPGRE-PS		382
Rattus_norvegicus	HQEKDHFEDSMKKAFMRGVCALNLEAMTIFONKNDAGID-FTNNKKEESGPGGPGRE-PS		381
Canis_lupus_familiaris	QHEKEHFEDSMKKAFMRGVCALNLEAMTIFONRGDTGID-FTNNKKEEYGPVGIOGKE-HS		400
Equus_caballus	QQEKEQFEDSMKKAFMRGVCALNLEAMTIFONRSDPGMD-FANNRKEEYGPVGOGTE-SS		399
Bos_taurus	QHEKEHFEDSMKKAFMRGVCALNLEAMTIFONRGDTGTD-FTNNKKEEYGPVGOGKEPPS		397
Homo_sapiens	QHEKEHFEDSMKKAFMRGVCALNLEAMTIFONRNDAGID-STNNKKEEYGPVGOGKE-HS		398
Pan_troglodytes	QHEKEHFEDSMKKAFMRGVCALNLEAMTIFONRNDAGID-STNNKKEEYGPVGOGKE-HS		398
Macaca_mulatta	QHEKEHFEDSMKKAFMRGVCALNLEAMTIFONRNDTGVD-STNNKKEEYGPVGOGKE-HS		398
Callithrix_jacchus	QHEKEHFEDSMKKAFMRGVCALNLEAMTIFONRNDTGID-STNNKKEEYGPVGOGKE-HS		398
Xenopus_tropicalis	LAERGQFEGSMKKAFMRGVCALNMEAMSMFOGRESRMEYADHPPPREERDPS-----PS		395
Rhinatrema_bivittatum	HGERORFEGSMKKAFMRGVCALNMETMSVFOGKESRMDH-DHSNRREESGPS-----SS		430
Latimeria_chalumnae	RIERERFEDAMKKAFMRGVCALNMEAMTIFENDKDDKGEQAESMSMKDEPGPG-----LS		411
	.....550.....560.....570.....580.....590.....600		

Pavo_muticus	QYSPSPPPPAPATTIQ-----MEDLFS <del>TH</del> LGHASTSQTRLDS <del>DP</del> PVVIIPGTA-AA	574
Pavo_cristatus	QYSPSPPPPAPATTIQ-----MEDLFS <del>TH</del> LGHASTSQTRLDS <del>DP</del> PVVIIPGTA-AA	574
Gallus_gallus	QYSPSPPPPAPATTIQ-----MEDLFS <del>TH</del> LGHASTSQTRLDS <del>DP</del> PVVIIPGTA-SG	575
Anas_platyrhynchos	QYNPPSPPPPPASALQ-----MDDLFS <del>TH</del> LGHASTSQTRLDS <del>DP</del> PVVIISSTA-AG	419
Chelonia_mydas	QFDPPSPPPPTAATVS-----QEEIFS <del>SH</del> LGHASTSQTRL <del>ES</del> NPVIVASAA-VG	421
Mus_musculus	AHLDTS <del>SS</del> STMP <del>SA</del> VP <del>SQ</del> LLPSG <del>PL</del> AAGVASATAFP <del>SA</del> ASLT <del>S</del> AGATSASSLHVPIS <del>I</del> -LS	441
Rattus_norvegicus	AHLDTS <del>SS</del> STMP <del>SA</del> VP <del>LQ</del> LLPSA <del>T</del> LAAGVASATAIP <del>ST</del> ASLT <del>S</del> AGATSASSGHVPIS <del>V</del> -LS	440
Canis_lupus_familiaris	AHLDPLAPPMP <del>SV</del> VQA <del>PP</del> SP-PPAAMGAASAAAF <del>PS</del> AASISSAGPASASSTHPPV <del>SA</del> ALG	459
Equus_caballus	AHLDASAPRVPSAVALPQ <del>QP</del> -PPAAGAAASAAAF <del>PS</del> AASLT <del>S</del> AR-AAASSIHLPV <del>S</del> APLG	457
Bos_taurus	AHLDASAAPVPSAGAVPPSP-PAAALGATCAAAF <del>PS</del> AASVT <del>S</del> AGATSSSAHV <del>VS</del> APHG	456
Homo_sapiens	AHLDPSAPPMP <del>LP</del> V <del>TS</del> PL <del>LP</del> SPPAAVGGASATAVP <del>SA</del> ASMT <del>STR</del> AASASSVHV <del>VS</del> SA-LG	457
Pan_troglodytes	AHLDPSAPPMP <del>LP</del> V <del>TS</del> PL <del>LP</del> SPPAAVGGASATAIP <del>SA</del> ASMT <del>STR</del> AASASSVHV <del>VS</del> SA-LG	457
Macaca_mulatta	AHLDPSAPPMP <del>LP</del> VAS <del>PL</del> LPSPPAAVGGASATAVP <del>SA</del> ASMT <del>STR</del> AASASSAHV <del>VS</del> SV-LG	457
Callithrix_jacchus	AHLDPSAPQI <del>LP</del> V <del>TS</del> PL <del>LP</del> SPQAVVGGASANALHSAASMT <del>AT</del> RAASASSVHV <del>VS</del> SV-LG	457
Xenopus_tropicalis	VTFQNPVGTTHPS-----TISALHSPVTCEPNFIHAFGQSSVSQSKEDVNTIPAVISSVT	450
Rhinatrema_bivittatum	VPFQSQIATSADLKPAQFDLSVPQMTTIAPEPIFLSPFCPTTTLESKADDIMPSVSASAP	490
Latimeria_chalumnae	VQFRQQPPS-----SSAHRSP <del>TF</del> DF-----TMTASD-----	439
	.....610.....620.....630.....640.....650.....660	

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Pavo_muticus	SG----	LASTQKLPMAKVITSAQQKAGRTTARITGRSDMGQK-HRICGSVAVMGVAPP	628																			
Pavo_cristatus	SG----	LASTQKLPMAKVITSAQQKAGRTTARITGRSDMGQK-HRICGSVAVMGVAPP	628																			
Gallus_gallus	SG----	LASTQKLPMAKVITSAQQKAGRTTARITGRSDMGQK-HRICGSVAVMGVAPP	629																			
Anas_platyrhynchos	SG----	VTSQKLPMAKVITSAQQKAGRTTARITGRSDMGQK-HRICGSLAVMGVAPP	473																			
Chelonia_mydas	SG----	ITSQAQLPVARVVITSAQQKAGRTTARITGRSDFLQSK-NRICSSSLAVMGVSPP	475																			
Mus_musculus	AG--	SAAAPAPEESYAPRVVTAAQQKAGKTITARITGRSDFGSK-ARINSSLAIMGVSP	498																			
Rattus_norvegicus	AG--	SAATAAPEDTFAPRVVTAAQQKAGKTITARITGRCDFGSK-TRINSSLAIMGVSP	497																			
Canis_lupus_familiaris	AG--	PTAATAPEEMYVPRVVITSAQQKAGRTTARITGRCDFASK-NRISSGLAIMGVSP	516																			
Equus caballus	AG--	SAAPAPEEMPAPRVVITSAQQKAGRTTARITGRCGFAAK-SRVSSNLAIMGVSP	514																			
Bos_taurus	AGLIATASAAQEEMYGPRVVITSAQQKAGRTTARITGRCDFASK-NRISSSLAIMGVSP	515																				
Homo_sapiens	AG--	SAATAASEEMYVPRVVITSAQQKAGRTTARITGRCDFASK-NRISSSLAIMGVSP	514																			
Pan_troglodytes	AG--	SAATAASEEMYVPRVVITSAQQKAGRTTARITGRCDFASK-NRISSSLAIMGVSP	514																			
Macaca_mulatta	AG--	SAATAASEEMYVPRVVITSAQQKAGRTTARITGRCDFASK-NRISSGLAIMGVSP	514																			
Callithrix_jacchus	AG--	SPATAASEEMYVPRVVITSAQQKAGRTTARITGRCDFASK-NRISSSLAIMGVSP	514																			
Xenopus_tropicalis	SA---	SSALPTQKLPMTRVVITSCQKAGKTITARITARSDLAQRSKIGSNITSMVNP	507																			
Rhinatrema_bivittatum	TAG--	SSTTLSQLHPLMTRVVITSAQQKAGKTITARLTGRSDLGQRSNRVGNSLNIMAVSP	548																			
Latimeria_chalumnae	-----	LEQMSVTRIVITSAQQKPGKTIKARLTARPDLISIKGNRVGVNVNNGVSPP	489																			
		.....670.....680.....690.....700.....710.....720																				



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Pavo_muticus	MSSVIVEKHHHPVTIQTISQATAAKYPRTVILASGSTTVRPAGQAGRMLQSQTHTSVQSIK				688
Pavo_cristatus	MSSVIVEKHHHPVTIQTISQATAAKYPRTVILASGSTTVRPAGQAGRMLQSQTHTSVQSIK				688
Gallus_gallus	MSSVIVEKHHHPITQTISQATAAKYPRTVFLASGSTTVRPAGQVGRMLQSQTHTSVQSIK				689
Anas_platyrhynchos	MSSVIVEKHHHPVTIQTISQATAAKYPRTVLHSSGATTVRPAGQVGRMLQSQPHTSVQSIK				533
Chelonia_mydas	MSSVVVEKHHHPVTIQTISQATAAKYSRTIVHHASNATSVRPTIGHGGRTPHSQAHNIQSIK				535
Mus_musculus	MGSVVVEKHHHPVTIVQTIPOATAAKYPRTIHPESSISASRSLG--ARPGHAQSLSVQSIK				555
Rattus_norvegicus	MSSVVVEKHHHPVTIVQTIPOATAAKYPRAIHPESGFPASRSVG--ARPAHAQSLSNVQSIK				555
Canis_lupus_familiaris	MSSVVVEKHHHPVTIVQTIPOAAAAKYPRTIHPESSTSASRSLG--TRSTHTQSLTSIHSIK				574
Equus_caballus	VSSVVVEKHHHPVTIVQTIPOATAAKYPRTIHPEGGASASRPLG--ARSAHSQPLSSIPSIK				572
Bos_taurus	MSSVVVEKHHHPVTIVQTIPOATAAKYPRTIHPEGSTSASRSLG--TRSTHTQSLTSIQSIK				573
Homo_sapiens	MSSVVVEKHHHPVTIVQTIPOATAAKYPRTIHPESSTSASRSLG--TRSAHTQSLTSVHSIK				572
Pan_troglodytes	MSSVVVEKHHHPVTIVQTIPOATAAKYPRTIHPESSTSASRSLG--TRSAHTQSLTSVHSIK				572
Macaca_mulatta	MSSVVVEKHHHPVTIVQTIPOATAAKYPRTIHPESSTSASRSLG--TRSAHTPSLTSVQSIK				572
Callithrix_jacchus	MSSVVVEKHHHPVTIVQTIPOATAAKYPRTIHPESSTSASRSLG--ARSAHTQSLTSVQSIK				572
Xenopus_tropicalis	MSSIIVEKHHHPVTIQTISQAAAAKYPRAALQSTGSGIGGRSSGQSGRVSQ--THAGIHSIK				565
Rhinatrema_bivittatum	MSSVVVEKHHHPVTIQTISHATAAKYPRTLLTSS--VSGRMVPSGSRVSQ--VHPTVQSIK				604
Latimeria_chalumnae	MGSVVVERHHHPVTIQTILGAVASKYPRSSYGASSGNVKGQGSKGKTHH--VLLGIQSIK				547
	.....730.....740.....750.....760.....770.....780				

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Pavo_muticus	VVD	691
Pavo_cristatus	VVD	691
Gallus_gallus	VVD	692
Anas_platyrhynchos	VVD	536
Chelonia_mydas	VVD	538
Mus_musculus	VVD	558
Rattus_norvegicus	VVD	558
Canis_lupus_familiaris	VVD	577
Equus_caballus	VVD	575
Bos_taurus	VVD	576
Homo_sapiens	VVD	575
Pan_troglodytes	VVD	575
Macaca_mulatta	VVD	575
Callithrix_jacchus	VVD	575
Xenopus_tropicalis	VVD	568
Rhinatrema_bivittatum	VVD	607
Latimeria_chalumnae	VVD	550
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