

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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Pavo_muticus          -----
Pavo_cristatus        -----
Gallus_gallus          -----MGRPVPAAL---LLLAALG      16
Anas_platyrhynchos    -----MGPPVPAALGALLLIGALG    19
Homo_sapiens           -----MGWRAAGALLLALL-----    14
Pan_troglodytes        -----MGWRAAGALLLALL-----    14
Macaca_mulatta         MLADSGGGAGRSSGTSLYGAVAFWLKAFPVGLRQEGLLCGKGGAQAQVLRQRAAEGGAW    60
Callithrix_jacchus     -----MGRRASSALLLALL-----    14
Equus_caballus         -----MGRRAAGALLLALL-----    14
Pteropus_alecto        -----
Bos_taurus             -----MGRQAAGALLLTLI-----    14
Mus_musculus           -----MQQRAVGSLLLGLL-----    14
Ornithorhynchus_anatinus -----MGPPEVWSFCLVLC-----    14
Chelonia_mydas         -----
Xenopus_tropicalis     -----MIWGRTPVAPWVPLLLFVSLLLLPQ    24
Rhinatrema_bivittatum -----MERLLGISLPLLLLAQLLQVAH    22
1.....10.....20.....30.....40.....50.....60

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Pavo_muticus          -----
Pavo_cristatus        -----
Gallus_gallus          -----VCHAAGVPAESSFPEDTVADHVGSTWRRRYVAQLSDDED    55
Anas_platyrhynchos    -----VTHGARGLAETTFPEDTVADRVGARGGRRYVAQLSDDED    58
Homo_sapiens           -----LHGRLLA-----VTHGLRAYDGLSLPED--IETVTASQMRWTHSYLSDDDED    58
Pan_troglodytes        -----LHGRLLA-----VTHGLRAYDGLSLPED--IETVTASQMRWTHSYLSDDDED    58
Macaca_mulatta         WVGDSSGQLHGRLKVPKCAPEVTHGLSAYDGLSLPED--TETVTASQMRWTHSYLSDDDED    118
Callithrix_jacchus     -----LQGRLLA-----VTHGLRAYDGLSLPED--TETVTASRMGWSYSYLSDDDED    58
Equus_caballus         -----LHG-RLLAV-----THGLRAYDGLSLPED--AETVTAGRAGWSYSDLSDDDED    58
Pteropus_alecto        -----
Bos_taurus             -----LLHGRLLA-----THGLRAYDGLSLPED--AETVTAGRAGWSYSDLSDDDED    59
Mus_musculus           -----LHARLLAV-----THGLRAYDGLSLPED--TETVTASRYGWTYSYLSDDDED    58
Ornithorhynchus_anatinus -----VLGQLLAN-----THGLRAYDGLSLPED--SEPDPGGRTHWSYAHLSDDDED    58
Chelonia_mydas         -----
Xenopus_tropicalis     G-----VASSRGLDEVYFPDG-ESDART-GQNAWRYGDLADDED    61
Rhinatrema_bivittatum -----ASKVLDEVSPDDTESDARP-GKPRWGYTDLSDDDED    57
.....70.....80.....90.....100.....110.....120

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Pavo_muticus          -----
Pavo_cristatus        -----
Gallus_gallus          LLADEASAD-----GSGELGSGDV-----A-LVALAPTAAPPPVGMV    92
Anas_platyrhynchos    LLADEASGD-----GSGEYGSGLDI-----Q-LVAGSPSPVPG-----    88
Homo_sapiens           MLADSIISGDD--LGSGDLGSGD-----
Pan_troglodytes        MLADSIISGDD--LGSGDLGSGD-----
Macaca_mulatta         MLADSTSGDD--LGSGDLGSGD-----    138
Callithrix_jacchus     LLADSTSGDG--LGSGDLGSGD-----    78
Equus_caballus         LLADDASGDG--LGSGDVGSGL-----    78
Pteropus_alecto        -----
Bos_taurus             FLADEASGDG--VGSGDLGSGD-----    79
Mus_musculus           LLADDASGDG--LGSGDVGSGL-----    78
Ornithorhynchus_anatinus LLADEASGDE--LGSGDVGSGL-----LFETDSRPPLIQPHLTGMT    98
Chelonia_mydas         MLADEASGDG--NGSGENGSGIA-----LPDVPLSTSRTP-----    33
Xenopus_tropicalis     FAADEASGD--DNGSTETGSG-----TEEPITATPPSFLSPTGLDTS LAVPQLAGMS    111
Rhinatrema_bivittatum LLADEASGDGEVQVGSADGSGEPPLTEGLASPTPLPEARPPATDFLSTPIAPLLAGMS    117
.....130.....140.....150.....160.....170.....180

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Pavo_muticus          -----
Pavo_cristatus        -----
Gallus_gallus          VAEPEDDPPIIYFRALVNFTRSIDFSRPLEDNSEEFREVSEAVVDTLSEYYKIPGEQM 152
Anas_platyrhynchos    ----VGLAPTIVYFRALVNFTHSIDYSPRLDANSEDEFREVSEAVVDTLSEYYKIPGDQM 144
Homo_sapiens           -----FQMVFYFRALVNFTRISIEYSPQLEDAGSREFREVSEAVVDTLSEYKIPGDQV 131
Pan_troglodytes        -----FQMVFYFRALVNFTRISIEYSPQLEDAGSREFREVSEAVVDTLSEYKIPGDQV 131
Macaca_mulatta         -----FQMVFYFRALVNFTRISIEYSPQLEDAGSREFREVSEAVVDTLSEYKIPGDQV 191
Callithrix_jacchus     -----FQMVFYFRALVNFTHSIAYSPQLEDAGSREFREVSEAVVDTLSEYKIPGDQV 131
Equus_caballus         -----FQMVFYFRALVNFTRSIDYSTRLENASSEEFREVSEAVVDTLSEYKIPGDQV 131
Pteropus_allecto       -----
Bos_taurus            -----FQMVFYFRALVNFTHSIDYSPQLEDAGSEEFREVSEAVVDTLSEYKIPGDQV 132
Mus_musculus           -----FQMVFYFRALVNFTRISIEYSPQLEDASAKEFREVSEAVVEKLEPEYRKIPGDQI 131
Ornithorhynchus_anatinus VSEPEDEETLLIYFRALVNFTHSIAYSPRMEDASSEEFREVSEAVVDTLSEYKIPGDQI 158
Chelonia_mydas         ---SVTLLPMYVFRALVNFTHSIDYSPRLDDANSEEFREVSEAVVDTLSEYYKIGGEQV 90
Xenopus_tropicalis     VPEQEQQEPLYIYFRALVNFTHSIDYSPQLEDAGSREFREVSEAVVDTLSEYHKIPGEQM 171
Rhinatrema_bivittatum VSEPEDEQFLIYFRALVNFTHSIDYSPALDDVTSEEFREVSEAVVDTLSEYKIPGEQL 177
.....190.....200.....210.....220.....230.....240

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Pavo_muticus          -----
Pavo_cristatus        -----
Gallus_gallus          VSVVFIKELEGSVVFELDVGSEGNNGDEAQIGAVLRVSVTAGSIAFVTSFVGQFRRRLG- 211
Anas_platyrhynchos    VNVVFIKELEGSVVFELDVGSEGNNGDEAQIRAVLQDVVAAGSIAFVTSFVGQFRRRLG- 203
Homo_sapiens           VSVVFIKELDGVVVFELDVGSEGNADGAQIQEMLLRVISSGSVASVTSFVGQFRRRLG- 190
Pan_troglodytes        VSVVFIKELDGVVVFELDVGSEGNADGAQIQEVLRLVSSGSMSAYITSFVGQFRRRLGT 191
Macaca_mulatta         VSVVFIKELDGVVVFELDVGSEGNADGAQIQEVLRLVSSGSMSAYITSFVGQFRRRLGT 251
Callithrix_jacchus     VSVVFIKELDGVVVFELDVGSEGNPDGVQIQEVLHVVSSGSMSAYNTSFVGQFRRRLGT 191
Equus_caballus         VSVVFIKELDGVVVFELDVGSEGNADGAQIQEVLHTVSSGSIAFYITSFVGQFRRRLG- 190
Pteropus_allecto       -----
Bos_taurus            VSVVFIKELDGVVVFELDVGSEGNADGAQIQEVLHGVSSGSIAFYITSFVGQFRRRLGT 192
Mus_musculus           VSVVFIKELDGVVVFELDVGSEGNADGSQIQEVLHTVSSGSIGPYVTSFVGQFRRRLG- 190
Ornithorhynchus_anatinus VSVVFIKELEGSVVFELDVGSEGNNTNASQIREVLHVVAGGSIAFYVTSFVGQFRRRLGA 218
Chelonia_mydas         VSVVFIKEIDGCVFVFDLVGSEGNLDEGEIREVLYSVIRSGSIAFYVTSFVGQFRRRLG- 149
Xenopus_tropicalis     VSVVYVKVIDGDTFVFDLVGSEGYSDNAEIRQVLFVSDIRSIAFYITSFVGQFRRRLGS 231
Rhinatrema_bivittatum VSVVVFKEIDGNVVFELDVGSEGNNDNAQIREVLYSVIESGSIAFYVTSFVGQFRRRLGS 237
.....250.....260.....270.....280.....290.....300

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Pavo_muticus          -----
Pavo_cristatus        -----
Gallus_gallus          -----AVTPHLRPTCLEFSCGSG-ECIAREYRCDRRPDCRDASDEQGC 254
Anas_platyrhynchos    -----AVTPHLRPTALEFSCGSG-ECIAQEYRCDRRPDCRDASDEQGC 246
Homo_sapiens           -----TVPQFPRACTEAEFACHSYNECVALEYRCDRRPDCRDMSDELNC 234
Pan_troglodytes        AQTPPPPPAAVAVAVTPVPQFPRACTEAEFACHSYNECVALEYRCDRRPDCRDMSDELNC 251
Macaca_mulatta         AQTPPPPPAAVAVAVTPVPQFPRACTEAEFACHSYNECVALEYRCDRRPDCRDMSDELNC 311
Callithrix_jacchus     AQTPPPPPAAVAVTVTPVPQFPRACTEAEFACHSYNECVALEYRCDRRPDCRDMSDELNC 251
Equus_caballus         -----TVPQVARVCTEAEFACHSHNECVALEYRCDRRPDCRDMSDELNC 234
Pteropus_allecto       -----
Bos_taurus            AQTPPPPPAAVAAVTPVPQVPRACTEAEFACHRYNECVALEYRCDRRPDCRDMSDELDC 252
Mus_musculus           -----TVPQFPVCTETEFACHSYNECVALEYRCDRRPDCRDMSDELNC 234
Ornithorhynchus_anatinus AQTPPPS----SAETSPVPSVPRPCTAEFACHSHNECVALEYRCDRRPDCRDMSDEENC 274
Chelonia_mydas         -----EVPLDVRACTEGEFACRSG-ECIEKEFRCDRRPDCRDMSDELDC 192
Xenopus_tropicalis     AQTLPSP----VGKEPPVTPSLRPCRDEFTCTSG-DCVPAEYRCDHRHDCRDMSDELEC 286
Rhinatrema_bivittatum AESPPPS----ESTEISVPMVDVRCCTASEFTCRDG-GCVPLDYRCDRRPDCRDMSDEEEC 292
.....310.....320.....330.....340.....350.....360

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Pavo_muticus	--P-----	-----QPHTAPPGTWCAAGGGT	18
Pavo_cristatus	--P-----	-----QPHTAPPGTWCAAGGGT	18
Gallus_gallus	AEP-----	-----PPSTAPPSTARPATTAR	274
Anas_platyrhynchos	GEP-----	-----PPATSPARPVPPAQARF	266
Homo_sapiens	EEP-----	-----VLGISPTFSLLVETTSI	254
Pan_troglodytes	EEP-----	-----VLGISPTFSLLVETTPL	271
Macaca_mulatta	EEL-----	-----VLGISPTVSLLVETTPL	331
Callithrix_jacchus	EEP-----	-----VLGVSPSSLLMEMTPL	271
Equus_caballus	EDL-----	-----VPELSSLPPPLMETPLP	254
Pteropus_allecto	-----	-----	
Bos_taurus	EEP-----	-----MPTLSSQPPPLGATPPP	272
Mus_musculus	EEP-----	-----VPELSSSTPAVGKVSPL	254
Ornithorhynchus_anatinus	EDE-----	-----TEEVGTVA TLQATTSP	294
Chelonia_mydas	DRQEVVVT	-----LPPLPITTAQPA TTRPT	217
Xenopus_tropicalis	EYEVVVVT	-----VPOEPR-----ITTPGPNLG-----PVSTARP	315
Rhinatrema_bivittatum	EVDGCGTDEFSCGSGECVPLVOLCDHRDCVDSDESNCVISTTPASVRTITLPTFTTAA		352
	.....370.....380.....390.....400.....410.....420		

Pavo_muticus	AGGR---TSRSTSSPPPP-----	-----PHGCRPAETACADGRCVPRDYLCDGE	59
Pavo_cristatus	AGGR---TSRSTSSPPPP-----	-----PHGCRPAETACADGRCVPRDYLCDGE	59
Gallus_gallus	PALT---TPPGTRRP PPP-----	-----PHGCRPAETACADGRCVPRDYLCDGE	315
Anas_platyrhynchos	ATTRPLVTIPATTRRPLPP-----	-----KAGCRPAEATCCRG GCVPRDYLCDGE	311
Homo_sapiens	PP-RPETTIMRQPPVTHA PQLLPGSV-----	-----RPLPCGPQEAACRNH CIPRDYLCDGQ	307
Pan_troglodytes	PP-QPETTIMRQPPVTHA PQLLPGSV-----	-----RPLPCGPQEAACRS GHCIIRRDYLCDGQ	324
Macaca_mulatta	PL-RPETAIMRQPPVTHA PQLLPGSV-----	-----RPLPCGPQEAACRS GHCIIPGDYLCDGQ	384
Callithrix_jacchus	PP-QREATTTRQPPHTHA PQLLPASV-----	-----RPLLCGPQEVACRS GQCILRDYLCDGQ	324
Equus_caballus	PH-YPEVATIRQLLVTPA PQPLFPEPH-----	-----RPVPCGPHEAACHS GHCIIPKDYVCDGQ	307
Pteropus_allecto	-----	-----	
Bos_taurus	PA-QPESLSQQRPATPA PQAALPSPG-----	-----RPVPCGPHEAACHS GHCIIPKDYVCDGQ	325
Mus_musculus	PL-WPEAATTPPPPVTHG PQFLPSVP-----	-----GPSACGPQEASCHS GHCIIPRDYLCDGQ	307
Ornithorhynchus_anatinus	PLPSTVAPTTRWVPGTTPPRPVTSRPG-----	-----RPRSCGPLEATCIS GQCIPEDYLCDGQ	348
Chelonia_mydas	TSPSTPMITTRRVPA TTPRLVTPKHPIRHPLEQRP	-----PCRRDEAVCSNK QCIIPRDYLCDGE	277
Xenopus_tropicalis	ATTPPRPFTRPPVIATTPYKPFTHKPPP-----	-----DLETQRCRRDEAR CPNGQCIPRDYLCDGE	372
Rhinatrema_bivittatum	TTVPAVSTSTRIPSTTPYRRITPKPLP-----	-----DTEVRPCRRDEAR CPNGQCIPRDYLCDGE	409
	.....430.....440.....450.....460.....470.....480		

Pavo_muticus	RDCADGSDEEGCGTPSPCEPNEFKCRNGHCALKLWRC DGDND CGDGSDETGCPTKVP GMP	119
Pavo_cristatus	RDCADGSDEEGCGTPSPCEPNEFKCRNGHCALKLWRC DGDND CGDGSDETGCPTKVP GMP	119
Gallus_gallus	RDCADGSDEEGCGTPSPCEPNEFKCRNGHCALKLWRC DGDND CGDGSDETGCPTKVP GMP	375
Anas_platyrhynchos	RDCADGSDEEDCGTPSPCEPNEFKCRNGHCALKLWRC DGDND CGDGSDETDCPTKAPGAA	371
Homo_sapiens	EDCEDGSDELDCGPPPPCEPNEFFPCGN GH CALKLWRC DGD FDCEDRTDEANCP TKRPEEV	367
Pan_troglodytes	EDCEDGSDELDCGPPPPCEPNEFFPCGN GH CALKLWRC DGD FDCEDRTDEANCP TKRPEEV	384
Macaca_mulatta	EDCEDGSDELDCGPPPPCEPNEFFPCGN GH CALKLWRC DGD FDCEDRTDEANCP TKRPEEV	444
Callithrix_jacchus	DDCRDGSDELDCGTPPPCEPNEFACGN GH CALKLWRC DGD FDCDKQTD ETNCPTKRPEEV	384
Equus_caballus	EDCKDGSDELDCGPTTPCEPNEFFPCGN GH CALKLWRC DGD FDCEDRTDEADCP AKRPEDV	367
Pteropus_allecto	-----	
Bos_taurus	EDCADGSDEADCGPTTPCEPNEFFPCGN GH CALKLWRC DGD FDCEDHTDEADCP VKRPEDV	385
Mus_musculus	EDCRDGSDELGCASPPPPCEPNEFACGN GH CALKLWRC DGD FDCEDRTDEANCSVKQPGEV	367
Ornithorhynchus_anatinus	EDCGDGSDEQDCGPPSLCEPNEFLCGN GH CALRLWRC DGD FDCEDRS DERDCPPKRPEEA	408
Chelonia_mydas	RDCLDGSDELS CGTPTPCEPNEFKCRNGHCALKLWRC DGDND CVDGSDEVD CPTKGP GDT	337
Xenopus_tropicalis	KDCKDGSDEMHC GTPSPCEPNEFKCKN GR CALKLWRC DGDND CGDGSDELNCPTKGP SDT	432
Rhinatrema_bivittatum	RDCRNGEDELNC GTPSPCEPNEFKCKN GRCT LK L WRC DGD DDCG D N SDESNCPTKGP GDT	469
490.....500.....510.....520.....530.....540	

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Pavo_muticus	CGPDQFSCVVGACIPASVHCDEEDCPDRSDEVGCMPPQVVTTPQESVQAVPGQTVSFT	179
Pavo_cristatus	CGPDQFSCVVGACIPASVHCDEEDCPDRSDEVGCMPPQVVTTPQESVQAVPGQTVSFT	179
Gallus_gallus	CGPDQFSCVVGACIPASVHCDEEDCPDRSDEVGCMPPQVVTTPQESVQAVPGQTVSFT	435
Anas_platyrhynchos	CGPDQFSCVVGACIPASVHCDEEDCPDRSDEVGCMPPQVVTTPQESVQAVPGQTVSFT	431
Homo_sapiens	CGPTQFRCVSTNMCIASFHCDEEDCPDRSDEFGCMPPQVVTTPPRESIQASRGQTVTFT	427
Pan_troglodytes	CGPTQFRCVSTNMCIASFHCDEEDCPDRSDEFGCMPPQVVTTPPRESIQASRGQTVTFT	444
Macaca_mulatta	CGPTQFRCVSTNMCIASFHCDEEDCPDRSDEFGCMPPQVVTTPPRESIQASRGQTVTFT	504
Callithrix_jacchus	CGPTQFRCVSTNMCIASFHCDEEDCPDRSDEFGCMPPQVVTTPPRESIQASRGQTVTFT	444
Equus_caballus	CGPTQFRCVSTNMCIASFHCDEEDCPDRSDEFGCMPPQVVTTPPRESIQASRGQTVTFT	427
Pteropus_allecto	-----	
Bos_taurus	CGPTKFRVSTNTCIPASFHCDEEDCPDRSDEFGCMPPQVVTTPQELIQASRGQTVTFT	445
Mus_musculus	CGPTKFRVSTNTCIPASFHCDEEDCPDRSDEFGCMPPQVVTTPQELIQASRGQTVTFT	427
Ornithorhynchus_anatinus	CEPSQFRCVSTNTCIPASFHCDEEDCPDRSDEFGCMPPQVVTTPPEELVQVSRGETVTFT	468
Chelonia_mydas	CSPDQFICVSSRTCIPASVQCDEEDCPDRSDEVGCTPPQVITPPEESVQATPGQTVRFR	397
Xenopus_tropicalis	CAPDQFVCVQARTCIPASVQCDEEDCPDRSDEVGCMPPQVVTTPPEESIMASRGDTVRFT	492
Rhinatrema_bivittatum	CAPDQFVCVQARTCIPASVQCDEEDCPDRSDEVGCMPPQVVTTPPEESIMASRGDTVRFT	529
	.....550.....560.....570.....580.....590.....600	

Pavo_muticus	CVATGVPTPIITWRLNWGSIPASRRVSVSEGGQGTLTIRDVKEADQGAYTCEAINTRGM	239
Pavo_cristatus	CVATGVPTPIITWRLNWGSIPASRRVSVSEGGQGTLTIRDVKEADQGAYTCEAINTRGM	239
Gallus_gallus	CVATGVPTPIITWRLNWGSIPASRRVSVSEGGQGTLTIRDVKEADQGAYTCEAINTRGM	495
Anas_platyrhynchos	CAATGVPTPIITWRLNWGSIPASRRVSVSEGGQGTLTIRDVKEADQGAYTCEAINTRGM	491
Homo_sapiens	CVAIGVPTPIINWRLNWGHIPSHPRVTVTSEGGRGTLIIRDVKESDQGAYTCEAMNARGM	487
Pan_troglodytes	CVAIGVPTPIINWRLNWGHIPSHPRVTVTSEGGRGTLIIRDVKESDQGAYTCEAMNARGM	504
Macaca_mulatta	CVAIGVPTPIINWRLNWGHIPSHPRVTVTSEGGRGTLIIRDVKESDQGAYTCEAMNARGM	564
Callithrix_jacchus	CVAIGVPTPIINWRLNWGHIPSHPRVTVTSEGGRGTLIIRDVKESDQGAYTCEAMNARGM	504
Equus_caballus	CVAMGVPTPIINWRLNWGHIPSHPRVTVTSEGGRGTLIIRDVKESDQGAYTCEAMNARGM	487
Pteropus_allecto	-----	
Bos_taurus	CVAIGVPTPIINWRLNWGHIPSHPRVTVTSEGGRGTLIIRDVKESDQGAYTCEAMNARGM	505
Mus_musculus	CVATGVPTPIINWRLNWGHIPAHPRVTVTSEGGRGTLIIRDVKESDQGAYTCEAMNARGM	487
Ornithorhynchus_anatinus	CIATGVPTPIINWRLNWGHIPSHPRVTVTSEGGRGTLIIRDVKESDQGAYTCEAMNARGM	528
Chelonia_mydas	CVAVGVPTPIITWRLNWGHIPANRRVSVSENGHGMILTIRDVKEADQGAYTCEAINARGM	457
Xenopus_tropicalis	CVAIGVPTPIITWRLNWGHIPSHPRVTVTSENGHGMILTIRDVKEADQGAYTCEAINAKGM	552
Rhinatrema_bivittatum	CVAIGVPTPIITWRLNWGHIPSHPRVTVTSENGHGMILTIRDVKEADQGAYTCEAINAKGM	589
	.....610.....620.....630.....640.....650.....660	

Pavo_muticus	VFGIPDSVLTVTTPRPG-PCPEGHFQVTGTSRCLPCFCFGVTSSCHATTTRHRHRIHLSFNR	298
Pavo_cristatus	VFGIPDSVLTVTTPRPG-PCPEGHFQVTGTSRCLPCFCFGVTSSCHATTTRHRHRIHLSFNR	298
Gallus_gallus	VFGIPDSVLTVTTPRPG-PCPEGHFQVTGTSRCLPCFCFGVTSSCHATTTRHRHRIHLSFNR	554
Anas_platyrhynchos	VFGIPDSVLTVTTPRPG-PCPEGHFQVTGTSRCLPCFCFGVTSSCHATTTRHRHRIHLSFNR	550
Homo_sapiens	VFGIPDGVLELVPQRG-PCPDGHFYLEHSASCLPCFCFGVTSSCHATTTRHRHRIHLSFNR	546
Pan_troglodytes	VFGIPDGVLELVPQRG-PCPDGHFYLEHSASCLPCFCFGVTSSCHATTTRHRHRIHLSFNR	564
Macaca_mulatta	VFGIPDGVLELVPQRG-PCPDGHFYLEHSASCLPCFCFGVTSSCHATTTRHRHRIHLSFNR	624
Callithrix_jacchus	VFGIPDGVLELVPQRG-PCPDGHFYLEHSASCLPCFCFGVTSSCHATTTRHRHRIHLSFNR	563
Equus_caballus	VFGIPDGVLELVPQRG-PCPDGHFYLEHSASCLPCFCFGVTSSCHATTTRHRHRIHLSFNR	546
Pteropus_allecto	-----	
Bos_taurus	VFGIPDGVLELVPQRG-PCPDGHFYLEHSASCLPCFCFGVTSSCHATTTRHRHRIHLSFNR	564
Mus_musculus	VFGIPDGVLELVPQRG-PCPDGHFYLEHSASCLPCFCFGVTSSCHATTTRHRHRIHLSFNR	546
Ornithorhynchus_anatinus	VFGIPDGVLELVPQRG-PCPDGHFYLEHSASCLPCFCFGVTSSCHATTTRHRHRIHLSFNR	587
Chelonia_mydas	VFGIPDGVLELVPQRG-PCPDGHFYLEHSASCLPCFCFGVTSSCHATTTRHRHRIHLSFNR	516
Xenopus_tropicalis	VFGIPDGVLELVPQRG-PCPDGHFYLEHSASCLPCFCFGVTSSCHATTTRHRHRIHLSFNR	611
Rhinatrema_bivittatum	VFGIPDGVLELVPQRG-PCPDGHFYLEHSASCLPCFCFGVTSSCHATTTRHRHRIHLSFNR	648
670.....680.....690.....700.....710.....720	

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Pavo_muticus	PDDFKGVNVTVP SAPSV PALSATQLHVDMA TE EFQ LLDLSRRFLALDAFWALPA Q FLGDK	358
Pavo_cristatus	PDDFKGVNVTVP SAPSV PALSATQLHVDMA TE EFQ LLDLSRRFLALDAFWALPA Q FLGDK	358
Gallus_gallus	PDDFKGVNVTVP SAPSV PALSATQLHVDMA TE EFQ LLDLSRRFLALDAFWALPA Q FLGDK	614
Anas_platyrhynchos	PDDFKGVNVTVP STPLPAL SATQLHVDMATEEFQ LLDLSRRFLALDAFWALPAP FLGDK	610
Homo_sapiens	PDDFKGVNVTMPA PGITPPLSSTQLQIDPSLHEFQLVDSLRRFLVHDSFWALPEQFLGNK	606
Pan_troglodytes	PDDFKGVNVTMPA PGMPPLSSTQLQIDPSLHEFQLVDSLRRFLVHDSFWALPEQFLGNK	624
Macaca_mulatta	PDDFKGVNVMPA PQSPMPPLSSTQLQIDPALHEFQLVDSLRRFLVHDSFWALPEQFLGNK	684
Callithrix_jacchus	PNDFKGVNVTMPA PGITPPLSSTQLQIDPALHEFQLVDSLRRFLVHDSFWALPEQFLGNK	623
Equus_caballus	PNDFKGVNVTMPA PGMPPLSSTQLQIDTALQEFQLVDSLRRFLVHDSFWALPEQFLGNK	606
Pteropus_alecto	-----MPA PGMPPLSSTQLQIDTALQEFQLVDSLRRFLVHDSFWALPEQFLGNK	50
Bos_taurus	PNDFKGVNVTMPA PGMPPV SSTQLQIDTTLOEFQLVDSLRRFLVHDSFWALPEQFLGNK	624
Mus_musculus	PNDFKGVNVTMP SPGVPPLSSTQLQIDPALQEFQLVDSLRRFLVHD AFWALPKQFLGNK	606
Ornithorhynchus_anatinus	PDDFKGVNVT EPA PGAPPLSSTQLQVDLATEEFQLVDSLRRFLI HD SFWMLPQQFLGNK	647
Chelonia_mydas	PEDFKGVNVTTPA QLGLPLSSTQLQIDPALQEFQLVDSLRRFLAQ NSFWTLPSQFLGNK	576
Xenopus_tropicalis	PEDFKGVNFTVP SHVGIPPLSSNLQIDTSVEEFQLVDSLRRFLSIDSFWTLPGOFLGNK	671
Rhinatrema_bivittatum	PDDFKGVNV SVPHGP TPLSSNLQIDPSAEFQLVDSLRRFLSHDSFWTLPGOFLGNK	708
	.....730.....740.....750.....760.....770.....780	

	: * : *:* * ** ** .:..*:: * * : * : *:* *::: ::*	
Pavo_muticus	VDAYGGALS YGVRYRLGRGPSEPAPRPDVLWLWGHGHQLRAQAR-ATQPDVLNRRHIPFTE	417
Pavo_cristatus	VDAYGGALS YGVRYRLGRGPSEPAPRPDVLWLWGHGHQLRAQAR-ATQPDVLNRRHIPFTE	417
Gallus_gallus	VDAYGGALS YGVRYRLGRGPSEPAPRPDVLRLRGHGRQLRARTR-ATQPDVLNRRHIPFTE	673
Anas_platyrhynchos	VDAYGGALS YSVRYRLGRGPPEPAPRPDVLRLRGRGRQLQARAG-DTQPDILNQRRIPFTE	669
Homo_sapiens	VDSYGGSLRYNVRYELARGMLEPVQRPDVVLVMGAGYRLLSRGHTPTQPGALNQROVQFSE	666
Pan_troglodytes	VDSYGGSLRYNVRYELARGMLEPVQRPDVVLVGAGYRLLSRGHTPTQPGALNQROVQFSE	684
Macaca_mulatta	VDSYGGSLRYNVRYELARGMLEPVQRPDVVLVGAGYRLLSRGHTPTQPGALNQROVQFSE	744
Callithrix_jacchus	VDSYGGSLRYNVRYELARGMLEPVQRPDVVLVGAGYRLLSRGHTPTQPGALNQROVQFSE	683
Equus_caballus	VDSYGGSLRYKVRYELARGTLEPVQRPDVVLVGAGYRLLSRGHTPTQPGALNQROVQFSE	666
Pteropus_alecto	VDSYGGFLRYKVRYELARGTLEPVQRPDVVLVMGAGYRLLSRGHTPTQPSALNQROVQFSE	110
Bos_taurus	VDSYGGSLRYKVRYELARGTLEPVQRPDVVLVGAGHRLLSRGHTSPTQGPVNQROVQFSE	684
Mus_musculus	VDSYGGFLRYKVRYELARGMLEPVQKPDVILVGAGYRLHSRGHTPTHPGTINQROVQFSE	666
Ornithorhynchus_anatinus	VDSYGGSLRYKVRYELARGTLEPVQKPDVVLVGGGHRLLSRGHTPTQPGTINQROVYFTE	707
Chelonia_mydas	VDSYGGYLSFQVRYGLARGQSEPVQKSSVVIVGNGQKLIYRVQVPTQPSVINRRQIHTE	636
Xenopus_tropicalis	VDSYGGSLSFVKVRYGLTRGQSEPVKRKPDVILVGNRKLIYRVQTSPTPSIVNQRKIQFTE	731
Rhinatrema_bivittatum	VDSYGGFLSYKVOYVLARGQSEPVQKPDVIIVGNGQRLLIYRVQVPTRPATVNQRVHTE	768
	.....790.....800.....810.....820.....830.....840	

	.*:*..*::.:::***:*****:**.*	
Pavo_muticus	DNWEDETGAPVRSRELLLMVLQRLEGILVREVDGRMASVGLSDVAMDVTGPGDTGLEPAG	477
Pavo_cristatus	DNWEDETGAPVRSRELLLMVLQRLEGILVREVDGRMASVGLSDVAMDVTGPGDTGLEPAG	477
Gallus_gallus	DNWEDETGAPVRSRELLLMVLQRLEGILVRAVDGRMASVGLSDVAMDVTGPGDTGLEPAG	733
Anas_platyrhynchos	DNWEDETGAPVRSRELLMQLEGLILVRAVDGRMASVGLSDVAMDITSPGDTGLAPAG	729
Homo_sapiens	EHWVHESGRPVQRAELLQVLSLEAVLIQTVYNTKMASVGLSDIAMDTTVTHATSHGRAH	726
Pan_troglodytes	EHWVHESGRPVQRVELLOVQLQSLEAVLIQTVYNTKMASVGLSDIAMDTTVTHATSHGRAH	744
Macaca_mulatta	EHWVHESGRPVQRAELLQVLSLEAVLIQTVYNTKMASVGLSDIAMDTTVTHATSHGRAH	804
Callithrix_jacchus	EHWVHESGRPVQRAELLQVLSLEAVLIQTVYNTKMASVGLSDIAMDTTVTYTTSHGRAH	743
Equus_caballus	EHWVHESGQPVQRAELLQVLSLEAVLIQTVYNTKMASVGLSDITMDTTVTHATSHGRAH	726
Pteropus_allecto	EHWVHESGRPVQRAEMMOVLQSLEAVLIQTVYNKMASVGLSDIAMDTTVTYTTSHGRAH	170
Bos_taurus	EHWVHESGRPVQRAEMLOVLSLEAVLIQTVYDHKMASVGLSDVAMDTTVTYATSHGRAH	744
Mus_musculus	EHWVHESGRPVQRAEMLOALASLEAVLLQTVYNTKMASVGLSDIVMDTTVHTTTHGRAH	726
Ornithorhynchus_anatinus	EHWMHESGAPVTRGELLTILRSLEGVLLQTVYNTKMASVGLSDIIMDTTVALANGQPRAH	767
Chelonia_mydas	ENWQHESGAPVRSRETLILLALQNLSEILVQTVYDNKMASVGLSDIAMDTTMMELTSQMAQ	696
Xenopus_tropicalis	ENWQHESGASVTREDLLMTLQNLQLEAIMIQTVYDNKMASVGLSDIVMDTTSVEYTLGPVA	791
Rhinatrema_bivittatum	ENWQHESGASPTREDLLMALQNLQLEAVLIQTVYNNRTASVGLSDIVMDTTTVEFTSLGVAH	828
850.....860.....870.....880.....890.....900	

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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***** ** * **: * :.* *** * ****:* ** :*: ** . *:*****
Pavo_muticus      DVEECRCPVGYTGLSCORCAANFERVPQGPYLGTCSGCSCCHGHSSTCDQVYGHCLNCQHN 537
Pavo_cristatus    DVEECRCPVGYTGLSCORCAANFERVPQGPYLGTCSGCSCCHGHSSTCDQVYGHCLNCQHN 537
Gallus_gallus     DVEECRCPVGYTGLSCORCAANFERVPQGPYLGTCSGCSCCHGHSSTCDQVYGHCLNCQHN 793
Anas_platyrhynchos DVEECRCPVGYTGLSCORCAANFERVPQGPYLGTCSGCSCCHGHSSTCDQVYGHCLNCQHN 789
Homo_sapiens      SVEECRCPIGYSGLSCESCDAHFTRVPGGPYLGTCSGCNCNGHASSCDPVYGHCLNCQHN 786
Pan_troglodytes   SVEECRCPIGYSGLSCESCDAHFTRVPGGPYLGTCSGCNCNGHASSCDPVYGHCLNCQHN 804
Macaca_mulatta    SVEECRCPIGYSGLSCESCDAHFTRVPGGPYLGTCSGCNCNGHASSCDPVYGHCLNCQHN 864
Callithrix_jacchus TVEEECRCPIGYSGLSCESCDAHFTRVPGGPYLGTCSGCNCNGHASSCDPVYGHCLNCQHN 803
Equus_caballus    SVEECRCPIGYSGLSCESCDAHFTRVPGGPYLGTCSGCNCNGHASSCDPVYGHCLNCQHN 786
Pteropus_allecto  SVEECRCPIGYSGLSCESCDAHFTRVPGGPYLGTCSGCSCNGHASYCDPVYGHCLNCQHN 230
Bos_taurus        SVEECRCPIGYSGLSCESCDAHFTRVPGGPYLGTCSGCNCNGHASSCDPVYGHCLNCQHN 804
Mus_musculus      SVEECRCPIGYSGLSCESCDAHFTRVPGGPYLGTCSGCNCNGHASSCDPVYGHCLNCQHN 786
Ornithorhynchus_anatinus SVEECRCPTGYSGLSCEDCDSHFTRVPNGSSLGTCSGCDCNGHAASCDAAFVGHCLNCQHN 827
Chelonia_mydas    GVEECRCPIGYLGLSCERCDAHFTRVPGGPYLGTCSGCNCNGHSSSCDRVFGYCLNCQHN 756
Xenopus_tropicalis GVEECRCPPGYAGPSCEVCAAFERVPGGPYLGTCSGCNCNGHASSCDPVSGYCLNCQHN 851
Rhinatrema_bivittatum GVEECRCPPGYLGLSCETCAAFERVPGGPYLGTCAGCRCNGHASSCDPVSGYCLNCQHN 888
.....910.....920.....930.....940.....950.....960

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****:*:***.*****. . . :*.**** : ****:*:* ** *.** *****
Pavo_muticus      TEGPQCEKCKPGFFGDATQGTAAACRCPCPYTEPARRFSESFCFLDTDGQATCDACAPGY 597
Pavo_cristatus    TEGPQCEKCKPGFFGDATQGTAAACRCPCPYTEPARRFSESFCFLDTDGQATCDACAPGY 597
Gallus_gallus     TEGPQCEKCKPGFFGDATQGTAAACRCPCPYTEPARRFSESFCFLDTDGQATCDACAPGY 853
Anas_platyrhynchos TEGPQCEKCKPGFFGDATQGTAAACRCPCPYTEPARRFSESFCFLDTDGQATCDACAPGY 849
Homo_sapiens      TEGPQCNKCKAGFFGDAMKATATSCRPCPCPYIDASRRFSDTCFLDTDGQATCDACAPGY 846
Pan_troglodytes   TEGPQCNKCKAGFFGDAMKATATSCRPCPCPYIDASRRFSDTCFLDTDGQATCDACAPGY 864
Macaca_mulatta    TEGPQCNKCKAGFFGDAMKATATSCRPCPCPYIDASRRFSDTCFLDTDGQATCDACAPGY 924
Callithrix_jacchus TEGPQCDKCKAGFFGDAMKATATSCRPCPCPYIDASRRFSDTCFLDTDGQATCDACAPGY 863
Equus_caballus    TEGPQCNKCKAGFFGDAMKATATSCRPCPCPYIDASRRFSDTCFLDTDGQATCDACAPGY 846
Pteropus_allecto  TEGPQCNKCKAGFFGDAMKATATSCRPCPCPYIDASRRFSDTCFLDTDGQATCDACAPGY 290
Bos_taurus        TEGPQCNKCKAGFFGDAMKATATSCRPCPCPYIDASRRFSDTCFLDTDGQATCDACAPGY 864
Mus_musculus      TEGPQCDKCKPGFFGDAMKATATSCRPCPCPYIDASRRFSDTCFLDTDGQATCDACAPGY 846
Ornithorhynchus_anatinus TEGPRCDKCKPGFFGDATLGTPTACRCPCPYIDASRRFSDTCFLDTDGQATCDACAPGY 887
Chelonia_mydas    TEGPQCNKCKPGFFGDATRGNTACRCPCPYIDASRRFSDTCFLDTDGQATCDACAPGY 816
Xenopus_tropicalis TEGPQCNKCKAGFFGDPTRGVSDACRCPCPHTDPRRRFSDTCFMDVDGQPTCDSCAPGY 911
Rhinatrema_bivittatum TEGPQCNKCKAGFFGDPTSGTSEACRCPCPSTDYRRRFSDTCFLDTDGQATCDACAPGY 948
.....970.....980.....990.....1000.....1010.....1020

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:***** ** **: * :*:.*:* : ** :* :* **
Pavo_muticus      AGRRRCERCAPGYEGNPIQPGGKCTRIGQELIKCDARGGKDAV---GGTCRCKP----- 647
Pavo_cristatus    AGRRRCERCAPGYEGNPIQPGGKCTRIGQELIKCDARGGKDAV---GGTCRCKP----- 647
Gallus_gallus     AGRRRCERCAPGYEGDPIQPGGKCTRIGQELIKCDARGGKDAV---GGTCRCKP----- 903
Anas_platyrhynchos AGRRRCERCAPGYEGDPIQPGGKCTRIGQELIKCDTRGGKDAV---GGTCRCKP----- 899
Homo_sapiens      TGRRCESCAPGYEGNPIQPGGKCRPVNQEIIVRCDERGSMTGS---GEACRCKN----- 896
Pan_troglodytes   TGRRCESCAPGYEGNPIQPGGKCRPVNQEIIVRCDERGSMTGS---GEACRCKN----- 914
Macaca_mulatta    TGRRCESCAPGYEGNPIQPGGKCRPVNQEIIVRCDERGSMTGS---GEACRCKN----- 974
Callithrix_jacchus TGRRCESCAPGYEGNPIQPDGKCRPINQAIIVRCDERGSMTGS---GEACRCKN----- 916
Equus_caballus    TGRRCESCAPGYEGNPIQPGGKCRPTNQEIIVRCDERGSMTGS---GQTCRCKLPALCLON 903
Pteropus_allecto  TGRRCESCAPGYEGNPIQPGGKCRPTNQEIIVRCDERGSMTGS---GQTCRCKLPALCLON 347
Bos_taurus        TGRRCESCAPGYEGNPIQPNGKCRPINQAIIVRCDERGSMTGS---GEACRCKN----- 914
Mus_musculus      TGRRCESCAPGYEGNPIQPGGKCRPTNQEIIVRCDERGSMTGS---GETCRCKN----- 896
Ornithorhynchus_anatinus TGRRCESCAPGYEGNPIQPGGKCRPINQAIIVRCDERGSMTGS---GESCLCKD----- 937
Chelonia_mydas    TGRRCESCAPGYEGNPMQPGGRCVTTAQEFMKCDKRGSSDST---GGSCRCKP----- 866
Xenopus_tropicalis TGRRCERCAEGYDGRPMQPGGRCVGN---VCDVKG---ALSTG-DGSCVCKS----- 958
Rhinatrema_bivittatum TGRRCERCAEGYDGRPMQPGGRCVGN---VCDVKG---ALSTG-DGSCVCKS----- 1000
.....1030.....1040.....1050.....1060.....1070.....1080

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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:* *. *::: * *:: ** *****::: ** * * *:
Pavo_muticus      NVTGRQCDECAVGTFHLS DANPDGCLKCF CMGVSRQ CASSWSRDQVRVTSE--EVAPLH 705
Pavo_cristatus    NVTGRQCDECAVGTFHLS DANPDGCLKCF CMGVSRQ CASSWSRDQVRVTSE--EVAPLH 705
Gallus_gallus     NVTGRQCDECAVGTFHLS DANPDGCLKCF CMGVSRQ CASSWSRDQVRVTSE--EVAPLH 961
Anas_platyrhynchos NVTGRQCDECAAGTFHLS DANPDGCLKCF CMGVSRQ CASSWSRDQVRVTAE--EVSPLH 957
Homo_sapiens      NVVGRLCNECADGSFHLSTRNPDGCLKCF CMGVSRHCTSSSSWSRAQLHGASE--EPGHFS 954
Pan_troglodytes   NVVGRLCNECADGSFHLSTRNPDGCLKCF CMGVSRHCTSSSSWSRAQVHGASE--EPGHFS 972
Macaca_mulatta    NVVGRLCNECADGSFHLSTQNPDGCLKCF CMGVSRQCTSSSSWSRAQVHGASE--EPGHFS 1032
Callithrix_jacchus NVVGRLCNECANGSFHLSTQNPDGCLKCF CMGVSRQCTSSSSWSRAQVHGASE--KPAHFA 974
Equus_caballus    NVVGRLCNECVAGSFHLSTQNPDGCLKCF CMGVSRQCTSSSSWSRAQVHGASE--EPTQFS 961
Pteropus_allecto  NVVGRLCNECVAGSFHLSTQNPDGCLKCF CMGVSRQCTSSSSWSRDQVHGASE--EPSQFS 405
Bos_taurus        NVVGRLCNECVAGSFHLSTQNPDGCLKCF CMGVSRQCTSSSSWSRAQVHGASE--EPTQFS 972
Mus_musculus      NVVGRLCNECVAGSFHLSTQNPDGCLKCF CMGVSRQCTSSSSWSRAQVHGASE--EPSQFS 954
Ornithorhynchus_anatinus NVAGRLCDOCSAGNFHLSTQNPDGCLKCF CMGVSRQCTSSSSWSRAQVHGASE--EPTQFS 997
Chelonia_mydas    NVVGRLCNECVAGSFHLSTQNPDGCLKCF CMGVSRQCTSSSSWSRAQVHGASE--EPTQFS 924
Xenopus_tropicalis HVEGNFCNECVAGSFHLSTQNPDGCLKCF CMGVSRQCTSSSSWSRAQVHGASE--EPTQFS 1018
Rhinatrema_bivittatum NVAGNLCDCKSGAFYLS DNKPEGLKCF CMGVSRQCTSSSSWSRAQVHGASE--EPTQFS 1060
.....1090.....1100.....1110.....1120.....1130.....1140

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::: .*          ** *: * :   *: * *  * ***** *:
Pavo_muticus      LANLAGTRTAIKGSRFAAPGELIFSDFTLPRDIYFWVLPS SFTGDKVTSYGGELKYTVT 765
Pavo_cristatus    LANLAGTRTAIKGSRFAAPGELIFSDFTLPRDIYFWVLPS SFTGDKVTSYGGELKYTVT 765
Gallus_gallus     LANLAGTRTAIKGSRFAATRELVSDFHTLPRDIYFWVLPS SFTGDKVTSYGGELKYTVT 1021
Anas_platyrhynchos LTNLAGTGTMIGKSRFAAPRELVSDFHTLPRDIYFWVLPS SFTGDKVTSYGGELKYTVT 1017
Homo_sapiens      LTNAASTHTTNEGIFSPPTGELGFSFHLRLLSGPYFWSLPSRFLGDKVTSYGGELRFTVT 1014
Pan_troglodytes   LTNAASTHTTNEGIFSPPTGELGFSFHLRLLSGPYFWSLPSRFLGDKVTSYGGELRFTVT 1032
Macaca_mulatta    LTNAASTHTTNEGIFSPPTGELGFSFHLRLLSGPYFWSLPSRFLGDKVTSYGGELRFTVT 1092
Callithrix_jacchus MTNAANTHSTNDGIFSPPTGELGFSFHLRLLSGPYFWSLPSRFLGDKVTSYGGELRFTVT 1034
Equus_caballus    LTNTAGTHTTSEGISSPVPGELVFSFHLRLLSGPYFWSLPSRFLGDKVTSYGGELRFTVT 1021
Pteropus_allecto  LTNAAGTHITTLGISSPTGELAFSSFQRLLSGPYFWSLPSRFLGDKVTSYGGELRFTVT 465
Bos_taurus        LTNPITGTHNASEGISSPVPGELVFSFHLRLLSGPYFWSLPSRFLGDKVTSYGGELRFTVT 1032
Mus_musculus      LSNAAGTHITTLGISSPTGELAFSSFQRLLSGPYFWSLPSRFLGDKVTSYGGELRFTVT 1014
Ornithorhynchus_anatinus LSDAVGTHSTHOGIVSHGPGELAFSDFNLPPLPGPYFWSLPSRFLGDKVTSYGGELRFTVT 1057
Chelonia_mydas    LANLANTRITVSEGIRFSPSHAEAFSAFHSFPRDVIYFWVLPRFSGDKVTSYGGELRFTVT 984
Xenopus_tropicalis ISNAGSTRITLSEIRVTGQSELTFNLFNLPVQDVYFWVLPRFSGDKVTSYGGELRFTVT 1078
Rhinatrema_bivittatum LSNLANTRITFSEGIGVRGSELVFAAFSVPRDNIYFWVLPRFSGDKVTSYGGELRFTVT 1120
.....1150.....1160.....1170.....1180.....1190.....1200

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.: * ** *::: ** * *: . * * . *** * :*: * *
Pavo_muticus      HHAPAGAQMQLQHQPDLVLLQNGISLKYFSDASPVLGVPPTTVTPFRERAWRRADGRDATR 825
Pavo_cristatus    HHAPAGAQMQLQHQPDLVLLQNGISLKYFSDASPVLGVPPTTVTPFRERAWRRADGRDATR 825
Gallus_gallus     HHAPAGAQMQLQHQPDLVLLQNGISLKYFSDASPVLGVPPTTVTPFRERAWRRADGRDATR 1081
Anas_platyrhynchos HHAPADAQPLQRPDLVLLQNGIFLHFSDATVPVGPVPTTVTPFRERAWRRADGRDATR 1077
Homo_sapiens      QRSQPGSTPLHGQPLVVLQGNIILEHHVAQEPSPGQPSFTFTVPFREAWQRPDGPATR 1074
Pan_troglodytes   QRSQPGSTPLHGQPLVVLQGNIILEHHVAQEPSPGQPSFTFTVPFREAWQRPDGPATR 1092
Macaca_mulatta    QRSQPGSTPLHGQPLVVLQGNIILEHHVAQEPSPGQPSFTFTVPFREAWQRPDGPATR 1152
Callithrix_jacchus QRSQPGSAPLHGQPLVVLQGNIILEHHVAQEPSPGQPSFTFTVPFREAWQRPDGPATR 1094
Equus_caballus    QQPQPGSTPLHROPLVVLQNGIVLEHHVSREPSGQPSFTFTVPFREAWQRPDGPATR 1081
Pteropus_allecto  QQPQPGSAPLHGQPLVVLQNGIVLEHHVSREPSGQPSFTFTVPFREAWQRPDGPATR 525
Bos_taurus        QRPQPGSAPLHGQPLVVLQGNIILEHHVAQEPSPGQPSFTFTVPFREAWQRPDGPATR 1092
Mus_musculus      QRPRPSSAPLHGQPLVVLQGNIILEHHVAQEPSPGQPSFTFTVPFREAWQRPDGPATR 1074
Ornithorhynchus_anatinus QMRERGSAPLHGQPLVVLQNGIFLHFHQAQEPSPGQPSFTFTVPFREAWQRPDGPATR 1117
Chelonia_mydas    HSAAPGAHPLPSQPDVLLQNGIFLHFHQAQEPSPGQPSFTFTVPFREAWQRPDGPATR 1044
Xenopus_tropicalis FEAPAGSQPLFGQPDVLLQNGIFLHFHQAQEPSPGQPSFTFTVPFREAWQRPDGPATR 1138
Rhinatrema_bivittatum YTAPPQSQPLFGQPDVLLQNGIFLHFHQAQEPSPGQPSFTFTVPFREAWQRPDGPATR 1180
.....1210.....1220.....1230.....1240.....1250.....1260

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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*****.: : : : : *.: : : * * * * * * * * * *
Pavo_muticus      EHLLMALADIDVLMIRASYSEOPTESRLADVRLDVAVPHATGRPPALEVEDCTCPPGYRG 885
Pavo_cristatus    EHLLMALADIDVLMIRASYSEOPTESRLADVRLDVAVPHATGRPPALEVEDCTCPPGYRG 885
Gallus_gallus     EHLLMALADIDVLMIRASYSEOPTESRLADVRLDVAVPHATGRPLALEVEDCTCPPGYRG 1141
Anas_platyrhynchos EHLLMALADIDVLMIRASYTDQPMESRLADVRLDVAVPHATGRAPALEVEDCACPPGYRG 1137
Homo_sapiens      EHLLMALAGIDTLLIRASYAQQAESRVSGISMDVAVPEETGQDPALEVEQCS CPPGYRG 1134
Pan_troglodytes   EHLLMALAGIDTLLIRASYAQQAESRVSGISMDVAVPEETGQDPALEVEQCS CPPGYRG 1152
Macaca_mulatta    EHLLMALAGIDTLLVRASYAQQAESRVSGISMDVAVPEETGQDPALEVEQCS CPPGYRG 1212
Callithrix_jacchus EHLLMALAGIDTLLIRASYTQQAESRISGISMDVAVPEETGQDPALEVEHCSCPHGYGG 1154
Equus_caballus    EHLLMALAGLDTLLIQASYTQQAESRISGISMDVAVPEDTGQDPALEVEQCTCPPGYRG 1141
Pteropus_allecto  EHLLMALAGIDTLLIQASYTQQAESRISGISMDVAVPENTGQDPALEVEQCTCPPGYRG 585
Bos_taurus        EHLLMALADIDSLLIQASHTRQQAESRVSGISMDVAVPEDTGQDPAREVEQACPPGYRG 1152
Mus_musculus      EHLLMALAGIDALLIQASYTQQAESRVSGISMDVAVPENTGQDSAREVEQCTCPPGYRG 1134
Ornithorhynchus_anatinus EHLLMALAGIDMLIRASYAQQAESRISGIKMDVAVPYATGOKLALEVENCS CPPGYRG 1177
Chelonia_mydas    EHLLMALADIDLFMIRASYMDRPTESRLSNIHMDVAVPHATGLEQAVEVEECTCPPGYRG 1104
Xenopus_tropicalis EHLLMALADIDLLMIRASYAERMVETRISNIHMDVAVPYPTDRQRAVEVEHCVCPPGYSG 1198
Rhinatrema_bivittatum EHLLMALADINLFMIRATYSERMTERSLNINMDVAVPHSTGLERALEVEHCVCPPAGYRG 1240
.....1270.....1280.....1290.....1300.....1310.....1320

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***: ** * * .***** *.* *: *.: * *.:* *.:* *.:*
Pavo_muticus      PSCQDCDVGYSRSTSGLYLGTCECQCCHGHATECHPETGECQGCRDHTEGAQCDKCPGY 945
Pavo_cristatus    PSCQDCDVGYSRSTSGLYLGTCECQCCHGHATECHPETGECQGCRDHTEGAQCDKCPGY 945
Gallus_gallus     PSCQDCDVGYTRSTSGLYLGTCECQCCHGHATECHPETGECQGCRDHTEGAQCDKCPGY 1201
Anas_platyrhynchos PSCQDCDVGYTRSTSGLYLGTCECQCCHGHATECHPETGECQGCRDHTEGTQCDKCPGY 1197
Homo_sapiens      PSCQDCDTGYTRTPSGLYLGTCECSCCHGHSEACEPETGACQGCQHHTEGPRCEQCPGY 1194
Pan_troglodytes   PSCQDCDTGYTRTPSGLYLGTCECSCCHGHSEACEPETGACQGCQHHTEGPRCEQCPGY 1212
Macaca_mulatta    PSCQDCDTGYTRTPSGLYLGTCECSCCHGHSEACEPETGACQGCQHHTEGPRCEQCPGY 1272
Callithrix_jacchus PSCQDCDTGYTRTPSGLYLGTCECSCCHGHSEACEPETGACQGCQHHTEGPWCEQCPGY 1214
Equus_caballus    PSCQDCDTGYTRTPSGLYLGTCECSCCHGHTEVCEPETGACQGCQHHTEGPRCEQCPGY 1201
Pteropus_allecto  PSCQDCDTGYTRTPSGLYLGTCECSCCHGHTEVCEPESGACQGCQHHTEGPQCEQCPGY 645
Bos_taurus        PSCQDCDAGYTRMPSGLYLGTCECSCCHGHTEVCEPETGACQGCQHHTEGPRCEQCPGY 1212
Mus_musculus      PSCQDCDTGYTRVPSGLYLGTCECSCNCHGHSETCEPETGACQSCQHHTEGASCEQCPGY 1194
Ornithorhynchus_anatinus LSCQECDKGYVRTSSGLYLGTCEPCDCHGHSEVCDPDTRVCQDKDNTAGPKCETCPGY 1237
Chelonia_mydas    PSCQDCDVGYARTTSGLYLGTCECQDCSGHSAECDAETGDCQNCQDNTGTRCERCKSGY 1164
Xenopus_tropicalis PSCQDCDTGYTRSTSGLYLGTCECQCGGHSSECDRETGECLNCQHNTGKCEKCKAGS 1258
Rhinatrema_bivittatum PSCQECDSGYTRSTSGLYLGTCECQCGGHAECDEETGECLNCQHNTGSRCEKCPGY 1300
.....1330.....1340.....1350.....1360.....1370.....1380

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Pavo_muticus      YGDATRGTPGDCRPPCPCHGPRID---SQSCFEDTDGQPTCSACAPGHTGRLCERCLPGYV 1002
Pavo_cristatus    YGDATRGTPGDCRPPCPCHGPRID---SQSCFEDTDGQPTCSACAPGHTGRLCERCLPGYV 1002
Gallus_gallus     YGDATHGTPGDCRPPCPCHGPRID---GQSCFEDTDGQPTCSACAPGHTGRLCERCLPGYV 1258
Anas_platyrhynchos YGDATRGTPGDCRPPCPCHGPRID---TQSCFEDTDGQPTCSACAPGHTGRLCERCLPGYV 1254
Homo_sapiens      YGDAQRGTPQDCQLCPCYGDPAAQAHTCFLDLDGHPTCDACSPGHSGRHCERCAPGYV 1254
Pan_troglodytes   YGDAQRGTPQDCQLCPCYGDPAAQAHTCFLDLDGHPTCDACSPGHSGRHCERCAPGYV 1272
Macaca_mulatta    YGDAQRGTPQDCQLCPCYGDPAAQAHTCFLDLDGHPTCDACSPGHSGRHCERCAPGYV 1332
Callithrix_jacchus YGDAQRGTPQDCQLCPCYGDPAAQAHTCFLDLDGHPTCDACSPGHSGRHCERCAPGYV 1274
Equus_caballus    YGDAQRGTPEDCQPCPCYGAPAAQAHTCFLDLDGHATCDACSPGHSGRHCERCAPGYV 1261
Pteropus_allecto  YGDAQRGTPQDCQPCPCYGAPAAQAHTCFLDLDGHPTCDACSPGHSGRHCERCAPGYV 705
Bos_taurus        YGDAQRGTPHDCQPCPCYGAPAAQAHTCFLDLDGHPTCDACSPGHSGRHCERCAPGYV 1272
Mus_musculus      YGDAQRGTPQDCQPCPCYGAPAAQAHTCFLDLDGHPTCDSCSPGHSGRHCERCAPGYV 1254
Ornithorhynchus_anatinus YLAAQKDAPGLCPPCPCMGIPMN-KRVHTCFLDLDYPTCDSCSPEHTGRHCERCAPGYR 1296
Chelonia_mydas    YGDARRGTPADCPPCPCYATSTQATKTCFLDLDGQPTCNACTTGTVGRQCQRCAPGYL 1224
Xenopus_tropicalis YRDPNRGAAAECQPCPCQ--TSAQYFGTCFLDRDGHPTCDSCPVGYAGRCERCAPGYR 1316
Rhinatrema_bivittatum YGDARRGTSADCPPCPCRGPFSSQPEGSFCFMDTGRPTCDSCATGYTGRQCERCAPGYV 1360
.....1390.....1400.....1410.....1420.....1430.....1440

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	:	*	.*	..	*	.*	:	*	*****	:	*	***	
Pavo_muticus	EMGTQGPOLTYGRFGELSPESYYWQLPQPYLGDK	-----	1153										
Pavo_cristatus	EMGTQGPOLTYGRFGELSPESYYWQLPQPYLGDK	-----	1153										
Gallus_gallus	EMGSQGPOLTYGRFGELSPESYYWQLPQPYLGDK	-----	1409										
Anas_platyrhynchos	EMGAAGPRLTYGRFGELSPESYYWQLPQPYGDK	-----	1405										
Homo_sapiens	EPVPEGAQLSFGNFAQLGHESFYWQLPETYQGD	-----	1407										
Pan_troglodytes	KPVPEGAQLSFGNFAQLGHESFYWQLPETYQGD	-----	1425										
Macaca_mulatta	EPVPEGAQLSFGNFAHLGHESFYWQLPETYQGD	GEAYFARMRRAHQNR	TSLEEQLRAA	1511									
Callithrix_jacchus	EPVPEGAQLSFGNFAHLGHESFYWQLPETYQGD	-----	1427										
Equus_caballus	EPVPEGAQLSFGNFAQLGRESFYWQLPEAYQGD	-----	1414										
Pteropus_alecto	ELVPEGAQLSFGNFAHLGHESFYWQLPETYQGD	-----	858										
Bos_taurus	EPVPEGTQLSFGNFAHLGHESFYWQLPETYQGD	KREAYFARMRRAHQNR	TSLEEQLRAA	1452									
Mus_musculus	EPVHDGARLSFSNFAHLGQESFYWQLPEIYQGD	-----	1407										
Ornithorhynchus_anatinus	QPAPGGFELSFSDFTLGHESLYWQLPKLYLGDK	-----	1446										
Chelonia_mydas	EPLAEGPQLSFGHFGQLGQESYYWQLPEPYQGD	-----	1375										
Xenopus_tropicalis	EMSRHGPQLTHSSFDQLGQESYYWQLPEGYQGD	KREMYFARMRRAHKND	TSLEEELRKK	1491									
Rhinatrema_bivittatum	EMSNEGQLSYQGFGQLGHDYSYWQLPEYQGD	KRETYFARMRRAHKNE	TSLEEQLRKD	1535									
1570.....1580.....1590.....1600.....1610.....1620												

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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Pavo_muticus      ----- 1153
Pavo_cristatus    ----- 1153
Gallus_gallus     ----- 1409
Anas_platyrhynchos ----- 1405
Homo_sapiens      ----- 1407
Pan_troglodytes   ----- 1425
Macaca_mulatta    MTAGRI PGPPEGRDQAQQASQVDEAQRMDAEIWQLLSSFAAHPPPPPQGLSPHPQAAA 1571
Callithrix_jacchus ----- 1427
Equus_caballus    ----- 1414
Pteropus_alecto   ----- 858
Bos_taurus        MTTGRIPGLPQGKGQAQRLSQVDEAQRMDAEIWQLLSSFAAHPPAPPORI SPHPQAAA 1512
Mus_musculus      ----- 1407
Ornithorhynchus_anatinus ----- 1446
Chelonia_mydas    ----- 1375
Xenopus_tropicalis ----- 1548
Rhinatrema_bivittatum ----- 1595
.....1630.....1640.....1650.....1660.....1670.....1680

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Pavo_muticus      ----- 1153
Pavo_cristatus    ----- 1153
Gallus_gallus     ----- 1409
Anas_platyrhynchos ----- 1405
Homo_sapiens      ----- 1407
Pan_troglodytes   ----- 1425
Macaca_mulatta    LRAAPPSSSSSSSSSTFS----- 1590
Callithrix_jacchus ----- 1427
Equus_caballus    ----- 1414
Pteropus_alecto   ----- 858
Bos_taurus        LQAAPPSSPFSSSSSSAF----- 1530
Mus_musculus      ----- 1407
Ornithorhynchus_anatinus ----- 1446
Chelonia_mydas    ----- 1375
Xenopus_tropicalis ----- 1608
Rhinatrema_bivittatum ----- 1654
.....1690.....1700.....1710.....1720.....1730.....1740

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Pavo_muticus      -----VG 1155
Pavo_cristatus    -----VG 1155
Gallus_gallus     -----VG 1411
Anas_platyrhynchos -----VG 1407
Homo_sapiens      -----VA 1409
Pan_troglodytes   -----VA 1427
Macaca_mulatta    -----SSSTSSASLSFPFGSQFSLSYEGFSLLPGLSYWQLPRAFLGNKVA 1637
Callithrix_jacchus -----VA 1429
Equus_caballus    -----VA 1416
Pteropus_alecto   -----VA 860
Bos_taurus        -----SASLSSAVGAQLSLSYKGFLLPESLYYWQLPRTFLGNKVA 1571
Mus_musculus      -----VA 1409
Ornithorhynchus_anatinus -----VT 1448
Chelonia_mydas    -----VG 1377
Xenopus_tropicalis -----PSGDSPPRSRAQDSTNLLFPQTRPRGSEKFSLVYKGFSLLPESGVFYWQLPKAFLGDKVA 1668
Rhinatrema_bivittatum -----APSRNAPRPQSESSNLLFSSRDARVHSAEKYSLVYKGFSLLPESGVFYWQLPEAFLGDKVA 1714
.....1750.....1760.....1770.....1780.....1790.....1800

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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	SYGGWLR	YTLTYT	TPGGRG	GPLPDA	DIQITG	NDITLV	VAYQPE	LPPTPR	AFETIF	REHHWQ	
Pavo_muticus	SYGGWLR	YTLTYT	TPGGRG	GPLPDA	DIQITG	NDITLV	VAYQPE	LPPTPR	AFETIF	REHHWQ	1215
Pavo_cristatus	SYGGWLR	YTLTYT	TPGGRG	GPLPDA	DIQITG	NDITLV	VAYQPE	LPPTPR	AFETIF	REHHWQ	1215
Gallus_gallus	SYGGRLR	YALTYT	TPGGRG	GPLPDA	DIQITG	NDITLV	VAYQPE	LPPTRL	AFEVVF	REHHWQ	1471
Anas_platyrhynchos	SYGGRLR	YTLTYS	PGGRGAP	LPDA	DIQITG	NDITLV	VAYQPD	LP	PGT	PHDFE	IMFREQYWK
Homo_sapiens	AYGGKLR	YTLT	SYTAGPQ	GSPLSD	PDVQIT	GNNIML	VASQ	PALQ	GPERRS	YEIMFREE	FWR
Pan_troglodytes	AYGGKLR	YTLT	SYTAGPQ	GSPLSD	PDVQIT	GNNIML	VASQ	PALQ	GPERRS	YEIMFREE	FWR
Macaca_mulatta	AYGGKLR	YTLT	SYTAGPQ	GSPLSD	PDVQIT	GNNIML	VASQ	PALQ	GTERRS	YEIVLREE	FWR
Callithrix_jacchus	AYGGKLR	YTLT	SYTAGLQ	GSPLSD	PDVQIT	GNNIML	VASQ	PALQ	GPERRS	YEIMFREE	FWR
Equus_caballus	AYGGKLR	YTLT	SYTAGA	QGSPLSD	PDVQIT	GNNIML	VASQ	PV	LQ	GPERRS	YEIMFREE
Pteropus_alecto	AYGGKLR	YTLT	SYSAGP	QGSPLSD	PDVQIT	GNNIML	VASQ	PP	LQ	GPERRS	YEIVLREE
Bos_taurus	AYGGKLR	YTLT	SYTAGA	QGSPLSD	PDVQIT	GNNIML	VASQ	PALQ	GPERRK	NYEVVFQ	EEFWR
Mus_musculus	AYGGKLR	YTLT	SYTAGPQ	GSPLSD	PDVQIT	GNNIML	VASQ	PALQ	GPERRS	YEIMFREE	FWR
Ornithorhynchus_anatinus	SYGGRLR	YTLT	SYMAGPH	GSLLSD	PDVQIT	NDITLV	VATHPT	LEDLH	GKPF	EYFLEEF	FWR
Chelonia_mydas	SYGGRLR	YTLT	SYNSGGR	SAPLPD	ADVQIT	NDITLV	VAYQPE	LLPRDR	QSF	EIVLRE	QYWK
Xenopus_tropicalis	SYGGKLR	YTLT	YNAGIRG	SALPD	ADVQIT	NDITLV	VAYQHD	LR	PRESKS	EIVFRE	SWK
Rhinatrema_bivittatum	AYGGR	LR	YTLT	YNAGIRG	SALPD	ADVQIT	NDIMLV	VAYQPE	LR	PREKRN	FEIMFRE
	.....1810	.....1820	.....1830	.....1840	.....1850	.....1860					

	***** ** *:.*.*****:.*:*****: :*:.*: * . . * ****	
Pavo_muticus	RPDGQPATREHLLMALADLDEILIRATYASSTAWAAIAALSMDTAVPPRPGLPAPAEVEE	1275
Pavo_cristatus	RPDGQPATREHLLMALADLDEILIRATYASSTAWAAIAALSMDTAVPPRPGLPAPAEVEE	1275
Gallus_gallus	RPDGQPATREHLLMALADLDEILIRATYASSTAWAAIAALSMDTAVPPRPGLPAPAEVEE	1531
Anas_platyrhynchos	RPDGQPATREHLLMALADLDEILIRATYSTSTAASSIAGVSMDEVPPRPGLPAPAEVEE	1527
Homo_sapiens	RPDGQPATREHLLMALADLDELLIRATFSSVPLAASISAVSLEVAQPGPSNRPRALEVEE	1529
Pan_troglodytes	RPDGQPATREHLLMALADLDELLIRATFSSVPLAASISAVSLEVAQPGPSNGPRALEVEE	1546
Macaca_mulatta	RPDGQPATREHLLMALADLDELLIRATFSSVPLAASISAVSLEVAQPGPSSGPRALEVEE	1757
Callithrix_jacchus	RPDGQPATREHLLMALADLDELLIRATFSSVPLAASISAVSLEVAQPGPSNGPQALEVEE	1549
Equus_caballus	RPDGQPATREHLLMALADLDELLVRATFSSMPQAASISAVSLEVAQPGPSEGRPALEVEE	1536
Pteropus_alecto	RPDGQPATREHLLMALADLDELLVRATFSSMPMAASISAVSLEVAQSGPSDGRPALEVEE	980
Bos_taurus	RPDGQPATREHLLMALADLDELLVRATFSSMPPLAASISGVSLEVAQPGPSEGRPALEVEE	1691
Mus_musculus	RPDGQPATREHLLMALADLDELLVRATFSSVPRAASISAVSLEVAQPGPSSGPRALEVEE	1529
Ornithorhynchus_anatinus	RPDGQPATRPHLLMALADLEEVLIRATFSTVPLATSIAGVSMENAVPGPNTGSLALEVEE	1568
Chelonia_mydas	RPDGQHATREHLLMALADLDEILIRATYSTDMVSASIAGVSMETAVPTYSLPRALEVEE	1497
Xenopus_tropicalis	RPDGQPATREHLLMALADLDEILVRASYSTDMLSSSITGVSMETAGPSYTNLPQALEVEE	1788
Rhinatrema_bivittatum	RPDGQPATREHLLMVLADLDEILIRATYSTDMVSASITGVSMETAVPQYTSLPRALEVEE	1834
1870.....1880.....1890.....1900.....1910.....1920	

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Pavo_muticus	CRCPPGYRGLSCQDCAPGYTRTGGGLYLGHCELCCECNHSDTCHPESGLCSGCLHNTAGD	1335
Pavo_cristatus	CRCPPGYRGLSCQDCAPGYTRTGGGLYLGHCELCCECNHSDTCHPESGLCSGCLHNTAGD	1335
Gallus_gallus	CRCPPGYRGLSCQDCAPGYTRTGGGLYLGHCELCCECNHSDTCHPESGLCSGCLHNTAGD	1591
Anas_platyrhynchos	CRCPPGYRGLSCQDCAPGYTRTGGGLYLGHCELCCECNHSETCHPESGLCSGCLHNTAGD	1587
Homo_sapiens	CRCPPGYIGLSCQDCAPGYTRTGSGLYLGHCELCCECNHSDLCHPETGACSQCOHNAAGE	1589
Pan_troglodytes	CRCPPGYIGLSCQDCAPGYTRTGSGLYLGHCELCCECNHSDLCHPETGACSQCOHNAAGE	1606
Macaca_mulatta	CRCPPGYIGLSCQDCAAGYTRTGSGLYLGHCELCCECNHSDLCHPETGACSQCOHNAAGE	1817
Callithrix_jacchus	CHCPPGYIGLSCQDCAPGYTRTGSGLYLGHCELCCECNHSDLCHPETGACSQCOHNAAGE	1609
Equus_caballus	CRCPPAYVGSQDCAPGYTRTGSGLYLGHCELCCECNHSDVCHPETGACSQCOHNAAGE	1596
Pteropus_allecto	CRCPPGYVGLSCQDCAPGYTRTGSGLYLGHCELCCECNHSDLCHPETGACSQCOHNAAGE	1040
Bos_taurus	CRCPPGYVGSQDCAPGYTRTGSGLYLGHCELCCECNHSDLCHPETGACSQCOHNAAGE	1751
Mus_musculus	CRCPPGYVGLSCQDCAPGYTRTGSGLYLGCCELCECNHSDLCHPETGACSRCQHNTAGE	1589
Ornithorhynchus_anatinus	CTCPLGYTGLSCQDCEPGYSRSGNGLYLGNCCELCECNHSDSCDPETGTCLDCMHNTAGN	1628
Chelonia_mydas	CRCPPGYRGLSCQDCAAGYTRTGGGLYLGHCELCCECNHSDSCHPETGACSNCLHNAAGE	1557
Xenopus_tropicalis	CRCPPGYQGLSCQDCAPGYTRTGGGLYLGHCEPCYCNHSHSECHPETGACSNCLHNTVGE	1848
Rhinatrema_bivittatum	CQPPGYTGLSCQDCAPGYTRTGGGLYLGHCEMCECNHSDSCHPETGACSNCLHNTVGE	1894
1930.....1940.....1950.....1960.....1970.....1980	

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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Pavo_muticus      FCDQCAPGFYGDATAGTPEDCQPCACPLLHPENQFSRTCESLGGGGYRCTACAPGYTGQY 1395
Pavo_cristatus    FCDQCAPGFYGDATAGTPEDCQPCACPLLHPENQFSRTCESLGGGGYRCTACAPGYTGQY 1395
Gallus_gallus     FCDQCAPGFYGDATAGTPEDCQPCACPLLHPENQFSRTCESLGGGGYRCTACAPGYAGQY 1651
Anas_platyrhynchos FCDQCAPGFYGDATAGTPEDCQPCACPLVHPENQFSRTCESLGGGGYRCTACAPGYAGQY 1647
Homo_sapiens      FCELCAPGYYGDATAGTPEDCQPCACPLTNPENMFSRTCESLGAGGYRCTACEPGYTGOY 1649
Pan_troglodytes   FCELCAPGYYGDATAGTPEDCQPCACPLTNPENMFSRTCESLGAGGYRCTACEPGYTGOY 1666
Macaca_mulatta    FCELCAPGYYGDATAGTPEDCQPCACPLTNPENMFSRTCESLGAGGYRCTACEPGYTGOY 1877
Callithrix_jacchus FCELCAPGYYGDATAGTPEDCQPCACPLTNPENMFSRTCESLGAGGYRCTACESGYTGQY 1669
Equus_caballus    FCELCAPGFYGDATAGTPEDCQPCACPLTNPENMFSRTCESLGAGGYRCTACEPGYTGOY 1656
Pteropus_alecto   FCELCAPGYYGDATAGTPEDCQPCACPLANPENMFSRTCESLGAGGYRCTACEPGYTGOY 1100
Bos_taurus        FCEQCAPGYGNDATAGTPEDCQPCACPLTNPENMFSRTCESLGAGGYRCTACEPGYTGOY 1811
Mus_musculus      FCELCATGYGNDATAGTPEDCQPCACPLTNPENMFSRTCESLGAGGYRCTACEPGYTGOY 1649
Ornithorhynchus_anatinus FCELCAPGFYGDASMGTPEDCQPCACPLTHPENMFSQTCELESKGYRCSACAPGYIGQY 1688
Chelonia_mydas    FCEQCAPGYYGDATAGTPEDCQPCACPLSEPNQFSRTCESLGAGGYRCSACDPGYTGQY 1617
Xenopus_tropicalis SCDQCAPGFYGDASAGTPEDCQPCACPLTNPDNQFSKTCEILGTSGYRCTACOPGYTGQY 1908
Rhinatrema_bivittatum FCEHCAPGFYGDASAGTPEDCQPCACPLTDVENQFSRTCESLGTGGYRCTACOPGYTGQY 1954
.....1990.....2000.....2010.....2020.....2030.....2040

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Pavo_muticus      CERCTPGYTGDPFSVRGQTCVPLGSPSLLAVRVHPPRTAVPOGSAVTLRCQASGEPPLYYH 1455
Pavo_cristatus    CERCTPGYTGDPFSVRGQTCVPLGSPSLLAVRVHPPRTAVPOGSAVTLRCQASGEPPLYYH 1455
Gallus_gallus     CERCAPGYTGDPFSVRGQTCVPLGSPSLLAVRVHPPRTAVPOGSAVTLRCQASGEPPLYYH 1711
Anas_platyrhynchos CERCAPGYVGDPSVRGQTCVPLGSPSLLAVRVHPPRTAVPOGSPVTLRCQASGDPFFYYH 1707
Homo_sapiens      CEQCGPGYVGNPVSQGGQCLPETNQAPLVVEVHPARSIVPOGGSHSLRCQVSGSPPHYFY 1709
Pan_troglodytes   CEQCGPGYVGNPVSQGGRCPLPETNQAPLVVEVHPARSIVPOGGSHSLRCQVSGSPPHYFY 1726
Macaca_mulatta    CEQCAPGYVGNPVSQGGRCPLPETNQAPLVVEVHPARSIVPOGGSHSLRCQVSGSPPHYFY 1937
Callithrix_jacchus CEQCAPGYVGNPVSQGGRCPLPETNQAPLVVQVHPARSIVPOGGSHSLRCQVSGSPPHYFY 1729
Equus_caballus    CEQCAPGYVGNPNVRRGRCPLQTDQAPLVVQVHPARSIVPOGGPYSLRCQVSGSPPHYFY 1716
Pteropus_alecto   CEQCAPGYVGNPNVRRGRCPLQADRASLVVQVQAQSVPOGGPHSLRCQVSGSPPHYFY 1160
Bos_taurus        CEQCAPGYVGNPNVRRGRCPLQADQAPLVVQVHPARSIVPOGGPHSLRCQVSGSPPHYFY 1871
Mus_musculus      CEQCAPGYEGDPNVQGGRCQPLTKES-LEVQIHPSRSVVPQGGPHSLRCQVSGSPPHYFY 1708
Ornithorhynchus_anatinus CEQCAPGYEGNPINIPGERCVPAQAQPLMVQVHPAHSTVPOGSAHSLWCQVSGSPPHYLS 1748
Chelonia_mydas    CEQCAPGYVGNPVSVRGQKCV-VDRAFPVVRVHPSKTTVSQGGVTLRCQASGSPYYYS 1676
Xenopus_tropicalis CERCAPGYTGNPNIPGQKCVPEDSRSKLIVRIHPQKATLSPGGEVTLRCHVSGNPPYYFY 1968
Rhinatrema_bivittatum CERCAQGYVGNPNIRGQKCVPGD-RAPLVVQVYPQRTTISQGGVSLRCQVSGNPPYYFY 2013
.....2050.....2060.....2070.....2080.....2090.....2100

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Pavo_muticus      WSREEGRPLPSSAQSRROGEELHFANIQPSSEAGVYVCSRNLOHSNTSRAEVIVTETPSK 1515
Pavo_cristatus    WSREEGRPLPSSAQSRROGEELHFANIQPSSEAGVYVCSRNLOHSNTSRAEVIVTETPSK 1515
Gallus_gallus     WSREDGRPLPSSAQSRROGEELHFANIQPSSEAGVYVCSRNLOHSNTSRAEVIVTETPTK 1771
Anas_platyrhynchos WSREDGRPLPSSAQSRROGEELHFASIQPAEAGVYVCSRNLOHSNASRAEVIVTETPTK 1767
Homo_sapiens      WSREDGRPVPSGTQQRHQGSELHFPSVQPSDAGVYICTCRNLHQSNTRSRAELLVTEAPSK 1769
Pan_troglodytes   WSREDGRPVPSGTQQRHQGSELHFPSVQPSDAGVYICTCRNLHQSNTRSRAELLVTEAPSK 1786
Macaca_mulatta    WSREDGRPVPSSTQQRHQGSELHFPSVQPSDAGVYICTCRNLHHSNTSRAELLVTEAPSK 1997
Callithrix_jacchus WSRADGRPLPSSSTQQRHQGSELHFPSVQPSDAGVYICTCRNLHHSNTSRAELLVTEAPSK 1789
Equus_caballus    WSREDGRPVPSSTQQRHQGSELHFPSVQPSDAGVYICTCRNLHHSNTSRAELLVTEAPSK 1776
Pteropus_alecto   WSREDGRPLPSSSTQQRHQGSELHFPSVQPSDAGVYICTCRNLHHSNTSRAELLVTEAPSK 1220
Bos_taurus        WSREDGRPLPSSSTQQRHQGSELHFPSVQPSDAGVYICTCRNLHHSNTSRAELLVTEAPSK 1931
Mus_musculus      WSREDGRPLPSSAQSRROGEELHFPSVQPSDAGVYICTCRNLHHSNTSRAELLVTEAPSK 1768
Ornithorhynchus_anatinus WSREDGRPVSLTQQRQGAELHFPRVQMSDAGIYICTCHNTQHANTGRAELLVSAQSSK 1808
Chelonia_mydas    WSREDGRPVPSSTQQRHQGSELHFPSVQPSDAGVYICTCRNLHHSNTSRAELLVTEAPSK 1736
Xenopus_tropicalis WTREDGRPIPPSAKAVGEGENLHFSRVQPTDSGVYICTCRSPESVNTSKAEIVSAAPSK 2028
Rhinatrema_bivittatum WSREDGRSISSSNAQQRAGGEELHFPIIQASDAGVYICTCRNLHHSNTSRAELLVTEAPSK 2073
.....2110.....2120.....2130.....2140.....2150.....2160

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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	*** ***: : * : *:****:*****:*****: :. ** *****	
<i>Pavo muticus</i>	PITVTVEEKRVRVKPGADVTFICTAKSKSPAYTLVWTRQNHGTLPSRAMDFNGILTIRN	1575
<i>Pavo cristatus</i>	PITVTVEEKRVRVKPGADVTFICTAKSKSPAYTLVWTRQNHGTLPSRAMDFNGILTIRN	1575
<i>Gallus gallus</i>	PITVTVEEKRVRVKPGADVTFICTAKSKSPAYTLVWTRQNHGTLPSRAMDFNGILTIRN	1831
<i>Anas platyrhynchos</i>	PITVTVEEKRVRVKPGADVTFICTAKSKSPAYTLVWTRQNHGTLPSRAMDFNGILTIRN	1827
<i>Homo sapiens</i>	PITVTVEEQRSQSVRPGADVTFICTAKSKSPAYTLVWTRLHNGKLPTRAMDFNGILTIRN	1829
<i>Pan troglodytes</i>	PITVTVEEQRSQSVRPGADVTFICTAKSKSPAYTLVWTRLHNGKLPTRAMDFNGILTIRN	1846
<i>Macaca mulatta</i>	PITVTVEEQRSQSVRPGDVTFICTAKSKSPAYTLVWTRLHNGKLPTRAMDFNGILTIRN	2057
<i>Callithrix jacchus</i>	PITVTVEEQRSQSVRPGADVTFICTAKSKSPAYTLVWTRLHNGKLPARAMDFNGILTIRN	1849
<i>Equus caballus</i>	PITVTVEEQRSRVHPGADVTFICTAKSKSPAYTLVWTRLHNGKLPARAMDFNGILTIRN	1836
<i>Pteropus alecto</i>	PITVTVEEQRSQSVRPGADVTFICTAKSKSPAYTLVWTRLHNGKLPARAMDFNGILTIRN	1280
<i>Bos taurus</i>	PITVTVEEQRSQSVRPGADVTFICTAKSKSPAYTLVWTRLHNGKLPARAMDFNGILTIRN	1991
<i>Mus musculus</i>	PITVTVEEQRSQSVRPGADVTFICTAKSKSPAYTLVWTRLHNGKLPARAMDFNGILTIRN	1828
<i>Ornithorhynchus anatinus</i>	AITVIVEEDRNKIVRPGSDVTFICTAKSQSPAYTLVWTRLHNGKLPARAMDFNGILTIRG	1868
<i>Chelonia mydas</i>	PITVTVEEKRVRVKPGADVTFICTAKSKSPAYTLVWTRQNHGKLPARAMDFNGILTIRN	1796
<i>Xenopus tropicalis</i>	PITVTVEEQRVQTVRPGSDVTFICTAKSKSPAYTLVWTRQHNKLPARAMDFNGILTIRR	2088
<i>Rhinatrema bivittatum</i>	PITVTVEEKKENVHVGADVTFVCTAKSKSPAYTLVWTRLNGKLPARAMDFNGILTIRG	2133
	.....2170.....2180.....2190.....2200.....2210.....2220	

	** .*** *:***** * :* * *:.*:	::: * .:	
Pavo_muticus	VQPEDAGVYVCTGSNMLDMEGTATLYVQAPSKTQMYYPVVEFMEGHRPAATATAPTASV		1635
Pavo_cristatus	VQPEDAGVYVCTGSNMLDMEGTATLYVQAPSKTQMYYPVVEFMEGHRPAATATAPTASV		1635
Gallus_gallus	VQPEDAGVYVCTGSNMLDMEGTATLYVQAPSKTQMYYPVVEFMEGHRPAATATAPTASV		1891
Anas_platyrhynchos	VQPEDAGVYVCTGSNMLDMEGTATLYVQAPDMSKTQMFYGPVEFMEGHRPAATATAPTATV		1887
Homo_sapiens	VQLSDAGTYVCTGSNMFAMDQGTATLHVQA-----SGTILSAPVVISI		1870
Pan_troglodytes	VQLSDAGTYMCTGSNMFAMDQGTATLHVQA-----AGTFSAPVVISI		1887
Macaca_mulatta	VQLSDAGTYVCTGSNMFAMDQGTATLHVQA-----SGTSSAPVVISI		2098
Callithrix_jacchus	VQLSDAGTYVCTGSNMFAMDQGTATLHVQA-----SGTSSAPVVISI		1890
Equus_caballus	VQPSDAGTYVCTGSNMFAMDQGTATLHVQA-----SGTPSAPVVISI		1877
Pteropus_alecto	VQPSDAGTYVCTGSNMFAMDQGTATLHVQA-----SGTPSAPIVSI		1321
Bos_taurus	VQPSDAGTYVCTGSNMFAMDQGTATLHVQA-----SATPSAPVVISI		2032
Mus_musculus	VQPSDAGTYVCTGSNMFAMDQGTATLHVQV-----SGTSTAPVASI		1869
Ornithorhynchus_anatinus	VQPSDAGTYVCTGSNMFAMDQGIAMLHVED-----SGALSPPVVISI		1909
Chelonia_mydas	VQPEDAGIYVCTGSNMLDMAEGTATLHVQAPSKTQMFYGPPIEVMEGHRPSATAVLPMATI		1856
Xenopus_tropicalis	VQPEDAGIYVCTGSNMYDMDEGNATLYVQDSSQTQMFYGPYETMEGHRPSGTATSPNAAA		2148
Rhinatrema_bivittatum	VQLEDAGVYVCTGSNMFMDDEGTATLYVQEPITKTQMFYGPYETFEGRHPSATAVQPTATI		2193
2230.....2240.....2250.....2260.....2270.....2280		

[illegible]

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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* *: . . *: . * *: . . .*** ** *: * :*:*: . * * :*: * .
Pavo_muticus      YACRARSSAGQDMARGYL RVQGADEPRVQVSPERTEVQEGSTVRLYCRVSGSPTATISWE 1751
Pavo_cristatus    YACRARSSAGQDMARGYL RVQGADEPRVQVSPERTEVQEGSTVRLYCRVSGSPTATISWE 1751
Gallus_gallus     YACRARSSAGQDMARGYL RVQGADEPRVQVSPERTEVQEGSTVRLYCRVSGSPTATISWE 2007
Anas_platyrhynchos YMCRRARSSAGQHTARGYLHVQGAGEPVQVQVSPERTEVQEGSTVRLYCRVSGSPTATISWE 2003
Homo_sapiens      YLCRAHSSAGQQVARAVLHVHGGGGPRVQVSPERTQVHAGRTVRLYCRAGVPSATITWR 1990
Pan_troglodytes   YLCRAHSSAGQQVARAVLHVHGGGGPRVQVSPERTQVHEGRTVRLYCRAGVPSATITWR 2007
Macaca_mulatta    YLCRAHSSAGQQVARAVLHVHGGGGPRVQVSPERTQVHEGRTVRLYCRAGVPSATITWR 2218
Callithrix_jacchus YLCRAHSSAGQQVARAVLHVHGGGGPRVQVSPERTQVHEGRTVRLYCRAGVPSATITWR 2010
Equus_caballus    YLCRASSSAGQQVARAVLHVHGGGNRPVQVSPERTQVHEGRTVRLYCRAGVPSATITWR 1997
Pteropus_alecto   YLCQAHNGVGHVARAVLHVHGGGNRPVQVSPERTQVHEGRTVRLYCRAGVPSATITWR 1441
Bos_taurus        YLCHAHSSAGQHVARAVLHVHGGGNRPVQVSPERTQVHEGRTVRLYCRAGVPSATITWR 2152
Mus_musculus      YLCRALSSAGQHVARAMLQVHGGSGPRVQVSPERTQVHEGRTVRLYCRAGVPSASITWR 1989
Ornithorhynchus_anatinus YRCQARNLAGQHEASATLHVHGGSGPOVQVRPERMQVQEGHSVELHCQASGTPMTTIEWR 2029
Chelonia_mydas    YLCRVRSSAGQHVARAFLQVHGSSVLQVQVSPERTEVQEGSTVRLYCRAGSPTATITWE 1976
Xenopus_tropicalis YTCRVHNSAGQHVARVDLRVHSGSLPEVQVSPERTEVREGDTVRLYCRAGGTPAATISWR 2267
Rhinatrema_bivittatum YSCRVRNSAGHHLARAVLRVHSGSLPEVQVSPERTEVQEGDTVRLYCRGGGSPAATISWK 2313
.....2350.....2360.....2370.....2380.....2390.....2400

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*:** ** *: : * ** ** *:*: :*. * **
Pavo_muticus      KQGGTLPP-----QSRSERTDIATLLIPSISVADGGIYL 1785
Pavo_cristatus    KQGGTLPP-----QSRSERTDIATLLIPSISVADGGIYL 1785
Gallus_gallus     KQGGTLPP-----QSRSERTDIATLLIPSITVADGGIYL 2041
Anas_platyrhynchos KQGGSLPP-----QSRSERTDIATLLIPSITVADGGIYL 2037
Homo_sapiens      KEGGSLPP-----QARSERTDIATLLIPAITTADAGFYL 2024
Pan_troglodytes   KEGGSLPP-----QARSERTDIATLLIPAITTADAGFYL 2041
Macaca_mulatta    KEGGSLPP-----QARSERTDIATLLIPAITTADAGFYL 2252
Callithrix_jacchus KEGGSLPP-----QARSEHTDIPTLLIPAITTADAGFYL 2044
Equus_caballus    KEGGSLPP-----QARSERTDIATLLIPAITTADAGFYL 2031
Pteropus_alecto   KEGGSLPP-----QARSEHTDIATLLIPAITTADAGFYL 1475
Bos_taurus        KEGGSLPP-----QARAERTDIATLLIPAITTADAGFYL 2186
Mus_musculus      KEGGSLPP-----QARSENTDIPTLLIPAITTADAGFYL 2023
Ornithorhynchus_anatinus KEGGHLPP-----QAHVEYQDIVTLAIPAIISLTADAGVYL 2063
Chelonia_mydas    KQGGSLPP-----QSRSEHTDIATLVIPSITAADSGVYL 2010
Xenopus_tropicalis KEGGSLPPQALSTFGFLHFRSSSWEAIKRRAQELQARTERTDISTLVIPSISAADGGTYL 2327
Rhinatrema_bivittatum KEGGSLPPQALSAFGFLHFRSSSLQALQRRVQELQSRTERTDISTLVIPSISAADGGVYL 2373
.....2410.....2420.....2430.....2440.....2450.....2460

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*:***:* . * :*: *: . .:***. * :* *** :*: * . *
Pavo_muticus      CVGTSAAGTARASIEVVVVPG---AAPPVRIESSSPSVTEGQTLDLDCVVAGSGHVTVTW 1842
Pavo_cristatus    CVGTSAAGTARASIEVVVVPG---AAPPVRIESSSPSVTEGQTLDLDCVVAGSGHVTVTW 1842
Gallus_gallus     CVGTSAAGTARASIEVVVVPG---AAPPVRIESSSPSVTEGQTLDLDCVVAGPGHVTVTW 2098
Anas_platyrhynchos CVGTSAAGTARASIEVVVVPG---AAPPVRIESSSPSVTEGQTLDLDCVVAGSGHVTVTW 2094
Homo_sapiens      CVATSPAGTAQARIQVVVLSASDASPPPVKIESSSPSVTEGQTLDLNLCVVAGSAHAQVTW 2084
Pan_troglodytes   CVATSPAGTAQARIQVVVLSASDASPPPVKIESSSPSVTEGQTLDLNLCVVAGSAHAQVTW 2101
Macaca_mulatta    CVATSPAGTAQARIQVVVLSASDASPPPVKIESSSPSVTEGQTLDLNLCVVAGSAHAQVTW 2312
Callithrix_jacchus CVATSPAGTAQARIQVIVLSASDASPPPVKIESSSPSVTEGQTLDLNLCVVAGSAHAQVTW 2104
Equus_caballus    CVATSPAGTAQARIQVVVLPASGAVSPPVRIESSSPSVTEGQTLDLSCVVAGLAYSQVTW 2091
Pteropus_alecto   CVATSPAGTAQARIQVIVLPASGAVSPPVRIESSSPSVTEGQTLDLNLCVVAGLGQAQVTW 1535
Bos_taurus        CVATSPAGTAQARIQVVVLPAG---ATTTPVRIESSSPSVTEGQTLDLNLCVVAGLAHSQVTW 2244
Mus_musculus      CVATSPGTGAQARIQVVVLSASGANSVPVRIESSSPSVTEGQTLDLNCAVMGLTYTQVTW 2083
Ornithorhynchus_anatinus CVATSPAGTSQAHVEVMVVP---LNAPIRIESSSPSVTEGQTLDLNCLVDGQAQPRFMW 2120
Chelonia_mydas    CIGTSPAGVGSARIEVVVLRASG-MEPPIRIEASSSPSVTEGQTLDLNCLVAGQAPATVTW 2069
Xenopus_tropicalis CVGTSSAGSAQARIEVIVIGAP-IHGPTLRIEPSSDTVIEGQLVELNCVSA-NPYATVTW 2385
Rhinatrema_bivittatum CVGTSSSGTAEARIEVTVIKAA-GIVSPVRIESSLDVTEGQTVDLNLCIVAGHLQPTVRW 2432
.....2470.....2480.....2490.....2500.....2510.....2520

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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::      .*. .      ** *: . : **::*:*. .      :***  ::
Pavo_muticus      YKRG---GSLPAGHQVSGSRLRVPHTVADSGEYVCRASSGTSVREASVIVTVVSS--SG 1897
Pavo_cristatus    YKRG---GSLPAGHQVSGSRLRVPHTVADSGEYVCRASSGTSVREASVIVTVVSS--SG 1897
Gallus_gallus     YRRG---GSLPAGHQVSGSRLRVPHTMADSGEYVCRASSGTSVREASVIVTVVSS--SG 2153
Anas_platyrhynchos YKRG---GSLPAGHQVSGSRLRVPHTAADSGEYVCRVNSGATVREASVIVTVVSS--SG 2149
Homo_sapiens      YRRG---GSLPPHTQVHGSRLRLPOVSPADSGEYVCRVENGSGPKEASITVSVLHGTHSG 2141
Pan_troglodytes   YRRG---GSLPPHTQVHGSRLRLPOVSPADSGEYVCRVENGSGPKEASITVSVLHGTHSG 2158
Macaca_mulatta    YRRG---GSLPPHTQVHGSRLRLPOVSPADSGEYVCRVENGSGPKEASITVSVLHGTHSG 2369
Callithrix_jacchus YRRG---GSLPPHTQVHGSRLRLPOVSPADSGEYVCRVENGSGPKEASITVSVLHGTHSG 2161
Equus_caballus    YKRG---GSLPPHAQVHGSRLRLAEVSPADSGEYVCRVSESGAKEASIIISVLHSTHSG 2148
Pteropus_alecto   YKRG---GSLPPHAQIHGSRLRLS OVSSADSGEYVCRVKNSSGSKEASITISVLHGTHSG 1592
Bos_taurus        YKRG---GSLPPHAQVRGSRLRLPOVSPADSGEYVCRVENDSGPKEASITVSVLHSHRHPG 2301
Mus_musculus      YKRG---GSLPPHAQVHGSRLRLPOVSPADSGDYVCRVSDVGPKEASIVSVLHSPHSG 2140
Ornithorhynchus_anatinus YKRG---GSLPAQHILHGSWLRLSHLTLADSGEYVCRVGS----QEASYAVSVLHSGSGSG 2173
Chelonia_mydas    YKRG---GSLPARHQVSGSHLRISQVSAADSGEYVCRVSI GAS PHEASIPVTVQHSG--AG 2124
Xenopus_tropicalis HRGG---GRPLSPNHQAYGSKLRILQASTADSGEYICRVTNGAATQQAASIIITITRS--SG 2441
Rhinatrema_bivittatum YKWYRPGRSPLPNHQVSGSRLRIAHS LADAGEYVVCVGS DSGIQQASVVVSVVAHH--TH 2490
.....2530.....2540.....2550.....2560.....2570.....2580

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::*:*.*: . : **::*:*. .      . * * : *
Pavo_muticus      LSYGP-----PASGGQAPVRIEASSSTVAEGQTLDLNCVIASPLQATVTWYKRGGSL 1949
Pavo_cristatus    LSYGP-----PASGGQAPVRIEASSSTVAEGQTLDLNCVIASPLQATVTWYKRGGSL 1949
Gallus_gallus     LSYGP-----PASGGQAPVRIEASSSAVAEGQTLDLNCVIASGLQATVTWYKRGGSL 2205
Anas_platyrhynchos LSYGP-----PGSGGTAPVRIEASSSTVAEGQTLDLNCVIASPVQATVTWYKRGGSL 2201
Homo_sapiens      PSYTP-----VPGSTRPIRIEPSSSHVAEGQTLDLNCVVPGQAHAQVTVHWRKGGSL 2192
Pan_troglodytes   PSYTP-----VPGSTQPIRIEPSSSHVAEGQTLDLNCVVPGQAHAQVTVHWRKGGSL 2209
Macaca_mulatta    PSYTP-----APGSTQPIRIEPSSSHVAEGQTLDLNCVVPGQAHAQVTVHWRKGGSL 2420
Callithrix_jacchus PSYTP-----APGSTPPIHIEPSSSHVAEGQTLDLNCVVPGQAHAQVTVHWRKGGSL 2212
Equus_caballus    PSYTP-----APGGAPAPGSTQPIRIESSSHVAEGQTLDLKCVVPGQAHAQVMWYRRGGSL 2205
Pteropus_alecto   PGYTPDEPAPGGAPARGNTQPIRIESSSHVAEGQTLDLNCVVPGQAHAQVTVHWRKGGSL 1652
Bos_taurus        PGYTP-----APGGAPAPGGTQPVRIEPSSSHVAEGQTLDLNCVVPGQAHAQVTVYKRGGSL 2358
Mus_musculus      PSYTP-----ATSIPTPIRIESSSHVAEGQTLDLNCVVPG--QAQVTVWRKGGSL 2189
Ornithorhynchus_anatinus QSPDH-----APGYNPQIRIESSSSVVAEGQTVELNCLVLGQTNPVRLWFKRQGNL 2224
Chelonia_mydas    FPHAP-----PIRIESSSSAVTEGQSLDLNCLVTGQSPATVMWYKRGGSL 2169
Xenopus_tropicalis PQQPS-----GNVPALRIEPSSDILVEGQTLLELNCFLFSPYPNAVTVHWRSGQPL 2490
Rhinatrema_bivittatum PGHPP-----GITPTIRIEPSASVMEGQTIELNCVTAGHAQPTVTWYRPGGTL 2539
.....2590.....2600.....2610.....2620.....2630.....2640

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Pavo_muticus      PARHQVSGSRLRLQLQVTAADSGEYVCRVSSGATTKEASVMVTIQPSGAS----- 1998
Pavo_cristatus    PARHQVSGSRLRLQLQVTAADSGEYVCRVSSGATTKEASVMVTIQPSGAS----- 1998
Gallus_gallus     PARHQVSGSRLRLQLQVTAADSGEYVCRVSSGATTKEASVMVTIQPSRAS----- 2254
Anas_platyrhynchos PARHQVSGSRLRLQLQVTAADSGEYVCRVSSGATTKEATVMVTIQPSTAG----- 2250
Homo_sapiens      PARHQTHGSLRLRLHQVTPADSGEYVCHVVGTS GPLEASVLVTIEAS-----VIPGPPI 2245
Pan_troglodytes   PARHQTHGSLRLRLHQVTPADSGEYVCRVVGTS GPLEASVLVTIEAS-----VIPGPVP 2262
Macaca_mulatta    PARHQTHGSLRLRLHQVTPADSGEYVCRVVGTS GPLEASVLVTIEAS-----VIPGRVP 2473
Callithrix_jacchus PTRHQTHGSLRLRLHQVSPADSGEYVCHVMGTS GPLEASVLVTIEAS-----VIPGPVP 2265
Equus_caballus    PARHQTHGSLRLRLHQVSPADSGEYVCRVILSSGPLETSVLVSI EASGSSADSIPAPGPVP 2265
Pteropus_alecto   PTRHQTHGSLRLRLHQVSPADSGEYVCRVVLGSGTLEASVLVTIEASGSSGTSIPAPGPVP 1712
Bos_taurus        PARHQTHGSLRLRLHQVSPADSGEYVCRVVLGSGPLETSVLVSI EAS--DAGTIPAPGPVP 2416
Mus_musculus      PARHQTHGSLRLRLHQVSPADSGEYVCHVVLGSEHTETSVLVTIEPAES----IPAPGPAP 2245
Ornithorhynchus_anatinus PVRHQVHGSRLQLQVTPADSGEYVCLVTIGSGSQEASVMVSIRES----GFLPAPGGPP 2280
Chelonia_mydas    PDGHQVSGSHLRILVRVSAANSGEYICRASTSA GIQEASIIIVTIYRATGS----- 2218
Xenopus_tropicalis SPNHQVSGPRLRLQASVADSGEYICRVTTGPVTQKASILVTITRASGPS----- 2540
Rhinatrema_bivittatum SANHQVSGSRLRIIKASSADSGEYICRASSGSGVLQASITISIGDTHSS----- 2588
.....2650.....2660.....2670.....2680.....2690.....2700

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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Pavo_muticus	-----	1998
Pavo_cristatus	-----	1998
Gallus_gallus	-----	2254
Anas_platyrhynchos	-----	2250
Homo_sapiens	PVRIESSSSTVAEGQTLDLSCVVAGQAHAAQVTWYKRGGSLPARHQVRGSRLYIFQASPAD	2305
Pan_troglodytes	PVRIESSSSTVAEGQTLDLSCVVAGQAHAAQVTWYKRGGSLPARHQVRGSRLYIFQASPAD	2322
Macaca_mulatta	PVRIESSSSTVAEGQTLDLSCVVAGQAHAAQVTWYKRGGSLPARHQVRGSRLYIFQASPAD	2533
Callithrix_jacchus	PVRIESSSSTVAEGQTLDLSCVVAGQAHAAQVTWYKRGGSLPARHQVRGSRLYIFQASPAD	2325
Equus_caballus	PVRIESSSPTVAEGQTLDLNCVVAGQAHAAQVTWYKRGGSLPARHQVRGSRLYIFQASPAD	2325
Pteropus_alecto	PVRIESSSSTVAEGQTLDLSCVVAGQPHAAQVTWYKRGGSLPARHQVRGSRLYIFQTSPAD	1772
Bos_taurus	PVRIESSSPTVAEGQTLDLNCVVAGQAHAAQVTWYKRGGTLPARHQVRGSRLYIFQASPAD	2476
Mus_musculus	PVRIEASSSTVTTEGHMLDLNCVVAGQAHAAQVTWYKRGGSLPARHQVRGSRLYILQASPAD	2305
Ornithorhynchus_anatinus	PIQIESSPSVVAEGQTLTLNCLVAGQAHPPVTWFKRRGSLPARHQVSGSRLRIYHVTGAD	2340
Chelonia_mydas	-----	2218
Xenopus_tropicalis	-----	2540
Rhinatrema_bivittatum	-----	2588
.....2710.....2720.....2730.....2740.....2750.....2760		

Pavo_muticus	-----	1998
Pavo_cristatus	-----	1998
Gallus_gallus	-----	2254
Anas_platyrhynchos	-----	2250
Homo_sapiens	AGQYVCRAS	2314
Pan_troglodytes	AGQYVCRAS	2331
Macaca_mulatta	AGQYVCRAS	2542
Callithrix_jacchus	AGQYVCRAS	2334
Equus_caballus	AGEYVCRAS	2334
Pteropus_alecto	AGEYVCRAS	1781
Bos_taurus	AGEYVCRAS	2485
Mus_musculus	AGEYVCRAG	2314
Ornithorhynchus_anatinus	SGEYVCRAGQAEASLFVSVTPWGSVSYSQESRALIRIESTPSAVAEGQTLDLNCVAGQA	2400
Chelonia_mydas	-----	2218
Xenopus_tropicalis	-----	2540
Rhinatrema_bivittatum	-----	2588
.....2770.....2780.....2790.....2800.....2810.....2820		

Pavo_muticus	-----	1998
Pavo_cristatus	-----	1998
Gallus_gallus	-----	2254
Anas_platyrhynchos	-----	2250
Homo_sapiens	-----NG-----MEASITVTVTGTO	2329
Pan_troglodytes	-----NG-----MEASITVTVTGTO	2346
Macaca_mulatta	-----NG-----MEASITVTVTGTO	2557
Callithrix_jacchus	-----NG-----MEASITVTVTRTO	2349
Equus_caballus	-----NG-----VEASITVTVTGTO	2349
Pteropus_alecto	-----NG-----VEASITVTVTGTO	1796
Bos_taurus	-----NG-----VEASITVTVTKTO	2500
Mus_musculus	-----NG-----QEATITVTVTRNH	2329
Ornithorhynchus_anatinus	QASVMWYKRNGSLPAHHQVQGSRLRLLOVSPADSGEYVCRVTIDSDYQEASVKVTIEASG	2460
Chelonia_mydas	-----	2218
Xenopus_tropicalis	-----	2540
Rhinatrema_bivittatum	-----	2588
.....2830.....2840.....2850.....2860.....2870.....2880		

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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Pavo_muticus      ----SYPLGGTTPLRIESSSSVTEGQTLDLNLCVIASPAQATVTWYKRGGSLPARHGVSG 2054
Pavo_cristatus    ----SYPLGGTTPLRIESSSSVTEGQTLDLNLCVIASPAQATVTWYKRGGSLPARHGVSG 2054
Gallus_gallus     ----SYPSGGTTPLRIESSSSVTEGQTLDLNLCVIASPAQATVTWYKRGGSLPARHGVSG 2310
Anas_platyrhynchos ----SYP----- 2253
Homo_sapiens      GANLAYPAGSTQPIRIEPSSSQVAEGQTLDLNLCVVPQGSHAQVTWHKRGGSLPVRHQTG 2389
Pan_troglodytes   GANLAYPAGSTQPIRIEPSSSQVAEGQTLDLNLCVVPQGSHAQVTWHKRGGSLPVRHQTG 2406
Macaca_mulatta    GANLAYPAGSTQPVRIEPSSSQVAEGQTLDLNLCVVPQGSHAQVTWHKRGGSLPVRHQTG 2617
Callithrix_jacchus GANFAYPAGSTQPIRIEPSSSHVAEGQTLDLKLCIVPQQAQAQITWHKRGGSLPVRHQTG 2409
Equus_caballus    GANFAYPPGGSQLIRIESSSSHVAEGQTLDLNLCVVPQTHAQITWHKRGGSLPARHQTG 2409
Pteropus_allecto  GANFAYPPGGTQPIRIESSSSHVAEGQTLDLNLCVVPQQAHAQVTWHKRGGSLPARHQTG 1856
Bos_taurus        GANFAYPPGGTQPVRIEPSSSHVAEGQTLDLNLCVVPQOPHAQVTWHKRGGSLPARHQTG 2560
Mus_musculus      GANLAYPPGSTSPIRIESSSSHVAEGQTLDLNLCVVPQQAHAQVTWHKRGGSLPARHQTG 2389
Ornithorhynchus_anatinus SIPGPPASGSTPPRIESSSSVVAEGQTLNCLVAGQAQPTVTWSKRGGSLPARHQIHG 2520
Chelonia_mydas    ----PYSSGVESPRIESSSSSIAEGQTMCLKLVAGQAAPAMVTWYKRGGSLPASHQVSG 2274
Xenopus_tropicalis ----IPLGNPAVRIETSSGSVVEGQTLNLCVVPQPDAAVVTWHRAGRLSPNHQVGLG 2595
Rhinatrema_bivittatum ----GVSPPVRIESSSNAVTEGQTVELNLCVVPQGHSRPPVTWYRRGGALSPNHQVSG 2640
.....2890.....2900.....2910.....2920.....2930.....2940

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Pavo_muticus      SRLRLQLVTAADSGEYVCRVSSGATIKEASVMVTIQPSGASPYPPAGTTPLRIESSSSVTV 2114
Pavo_cristatus    SRLRLQLVTAADSGEYVCRVSSGATIKEASVMVTIQPSGASPYPPAGTTPLRIESSSSVTV 2114
Gallus_gallus     SRLRLQLVTAADSGEYVCRVSSGATIKEASVMVTIQPSGASSYPPGGTTPLHIEPSSSTV 2370
Anas_platyrhynchos ----PGGTIMPLHIESSSSVTV 2269
Homo_sapiens      SLLRLYQASPADSGEYVCRVLGSSVPLEASVLVTIEPAG-SVPALGVTPTVRIESSSSQV 2448
Pan_troglodytes   SLLRLYQVSPADSGEYVCRVLGSSVPLEASVLVTIEPAG-SVPALGVTPTVRIESSSSHV 2465
Macaca_mulatta    SLLRLYQVSPADSGEYVCRVAGSSVPLEASVLVTIEPAG-SVPALGVTPTVRIESSSSHV 2676
Callithrix_jacchus SLLRLYQVSPADSGEYMCRMVSSVPLEASVLVTIEPAG-SVPALGVTPTVRIESSSSHV 2468
Equus_caballus    SLLRLHQLVSPADSGEYVCRVGGSSVPLEASVLVTIEPAS-SMPALGVTPTVRIESSSSHV 2468
Pteropus_allecto SLLRLHQLVSPVDSGEYVCRVGGSSVPLEASVLVTIEPVG-SVPALGVTLPRIESSSSHV 1915
Bos_taurus        SLLRLYQVSPADSGEYVCRVGGSSVPLEASVLVTIEPVD-SVPALGVTPTVRIESSSSHV 2619
Mus_musculus      SLLRLHQLVSPVDSGEYVCRVEGAVPLESSVLVTIEPAG-TAP--GVIPPVRIESSSSHV 2446
Ornithorhynchus_anatinus TRLRLQLVSPADSGEYVCRVATGSGSQEASVMVTIKASG-SIPASGSTPPRIESSSSV 2579
Chelonia_mydas    SHLRIPQVSAADSGEYVCRVSTGAVVQEAIIIVTVSSAG-SSYSLGIRPPRIEQSSSV 2333
Xenopus_tropicalis SRLRITQASVADSGEYICRTTTGTTTQGSIMVTITHTSTSSGHSSLIPTINIESAPDSV 2655
Rhinatrema_bivittatum SRLRILQATSADSGEYVCRVSDGAGTGESITISVISSASP---SDVAPPVRIESSSNAV 2697
.....2950.....2960.....2970.....2980.....2990.....3000

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Pavo_muticus      TEGQTLDLNLCVIASPAQATVTWYKRGGSLPARHGVSGSRLRLQLVTAADSGEYVCRVSSG 2174
Pavo_cristatus    TEGQTLDLNLCVIASPAQATVTWYKRGGSLPARHGVSGSRLRLQLVTAADSGEYVCRVSSG 2174
Gallus_gallus     TEGQTLDLNLCVIASPAQATVTWYKRGGSLPARHGVSGSRLRLQLVTAADSGEYVCRVSSG 2430
Anas_platyrhynchos TEGQTLDLNLCVIASPAQATVTWYKRGGSLPARHGVSGSRLRLQLVTAADSGEYVCRVTS 2329
Homo_sapiens      AEGQTLDLNCLVAGQAHAQVTWHKRGGSLPARHGVHGSRLRLQLVTPADSGEYVCRVVG 2508
Pan_troglodytes   AEGQTLDLNCLVAGQAHAQVTWHKRGGSLPARHGVHGSRLRLQLVTPADSGEYVCRVVG 2525
Macaca_mulatta    AEGQTLDLNCLVAGQAHAQVTWHKRGGSLPARHGVHGSRLRLQLVTPADSGEYVCRVVG 2736
Callithrix_jacchus AEGQTLDLNCLVAGQAHAQITWHKRGGSLPAQHGVHGSRLRLQLVTPADSGEYVCRVVG 2528
Equus_caballus    AEGQTLDLNCLVAGQAHAQITWHKRGGSLPARHGVHGSRLRLPQVTPADSGEYVCRVVS 2528
Pteropus_allecto AEGQTLDLNCLVTGQAHAQVTWHKRGGSLPARHGVHGSRLRLSQVTPADSGEYVCRVGS 1975
Bos_taurus        AEGQTLDLNCLVSGQPHAQVTWHKRGGSLPARHGVHGSRLRLPQMTPADSGEYVCRVVG 2679
Mus_musculus      SEGQSLDLNCLVSGQTHPQISWHKRGGSLPARHGVHGSRLRLQLVTPDTSGEYVCRVVG 2506
Ornithorhynchus_anatinus AEGQTLNCLVAGQAHTPTVTWSKRGGSLPARHGVHGTRLRLQLVSPADSGEYVCRVVTG 2639
Chelonia_mydas    TEGQTLDLNCLVAGQAATVTWYKRGGSLPADHQLSGSRLRLVQVSAADSGEYVCRAGN- 2392
Xenopus_tropicalis AEGQTVVLNLCVIEGRPHQEVTVWRPDQPLAPNHQVSGSRLRLITHASPRDSGEYICRIQSG 2715
Rhinatrema_bivittatum TEGQTIELNLCVAGHSRPMVTWYRRGSALSPNHQVSGSQLRILQATSADSGEYLCRVSSG 2757
.....3010.....3020.....3030.....3040.....3050.....3060

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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      : .:: ::      . *::***** : *:::*.::. . :*:
Pavo_muticus      ATTKEASVMVTIQPSGASPYPSGVTTPPVRIESSSSVSEGTLDLDCIVASQGOATVTWY 2234
Pavo_cristatus    ATTKEASVMVTIQPSGASPYPSGVTTPPVRIESSSSVSEGTLDLDCIVASQGOATVTWY 2234
Gallus_gallus     ATTKEASVMVTIQPSGASPYPSGVTTPPVRIESSSSVSEGTLDLDCIVASQGOATVTWY 2490
Anas_platyrhynchos ATTKEATIVVTIQPSAAGSYPSGVTTPPVRIESSSSVSEGTLDLDCIVASQGOATITWY 2389
Homo_sapiens      SGTQEASVLVTIQQRLSGSHSGVAYPVRIESSSSASLANGHTLDLNCIVASQAPHTITWY 2568
Pan_troglodytes   SGTQEASVLVTIQQRLSGSHSGVAYPVRIESSSSASLANGHTLDLNCIVASQAPHTITWY 2585
Macaca_mulatta    SGTQEASVLVTIQQRLSGSHSGVAYPVRIESSSSASLANGHTLDLNCIVASQAPHTITWY 2796
Callithrix_jacchus SGTQEASVLVTIQQRLSGSHSGVAYPVRIESSSSASLANGHTLDLNCIVASQAPHTITWY 2588
Equus_caballus    SGTQEASVLVTIQQRLSPSHTQGVVYPVRIESSSSASLANGHTLDLNCIVASQAPHTITWY 2588
Pteropus_alecto   SGTQEASVLVTIQQHPGPSHSQSVVYPVRIESSSSASLANGHTLDLNCIVASQAPHTITWY 2035
Bos_taurus        SGTQEASVLVTIQRRGPTRYQNVVYPVRIESSSSASLANGHTLDLNCIVASQAPHTITWY 2739
Mus_musculus      SGTQEASVLVTIQQRLSPSHTQGVVYPVRIESSSSASLANGHTLDLNCIVASQAPHTITWY 2566
Ornithorhynchus_anatinus SDSQEASVMVSIAP-GSVPAAGSTPPRIESSSSVSEGTLELNCIVASQAPAVTWY 2698
Chelonia_mydas    ---KEASVIIITIQSSSIISYPSGVTTPPVRIESSSSVSEGTLDLDCIVASQGOATITWY 2449
Xenopus_tropicalis AGVQMASIMVSIIEGS---SLNTGLGSPRIESSSSVSEGTLELNCIVASQAPAVTWY 2772
Rhinatrema_bivittatum AGTHEGSITISVTSS---ASPSGIAPPVRIESSSSVSEGTLELNCIVASQAPAVTWY 2814
      .....3070.....3080.....3090.....3100.....3110.....3120

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      : .*. ** : *::: :::***** *:::.. :*: * : :. .
Pavo_muticus      KRG-GSLPAKHQVSGTRLRIPQVSAADSGEYVCRVTTGSVTHETSLIVTIQTGAGSSYAV 2293
Pavo_cristatus    KRG-GSLPAKHQVSGTRLRIPQVSAADSGEYVCRVTTGSVTHETSLIVTIQTGAGSSYAV 2293
Gallus_gallus     KRG-GSLPAKHQVSGTRLRIPQVSAADSGEYVCRVTTGSVTHETSLIVTIQTGAGSSYAV 2549
Anas_platyrhynchos KRG-GSLPARHQVSGTRLRIPQVSAADSGEYVCRVTTGGVTHETSLIVTIQTGAGSSYAV 2448
Homo_sapiens      KRG-GSLPSRHQIVGSRLRIPQVTPADSGEYVCHVSNAGSRETSLIVTIQ-GSGSSHVP 2626
Pan_troglodytes   KRG-GSLPSRHQIVGSRLRIPQVTPADSGEYVCHVSNAGSRETSLIVTIQ-GSGSSHVP 2643
Macaca_mulatta    KRG-GSLPSRHQIVGSRLRIPQVTPADSGEYVCHVSNAGSRETSLIVTIQ-GSGSSHVP 2854
Callithrix_jacchus KRG-GSLPSRHQIVGSRLRIPQVTPADSGEYVCHVSNAGSRETSLIVTIQ-GSGSSHVP 2646
Equus_caballus    KRG-GSLPSRHQIVGSRLRIPQVTPADSGEYVCHVSNAGSRETSLIVTIQ-GSGSSHVP 2646
Pteropus_alecto   KRG-GSLPSRHQIVGSRLRIPQVTPADSGEYVCHVSNAGSRETSLIVTIQ-GSGSSHVP 2093
Bos_taurus        KRG-GSLPSRHQIVGSRLRIPQVTPADSGEYVCHVSNAGSRETSLIVTIQ-GSGSSHVP 2797
Mus_musculus      KRG-GSLPSRHQIVGSRLRIPQVTPADSGEYVCHVSNAGSRETSLIVTIQ-GSGSSHVP 2624
Ornithorhynchus_anatinus KRG-GSLPAHQVHGSRLRLHRVSPADSGEYVCRVATGSGSREASVMVTIE-RRHSDHPY 2756
Chelonia_mydas    KRG-GSLPAGHQVSGSRLRIPQVSAADSGEYICRVSTGAVTQETSLIVTIQGGAGSSYVL 2508
Xenopus_tropicalis RSGGLPLPSNHQVSGSRMRILQASPADSGIYICRVSSASGSQEASVTINVH----SSAQV 2828
Rhinatrema_bivittatum RRG-SALSPNHQVSGSRLRIVQATSDSGEYVCRISGAGTHEGSITISVT----SSASP 2869
      .....3130.....3140.....3150.....3160.....3170.....3180

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      *: *.*: :. ****:*****. : :*: * :. * *::*:
Pavo_muticus      G--VTPPVRIETSSASVTEGTLDLNCMVAGQGHQPVTWYRRGGALPPNSQVSGTHLRLT 2351
Pavo_cristatus    G--VTPPVRIETSSASVTEGTLDLNCMVAGQGHQPVTWYRRGGALPPNSQVSGTHLRLT 2351
Gallus_gallus     G--VTPPVRIETSSASVTEGTLDLNCMVAGQGHQPVTWYRRGGALPPSSQVSGTHLRLT 2607
Anas_platyrhynchos G--VTPPVRIETSSAAVTEGTLDLNCMVAGQGHQPHVTWYRRGGALPPNSQVSGTRLRLV 2506
Homo_sapiens      --SVSPPIRIESSSPTVVEGTLDLNCVVAROPQAIITWYKRGGSLPSRHQTHGSHLRLH 2684
Pan_troglodytes   --SVSPPIRIESSSPTVVEGTLDLNCVVAROPQAIITWYKRGGSLPSRHQTHGSHLRLH 2701
Macaca_mulatta    --SVSPPIRIESSSPTVVEGTLDLNCVVAROPQAIITWYKRGGSLPSRHQTHGSHLRLH 2912
Callithrix_jacchus --SVSPPIRIESSSPTVVEGTLDLNCVVAROPQAVITWYKRGGSLPSRHQAHGSHLRLH 2704
Equus_caballus    --SVSPPIRIESSSPTVVEGTLDLNCVVAROPQATITWYKRGGSLPARHQAHSRLRLH 2704
Pteropus_alecto   --SVSPPIRIESSSPAVVEGTLDLNCVVAROPQATITWYKRGGSLPARHQAHSRLRLH 2151
Bos_taurus        --SVSPPIRIESSSPTVVEGTLDLNCVVAROPQATITWYKRGGSLPARHQAHSRLRLH 2855
Mus_musculus      --SVSPPIRIESSSPTVVEGTLDLNCVVAROPQATITWYKRGGSLPARHQAHSRLRLH 2682
Ornithorhynchus_anatinus GQSLVHPVRIESSSSSLVEGTLDLNCIVASQAPHTVTWYKRGGSLPARHQAHSRLRLH 2816
Chelonia_mydas    G--VTPPVRIETSSASIAEGTLDLNCIVAGQAHPRVTWYRRGNSLPASTQVSGSRLRLV 2566
Xenopus_tropicalis PNQFPYPIIEKSADTVSEGTLDLNCVVGQAPVSWHRPGASFSSNHQISGSRLRLV 2888
Rhinatrema_bivittatum SDVAP-PVRIESSSNVTEGTLDLNCIVAGHSRPTVTWYRRGSAHSRNHQSRLRLV 2928
      .....3190.....3200.....3210.....3220.....3230.....3240

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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: : ***** . : * : : : . : * : *
Pavo_muticus      QVSVADSGEYVCRVTLGTTTQEASVIVTVPSAGTYY---SPGASQPVHIESSSSA---- 2404
Pavo_cristatus    QVSVADSGEYVCRVTLGTTTQEASVIVTVPSAGTYY---SPGASQPVHIESSSSA---- 2404
Gallus_gallus     QVSVADSGEYVCRVTLGTTTQEASVIVTVPSAGTYY---SPGASQPVHIESSSSA---- 2660
Anas_platyrhynchos QVSVADSGEYVCRVTLGSTTQEASVIVTVPSAGTYY---SPGASQPVRIESSSSA---- 2559
Homo_sapiens      QMSVADSGEYVCRANNNIDALEASIVISVSPSAGSPS---APGSSMPIRIESSSSH---- 2737
Pan_troglodytes   QMSVADSGEYVCRANNNIDALEASIVISVSPSAGSPS---APGSSMPIRIESSSSH---- 2754
Macaca_mulatta    QMSVADSGEYVCRANNNIDALEASIVISVSPRAGSPS---APGSSMPIRIESSSSH---- 2965
Callithrix_jacchus QMSVADSGEYVCRANNNIDALEASIVISVSPRAGSPS---APGSSMPIRIESSSSH---- 2757
Equus_caballus    QMSVADSGEYVCRANNNIDAEASIMVSVSPSAGSPS---VPGGSVPRIESSSSH---- 2757
Pteropus_allecto  QMSVADSGEYVCRANNNIDAREASIVSVSPNAGSPS---VPGSAVPRIESSSSH---- 2204
Bos_taurus        QMSVADSGEYVCRANNNIDAEASIVSVTPGTGGPSGESSPSGTMPIRIESSSSH---- 2911
Mus_musculus      HMSVADSGEYVCRANNNIDAQETSIMISVSPSTNSPP---APASPAPIRIESSSSR---- 2735
Ornithorhynchus_anatinus HVTADSGEYVCRYVSSGTGHQEASLVVTIQGGEGSSP-PHAPVGPPIRIESSSSV---- 2871
Chelonia_mydas    QVSAADSGEYICRVSNSTGPLEASVIVTIPRSAGSSYPLPALGVAPPVRIESSSSS---- 2622
Xenopus_tropicalis QASTADSGQYVCRHDTGAGIQCASISVSILSGAASSYR----LQSPVISIDPHSATVQRG 2944
Rhinatrema_bivittatum QATSADSGEYVCRVSSGAGTHEGSITISVSSASPSD-----VAPPVRIESSSNS---- 2978
.....3250.....3260.....3270.....3280.....3290.....3300

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Pavo_muticus      ----- 2404
Pavo_cristatus    ----- 2404
Gallus_gallus     ----- 2660
Anas_platyrhynchos ----- 2559
Homo_sapiens      ----- 2737
Pan_troglodytes   ----- 2754
Macaca_mulatta    ----- 2965
Callithrix_jacchus ----- 2757
Equus_caballus    ----- 2757
Pteropus_allecto  ----- 2204
Bos_taurus        ----- 2911
Mus_musculus      ----- 2735
Ornithorhynchus_anatinus ----- 2871
Chelonia_mydas    ----- 2622
Xenopus_tropicalis QNATFKCRIHDKGAQPIRVTWQMRHNQPMEDNVHISPNGSIIITIVGATHKNOGSYRCMASN 3004
Rhinatrema_bivittatum ----- 2978
.....3310.....3320.....3330.....3340.....3350.....3360

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: * : : : : : * . * * : *
Pavo_muticus      -----IAEGQTLDLNCVVAGSGPTTIVTWYKRG--GSL 2434
Pavo_cristatus    -----IAEGQTLDLNCVVAGSGPTTIVTWYKRG--GSL 2434
Gallus_gallus     -----IAEGQTLDLNCVVAGSGPTTIVTWYKRG--GSL 2690
Anas_platyrhynchos -----IAEGQTLDLNCVVAGSGPTTIVTWYKRG--GSL 2589
Homo_sapiens      -----VAEGETLDLNCVVPQAHAQVTHWKRG--GSL 2767
Pan_troglodytes   -----VAEGQTLDLNCVVPQAHAQVTHWKRG--GSL 2784
Macaca_mulatta    -----VAEGQTLDLNCVVPQAHAQVTHWKRG--GSL 2995
Callithrix_jacchus -----VAEGQTLDLNCVVPQAHAQVTHWKRG--GSL 2787
Equus_caballus    -----VAEGQTLDLNCVVPQAHAQVTHWKRG--GSL 2787
Pteropus_allecto  -----VAEGQTLDLNCVVPQAHAQVTHWKRG--GSL 2234
Bos_taurus        -----VAEGQTLDLNCVVPQAHAQVTHWKRG--GSL 2941
Mus_musculus      -----VAEGQTLDLNCVVPQAHAQVTHWKRG--GSL 2765
Ornithorhynchus_anatinus -----VAEGQTLDLNCVVPQAHAQVTHWKRG--GSL 2901
Chelonia_mydas    -----IAEGQTLDLNCVVPQAHAQVTHWKRG--GSL 2652
Xenopus_tropicalis AYGVMVHSSVNLVVQGRPSVSVIPHGKIRVKEGEPINVECMGIGDPRPIVSWRRTGARENL 3064
Rhinatrema_bivittatum -----VTEGQAIELNCVVAGOSRPTVTWYRR--RDAL 3008
.....3370.....3380.....3390.....3400.....3410.....3420

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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      : .      *::      ..****.*.
Pavo_muticus      PAGHQVSGT---RLRIPQVSAADSGEYVCRVTTG-----2465
Pavo_cristatus    PAGHQVSGT---RLRIPQVSAADSGEYVCRVTTG-----2465
Gallus_gallus     PAGHQVSGS---RLRIPQVSAADSGEYVCRVTTG-----2721
Anas_platyrhynchos PAGHQVSGT---RLRIPQVSAADSGEYVCRVTTG-----2620
Homo_sapiens      PSHHQTRGS---RLRLHHVSPADSGEYVCRMGS--GPLEASVLVTIEASGSSAVHVPAPG 2824
Pan_troglodytes   PSHHQTHGS---RLRLHQVSPADSGEYVCRMGS--GPLEASVLVTIEASGSSAVHVPAPG 2841
Macaca_mulatta    PSHHQAHGS---RLRLHQVSPADSGEYVCRMGS--GPLEASVLVTIEASGSSAVHVPAPG 3052
Callithrix_jacchus PSHHQAHDS---RLRLRVSPADSGEYVCQVIGSSGPLEASVLVTIEASGSSAVHVPARG 2844
Equus_caballus    PPHHQAHGS---RLRLHQVSPADSGEYVCRVVS--SSGPLEASVLVTIEASGSSAVFPVPAPG 2844
Pteropus_alecto   PANHQTHGS---RLRLHQVSPADSGEYVCRVVS--SSGPLEASVLVAIEASGSSAIPVPAPG 2291
Bos_taurus        PAHQTHGS---RLRLHRVSPADSGEYVCRVALGSGPLEASVLVTIEASGSGSVVVPAPG 2998
Mus_musculus      PTHHQTHGS---RLRLYQVSSADSGEYVCSVLSSSGPLEASVLVSITPAAAN-VHIPGEV 2821
Ornithorhynchus_anatinus PARHQTHGS---RLRLVQLTPADSGEYVCRANNNIDALEASVLVTISP---RAGAPSPPG 2955
Chelonia_mydas    PASHQVSGS---RLRIPQVSAADSGEYVCRVSTG-----2683
Xenopus_tropicalis KQHRLAPLDGTAVLQIPSAKPADSGSYTCVAHNP-----3098
Rhinatrema_bivittatum SPNHQVSGS---RLRLILQATSDSGDYVCRVSDG-----3039
      .....3430.....3440.....3450.....3460.....3470.....3480

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Pavo_muticus      -----2465
Pavo_cristatus    -----2465
Gallus_gallus     -----2721
Anas_platyrhynchos -----2620
Homo_sapiens      GAPPRIIEPSSSRVAEGQTLDLKCVPVPGQAHAQVTWHKRGGNLPARHQVHGPLLRLNQVS 2884
Pan_troglodytes   GAPPRIIETSSSRVAEGQTLDLKCVPVPGQAHAQVTWHKRGGNLPARHQVHGPLLRLNQVS 2901
Macaca_mulatta    GAPPRIIETSSSRVAEGQTLDLKCVPVPGQAHAQVTWHKRGGNLPARHQVHGPLLRLNQVS 3112
Callithrix_jacchus GAPPRIIETSSSQVAEGQTLDLKCMPVPGQAHAQVTWHKRGGNLPARHQVHGPLLRLNQVS 2904
Equus_caballus    GVPPRIIETSSSHVAEGQTLDLKCVPVPGQAHAQVTWHRRGGSPLARHQVHGPLLRLNQVS 2904
Pteropus_alecto   RVSPRIIETSSSHVAEGQTLDLNCVVPVPGQAHAQITWHRRGASLPARHQVHGPLLRLNQVS 2351
Bos_taurus        GAPPRIIETSSSHVAEGQTLDLKCVPVPGQAHAQVTWHRRGGSPLARHQVHGPLLRLNHVS 3058
Mus_musculus      PFPPIRIETSSSRVAEGQTLDLSCVPVPGQAHAQVTWHKRGGSLPAGHQVHGMLRLNRVS 2881
Ornithorhynchus_anatinus SVPPVRIESSSLEVTEGQAIDLNCLVAGQAHTVMWYKREGNLPAHQIHGSLRLRLHLS 3015
Chelonia_mydas    -----2683
Xenopus_tropicalis -----3098
Rhinatrema_bivittatum -----3039
      .....3490.....3500.....3510.....3520.....3530.....3540

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      : : : : :      : : . : *
Pavo_muticus      -----GVTQETSLVVTIDDDAGPSHPS-SVTPPIRIESSASSVTEGQTLDL 2510
Pavo_cristatus    -----GVTQETSLVVTIDDDAGPSHPS-SVTPPIRIESSASSVTEGQTLDL 2510
Gallus_gallus     -----GVTQETSLVVTIDDDAGRSHPSS-SVTPPIRIESSASSVTEGQTLDL 2766
Anas_platyrhynchos -----GVTQETSLVVTIDDGADPSHPT-GVTPPIRIESSASSVTEGQTLDL 2665
Homo_sapiens      PADSGEYSCQVTGSSGTLASVLVTIEPSSPGPIAPGLAQPIYIEASSSHVTEGQTLDL 2944
Pan_troglodytes   PADSGEYSCQVTGSSGTLASVLVTIEPSSPGPIAPGLAQPIYIEASSSYVTEGQTLDL 2961
Macaca_mulatta    PADSGEYSCQVTGSSGTLASVLVTIEPSSPGPIAPGLAQPIYIEASSSHVTEGQTLDL 3172
Callithrix_jacchus PADSGEYSCQVTGSSGTLASVLVTIEPSSPSPIAPGLAQPIYIEASSSHVTEGQTLDL 2964
Equus_caballus    PADSGEYSCQVTGSSGTLASVLVTIEASSPRPIAPGLAQPIYIEASSSHVAEGQTLDL 2964
Pteropus_alecto   PADSGEYSCQVTGSSGTLASVLVTIEASNPDPIAPGLAQPIYIEASSSHVAEGQTLDL 2411
Bos_taurus        PADSGEYSCQVSSSSGTLASVLVTIEASSPSPIAPGLAQPIHIEASSSHVTEGQTVDL 3118
Mus_musculus      PADSGEYSCQVTGSSGTLASVLVTIEASEPSPIAPGLAQPVYIESSSHLTEGQTVDL 2941
Ornithorhynchus_anatinus PADSGEYVCRVATGSGSQEASVTVTVR-SGTGSNSGPGPNSPIRIESSSSSVTEGQTLDL 3074
Chelonia_mydas    -----AVTQEAALVVTIEDSTGPSHSS-GVVPRVRIESSSSSIAEGQTLDL 2728
Xenopus_tropicalis -----HGSTQVHVEVHVEGHVISP-----CAPLVLADKPVHVVTGGQATL 3139
Rhinatrema_bivittatum -----AGTYEGSITISVTGSALP-----SPLVRIEASSHSITEGQTVEL 3078
      .....3550.....3560.....3570.....3580.....3590.....3600

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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.* .. : . .** : ..* . * .. * : .: ***:*.~.. * .
Pavo_muticus      DCMVAGQGQATFTWYKRGGSLPAKHQMSGSRRLRLSQLSVADSGEYVCRADLG-STCREAT 2569
Pavo_cristatus    DCMVAGQGQATFTWYKRGGSLPAKHQMSGSRRLRLSQLSVADSGEYVCRADLG-STCREAT 2569
Gallus_gallus     DCMVAGQGQATFTWYKRGGSLPAKHQMSGSRRLRLSQLSVADSGEYVCRADLG-STCREAT 2825
Anas_platyrhynchos DCIVAGQGQATITWYKRGGALPAKHQMSGSRRLRLSQLSVADSGEYVCRADVG-STCREAT 2724
Homo_sapiens      NCVVPGQAHAQVTWYKRGGSLPARHQTHGSQLRLHLVSPADSGEYVCRVAAGPGPEQEAS 3004
Pan_troglodytes   NCVVPGQAHAQVTWYKRGGSLPARHQTHGSQLRLHLVSPADSGEYVCRVAAGPGPEQEAS 3021
Macaca_mulatta    NCVVPGQAHAQVTWYKRGGSLPARHQTHGSQLRLHLVSPADSGEYVCRVAAGPGPEQEAS 3232
Callithrix_jacchus NCVVPGQAHAQVTWYKRGGSLPARHQTHGSQLRLHLVSPADSGEYVCRVAAGPGPEQEAS 3024
Equus_caballus    NCVVPRQPHAQVTWYKRGGSLPARHQTHGSQLRLHLVSPADSGEYVCRVVGSGSGPEQEAS 3024
Pteropus_alecto   NCVVPGQAHAQVTWYKRGGSLPARHQTHGSQLRLHLVSPADSGEYVCRVVTSAAGPEQEAS 2471
Bos_taurus        NCVVPGQAHAQVTWYKRGGSLPARHQTHGSQLRLHLVSPADSGEYVCRVVGSGSGPEQEAS 3178
Mus_musculus      KCVVPGQAHAQVTWYKRGGSLPARHQTHGSQLRLHLVSPADSGEYVCRVVGSGSGPEQEAS 3001
Ornithorhynchus_anatinus NCLVAGQAQPRVTWYRRGSLPAQHVLHGSQLRLHLVSPADSGEYVCRVVGSGSGPEQEAS 3129
Chelonia_mydas    NCLVAGQAQPRVTWYRRGSLPAQHVLHGSQLRLHLVSPADSGEYVCRVVGSGSGPEQEAS 2787
Xenopus_tropicalis SCSASGNPTPTITWYKRGGSLPARHQTHGSQLRLHLVSPADSGEYVCRVVGSGSGPEQEAS 3198
Rhinatrema_bivittatum NCVVSGHPRPTVTWYRRGSLPAQHVLHGSQLRLHLVSPADSGEYVCRVVGSGSGPEQEAS 3137
.....3610.....3620.....3630.....3640.....3650.....3660

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. : : . . : * * *: :~* : ~* . * *
Pavo_muticus      VVVTVTSRDSSSYRLQSPPIISIDPHSMVAPGEDATFKCRIHDGARPINVTWRMGPGQHL 2629
Pavo_cristatus    VVVTVTSRDSSSYRLQSPPIISIDPHSMVAPGEDATFKCRIHDGARPINVTWRMGPGQHL 2629
Gallus_gallus     VVVTVTSRDSSSYRLQSPPIISIDPHSMVAPGEDATFKCRIHDGARPINVTWRMGPGQHL 2885
Anas_platyrhynchos VVVTVTSRDSSSYRLQSPPIISIDPHSMVAPGEDATFKCRIHDGARPINVTWRMGPGQHL 2784
Homo_sapiens      FTVTVPPSEGGSSSYRLRSPVISIDPPSSTVQQGDASFCKLIHDGAAPISLEWKTRN-QEL 3063
Pan_troglodytes   FTVTVPPSEGGSSSYRLRSPVISIDPPSSTVQQGDASFCKLIHDGAAPISLEWKTRN-QEL 3080
Macaca_mulatta    FTVTVPPSEGGSSSYRLRSPVISIDPPSSTVQQGDASFCKLIHDGAAPISLEWKTRN-QEL 3291
Callithrix_jacchus FMVTVPPSEGGSSSYRLRSPVISIDPPSSTVQQGDASFCKLIHDGAAPISLEWKTRN---KL 3081
Equus_caballus    FTVTVPPSAGSSSYRLRSPVISIDPPSSTVQQGDASFCKLIHDGAAPISLEWKTRN-QEL 3083
Pteropus_alecto   FTVTVPPSAGSSSYRLRSPVISIDPPSSTVQQGDASFCKLIHDGAAPISLEWKTRN-QEL 2530
Bos_taurus        FTVTVPPSAGSSSYRLRSPVISIDPPSSTVQQGDASFCKLIHDGAAPISLEWKTRN-QEL 3237
Mus_musculus      FKLTVPPSSQNSSFRLRSPVISIDPPSSTVQQGDASFCKLIHDGAAPISLEWKTRN-QEL 3060
Ornithorhynchus_anatinus LVVTVLSSIGSSSYRLQSPVISIDPPGATVQRGNASFCKLIHDGAAPISLEWKTRN-QEL 3189
Chelonia_mydas    ITVSVSSTSSSYRLQSPPIISIDPHSMVAPGEDATFKCRIHDGARPINVTWRMGPGQHL 2847
Xenopus_tropicalis VTLDVETP-----AYATTLPEASVSPGEPQIQCLAHG-TPIKFWSRVDGT-L 3247
Rhinatrema_bivittatum IVISITINPSSSYRLQSPPIISIDPHSMVAPGEDATFKCRIHDGAAPISLEWKTRN-QEL 3197
.....3670.....3680.....3690.....3700.....3710.....3720

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.: .: . :~* : .: ~*~*~*~* * : :~*~*~*~* * ~*~*~*~*
Pavo_muticus      QDNVKISANGSVISITGAHVGNGQAYHCVASNRFGVASSVVNLLVQG-----APTVSVM 2683
Pavo_cristatus    QDNVKISANGSVISITGAHVGNGQAYHCVASNRFGVASSVVNLLVQG-----APTVSVM 2683
Gallus_gallus     QDNVKISANGSVISITGAHVGNGQAYHCVASNRFGVASSVVNLLVQG-----APTVSVM 2939
Anas_platyrhynchos QDNVKISTNGSVISITGAHVGNGQAYHCVASNRFGVASSVVNLLVQG-----APTVSVM 2838
Homo_sapiens      EDNVHISPNGSIITIVGTRPSNHGTYRCVASNAYGVAQSVVNLSVHG-----PPTVSVL 3117
Pan_troglodytes   EDNVHISPNGSIITIVGTRPSNHGTYRCVASNAYGVAQSVVNLSVHG-----PPTVSVL 3134
Macaca_mulatta    EDNVHISPNGSIITIVGTRPSNHGTYRCVASNAYGVAQSVVNLSVHG-----PPTVSVL 3345
Callithrix_jacchus EDNVHISPNGSIITIVGTRPSNHGTYRCVASNAYGVAQSVVNLSVHG-----PPTVSVL 3135
Equus_caballus    EDNVHISPNGSIITIVGTRPSNHGTYRCVASNAYGVAQSVVNLSVHG-----PPTVSVL 3137
Pteropus_alecto   EDNVHISPNGSVITIVGTRPSNHGTYRCVASNAYGVAQSVVNLSVHG-----PPTVSVL 2584
Bos_taurus        EDNVHISPNGSVITIVGTRPSNHGTYRCVASNAYGVAQSVVNLSVHG-----PPTVSVL 3291
Mus_musculus      EDNVHISPNGSIITIVGTRPSNHGTYRCVASNAYGVAQSVVNLSVHG-----PPTVSVL 3114
Ornithorhynchus_anatinus EDNVHISPNGSIITIVGTRPSNHGTYRCVASNAYGVAQSVVNLSVHG-----PPTVSVL 3243
Chelonia_mydas    QDNVKISPNGSVITISARPSNQGAYRCVASNRYGVANSVVNLMVQG-----SPTVSVM 2901
Xenopus_tropicalis PGQASIQDG--VLHIDQASASDSGTYRCVASNRYGVANSVVNLMVQG-----SPTVSVM 3305
Rhinatrema_bivittatum QENVKISPNGSVITIVGTRPSNHGTYRCVASNRYGVANSVVNLMVQG-----SPTVSVM 3251
.....3730.....3740.....3750.....3760.....3770.....3780

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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	..*: * *..*::*:*::*::*	***. . .: * . * *: *	
<i>Pavo_muticus</i>	EHAGTYICTAQSALGSAQARVDVSVETAQRHPGVPRVTAP-PTVAVVAGDTATLHCSATG	2801	
<i>Pavo_cristatus</i>	EHAGTYICTAQSALGSAQARVDVSVETAQRHPGVPRVTAP-PTVAVVAGDTATLHCSATG	2801	
<i>Gallus_gallus</i>	EHAGTYICTAQSALGSAQARVDVSVETAQRHPGAPRVVTAP-PTVTVVAGDTATLHCSATG	3057	
<i>Anas_platyrhynchos</i>	EHAGTYICTAQSALGSAQARVDVSVETAQRHPGAPEVTAP-PSVTVVAGDTATLHCSATG	2956	
<i>Homo_sapiens</i>	SDAGTYVCLAQNALGTAQKQVEVIVDTGAMAPGAPQVQAEAAELTVEAGHTATLRCSATG	3237	
<i>Pan_troglodytes</i>	SDAGTYVCLAQNALGTAQKQVELIVDTGAMAPGAPQVQAEAAELTVEAGHTATLRCSATG	3254	
<i>Macaca_mulatta</i>	SDAGTYVCLAQNALGTAQKQVEVIVDTGAMAPGAPQVQAEAAELTVEAGHTATLRCSATG	3465	
<i>Callithrix_jacchus</i>	SDAGTYVCLAQNALGTAQKQVEVIVDTGAVAPGAPQVQAEAAELTVEAGHTATLRCSATG	3254	
<i>Equus_caballus</i>	SDAGTYVCLAQNALGTAQKRVEVIVDMGTVAPGAPQVQVEEAELTVEAGHTATLRCSATG	3256	
<i>Pteropus_alecto</i>	SDAGTYVCLAQNALGTAQKQVEVIVDTGAVTPGAPQVQVEEVELTVEAGHTATLRCSATG	2703	
<i>Bos_taurus</i>	SDAGTYVCLAQNALGTAQKRVEVIVDTGAVAPGAPQVQVEEVELTVEAGHTATLRCSATG	3410	
<i>Mus_musculus</i>	SDAGTYVCQAQNALGTAQKQVELIVDTGTVAPGAPQVQVEESELTEAGHTATLHCSATG	3233	
<i>Ornithorhynchus_anatinus</i>	EDAGTYLCVVQNALGTAQAQVVVSVETGLGAPGAPQARVEEPVMTVEAGTTATLRCSATG	3362	
<i>Chelonia_mydas</i>	EDAGTYICTAQNSIGSTQVQVEVSVAAHGKPGAPEITVK-PTLTVVAGETATLQCSATG	3019	
<i>Xenopus_tropicalis</i>	EDSGSYTCAQNPSTQVQVEVHVEGRVITPGVPKVTAEQPLHVVVAGDRASLSTAVG	3424	
<i>Rhinatrema_bivittatum</i>	EDAGTYTCVGQNPVGSQVQVEVHVENVARPGAPQVTVEEPPVVAVTGTSVILRCSASG	3370	
	.....3850.....3860.....3870.....3880.....3890.....3900	

	* * : *:***:*****.: .*:**... *****:.. . * : * **	
Pavo_muticus	EPEPRIEWSKLRAPLPWQHRVNGTLVIPRAAQDSDGQYICNASSPTGFTEVFVTILDVET	2861
Pavo_cristatus	EPEPRIEWSKLRAPLPWQHRVNGTLVIPRAAQDSDGQYICNASSPTGFTEVFVTILDVET	2861
Gallus_gallus	EPEPRIEWSKLRAPLPWQHRVNGTLVIPRAAQDSDGQYICNASSPAGFTEVFVTILDVET	3117
Anas_platyrhynchos	EPAPRIEWSKLRAPLPWQHRVNGSLVIPRAAQDSDGQYICNASSPAGSAEFVFTILDVET	3016
Homo_sapiens	SPAPTIIHWSKLRSPLPWQHRLEGDTLIIPRVAQDSDGQYICNATSPAGHAETIILHVES	3297
Pan_troglodytes	SPAPTIIHWSKLRSPLPWQHRLEGDTLIIPRVAQDSDGQYICNATSPAGHAETIILHVES	3314
Macaca_mulatta	SPTPTIIHWSKLRSPLPWQHRLEGDTLIIPRVAQDSDGQYICNATSPAGHAETIILHVES	3525
Callithrix_jacchus	RPVPTIIHWSKLRSPLPWQHRLEGDTLIIPQAQDSDGQYICNATSPAGHAETIILHVES	3314
Equus_caballus	SPTPTIIHWSKLRSPLPWQHOLEGNTLIIPRVAQDSDGQYICNATSPAGHAETIALHVES	3316
Pteropus_allecto	SPTPTIIHWSKLRSPLPWQHOLEGDTLIIPRVAQDSDGQYICNATSPTGYAETIVLHVES	2763
Bos_taurus	SPKPTIIHWSKLRSPLPWQHRLEGDTLIIPRVAQDSDGQYICNASSPAGHAETIVLVHVES	3470
Mus_musculus	NPPPTIIHWSKLRAPLPWQHRIEGNTLVIPRVAQDSDGQYICNATNSAGHTAETVVLHVES	3293
Ornithorhynchus_anatinus	SPPP TLQWTKLRAPLPWQHQLVGDTLIIPRVAQDSDGQYICNASNSAGHAETTIVTLHVET	3422
Chelonia_mydas	DPPPTIQWSKLRAPLPWQHRVVNNILLIPRVAQDSDGQYICNASNAASFTEAFVTLDVET	3079
Xenopus_tropicalis	NPAPKITWSKLRAPLPWQHEIVNDTLIIPKAALDSGQYICNASNAEGYSVEFVFTILDVET	3484
Rhinatrema_bivittatum	HPTPTIKWSKLRLAPLPWQHVLVNDTLIIPNVGQDSDGQYICNASNTAGYNEVFITILDVET	3430
3910.....3920.....3930.....3940.....3950.....3960	

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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**** *: :. *: :*:*****.* : * .. *. . : * :
Pavo_muticus      PPYATSLPEDSAVRAGDTVQLOCLAHGTPPLLYTWDKLNGLSPRAVPRAGLLRISPALP 2921
Pavo_cristatus    PPYATSLPEDSAVRAGDTVQLOCLAHGTPPLLYTWDKLNGLSPRAVPRAGLLRISPALP 2921
Gallus_gallus     PPYATSLPEDSAVRAGDTVQLOCLAHGTPPLLYTWDKLNGLSPRAVPRAGLLRISPALP 3177
Anas_platyrhynchos PPYATSLPEESTVHAGDAVQLOCLAHGTPPLLYTWDKLNGLSPRAVPRAGLLRIIPVLP 3076
Homo_sapiens      PPYATTVPEHASVQAGETVQLOCLAHGTPPLTFOWSRVGSLLPGRATARNELLHFERAAP 3357
Pan_troglodytes   PPYATTVPEHASVQAGETVQLOCLAHGTPPLTFOWSRVGSLLPGRATARNELLHFERAAP 3374
Macaca_mulatta    PPYATTVPEHASVQAGETVQLOCLAHGTPPLTFOWSRVGSLLPGRATARNELLHFERAAP 3585
Callithrix_jacchus PPYATTVPEHVSVRAGEMVQLOCLAHGTPPLTFOWSRVGSLLPGRATARNELLHFESAAP 3374
Equus_caballus    PPYATTVPEHASVQAGETVQLOCLAHGTPPLTFOWSRVGSLLSGRVTARNEMLHFEPAAAP 3376
Pteropus_alecto   PPYATTVPEHASVRAGETVQLOCLAHGTPPLTFOWSRVGSLLPRRVTARNEMLRFEPVAP 2823
Bos_taurus        PPYATTVPEHASVRAGEAVQLOCLAHGTPPLTFOWSRVGGHLPAGATARNELLFEAAAP 3530
Mus_musculus      PPYATIIP EHTSAQPGNLVQLOCLAHGTPPLTYQWSLVGGVLPKEAVARNQVLRLEPTVP 3353
Ornithorhynchus_anatinus HPYATTLPESASVEVGERVRLQCLAHGTPPLTFQWTRVNGSLPGHATVQDGLDIASATL 3482
Chelonia_mydas    PPYATSLPEEVSQAGEAVQLOCLAHGTPPLRYQWTKANGSLSSHAVLRESALHISPIAP 3139
Xenopus_tropicalis PPYATTLPDEVSQSVGEVQIQICLAHGTSPLKFQWSKVNGSLPDRATVRDSTLHINLAKA 3544
Rhinatrema_bivittatum PPYATSLPDELSVGVGEAVQLOCLAHGTPPLRFQWTKVNGSLSNRASIREGVLHINPAIQ 3490
.....3970.....3980.....3990.....4000.....4010.....4020

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Pavo_muticus      ADAGTYRCMVTNVRVGRAETFARVAVHGDGGG-----DSGGPLAVRVTPGSLVRGVGSTA 2975
Pavo_cristatus    ADAGTYRCMVTNVRVGRAETFARVAVHGDGGG-----DSGGPLAVRVTPGSLVRGVGSTA 2975
Gallus_gallus     SDAGTYRCMVTNVRVGRAETFARVTVHGDGGG-----DSGGPLAVRVTPGSLVRGVGSTA 3231
Anas_platyrhynchos ADAGTYRCMVTNVRVGRAETFARVVHGDGGA-----GGGGPLAVRVTPASLVKGVGGMA 3130
Homo_sapiens      EDSGRYRCRVTNKVGSAEFAQLLVQPPGSLPATSIPAGSTPTVQVTPQLETKSIGASV 3417
Pan_troglodytes   EDSGRYRCRVTNKVGSAEFAQLLVQPPGSLPATSIPAGSTPTVQVTPQLETKSIGASV 3434
Macaca_mulatta    EDSGRYRCRVTNKVGSAEFAQLLVQPPGSLPATSIPAGSTPTVQVTPQLETKSIGASV 3645
Callithrix_jacchus EDSGRYRCRVTNKVGSAEFAQLLVQPPGSLPATSIPAGSMPTVQVTPQLETKSIGASV 3434
Equus_caballus    EDSGRYRCRVTNKVGSAEFAHVVVQPPGSLPATAVPAGSTPTVQVTPQLETKSIGASV 3436
Pteropus_alecto   EDSGRYRCQVTNVRVGSAAEFAQVLVQSSGSLPAT--PAGSTPTVQVTPQLETKSIGASV 2881
Bos_taurus        EDSGRYRCQVTNVRVGLAEFAQVLVQSGSLPATPAPAGSAPTQVTPQLETKSIGASV 3590
Mus_musculus      EDSGRYRCQVSNRVGSAAEFAQVLVQSSSNLPDTSIPGGSTPTVQVTPQLETNRNIGASV 3413
Ornithorhynchus_anatinus GDAGQYRCMVTNVRVGSAAEFAQLSVGGP-----AVVHVSQLETKSIGVGS 3529
Chelonia_mydas    EDSGTYRCMVTNVRVGSAAEFAQVSVQSGAPS-----ASPTVRVTPQTDVKGVGGTA 3190
Xenopus_tropicalis ADAGTYRCVGNKVGSSAEFAQVSVL-----APFAVRVSPPLIDTKAVSGTA 3590
Rhinatrema_bivittatum EDEGRYRCVSNKVGSGEALAHVHLG-----ASLAVRVSPQIDVKGVSGTA 3537
.....4030.....4040.....4050.....4060.....4070.....4080

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Pavo_muticus      EFACAAS-DPRVQLEWLKDGGELPPQHSVRDGVLRIPELAQGAQGVYVCRASAPGRQAE 3034
Pavo_cristatus    EFACAAS-DPRVQLEWLKDGGELPPQHSVRDGVLRIPELAQGAQGVYVCRASAPGRQAE 3034
Gallus_gallus     EFACIAS-DPRVHLEWLKDGGELPPRHVSQDGVLRIRIAELAQGAQGVYVCRASAPGRQAE 3290
Anas_platyrhynchos EFACIVSGDPRARLEWLKDGGELPPSHSVRDGVLRIPELARGAQGVYVCRASAPGRQAE 3190
Homo_sapiens      EFHCAVPSDRGTQLRWKFKEGGQLPPGHVSQDGVLRIQNLQSCQGTIYICQAHGPWGQAQA 3477
Pan_troglodytes   EFHCAVPSDRGTQLRWKFKEGGQLPPGHVSQDGVLRIQNLQSCQGTIYICQAHGPWGQAQA 3494
Macaca_mulatta    EFHCAVPSDRGTQLRWKFKEGGQLPPGHVSQDGVLRIQNLQSCQGTIYICQAHGPWGQAQA 3705
Callithrix_jacchus EFHCAVPSDRGTQLRWKFKEGGQLPPGHVSQDGVLRIQNLQSCQGTIYICQAHGPWGQAQA 3494
Equus_caballus    EFHCAVPSDRGTQLRWKFKEGGQLPPGHVSQDGVLRIQNLQSCQGTIYICQAHGPWGQAQA 3496
Pteropus_alecto   EFHCAVPSDRGTQLRWKFKEGGQLPPGHVSQDGVLRIQNLQSCQGTIYICQAHGPWGQAQA 2941
Bos_taurus        EFHCAVPSDRGTQLRWKFKEGGQLPPGHVSQDGVLRIQNLQSCQGTIYICQAHGPWGQAQA 3650
Mus_musculus      EFHCAVPSDRGTQLRWKFKEGGQLPPGHVSQDGVLRIQNLQSCQGTIYICQAHGPWGQAQA 3473
Ornithorhynchus_anatinus EFHCAVPSDRGTQLRWKFKEGGQLPPGHVSQDGVLRIQNLQSCQGTIYICQAHGPWGQAQA 3589
Chelonia_mydas    EFTCSVTGDAQARIEWFREGGELPASHSVRNGVLRIQNLDRGCQGVYTCRVSSPSGQAQD 3250
Xenopus_tropicalis EFTCSVTGDAQARIEWFKEGGQLPPGHVSQDGVLRIQNLDRGCQGVYTCRVSSPSGQAQD 3650
Rhinatrema_bivittatum EFTCSVTGDAQARIEWFKEGGQLPPGHVSQDGVLRIQNLDRGCQGVYTCRVSSPSGQAQD 3597
.....4090.....4100.....4110.....4120.....4130.....4140

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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	. * . : . *** . ** * : * : * : * . : * : * * . * : * : . : :	
Pavo_muticus	RAMLTVQALPRALINIRTA VQT VLAGT EVELECLGLGEPQHVTWSKVGGRI R P GVLVRA	3094
Pavo_cristatus	RAMLTVQALPRALINIRTA VQT VLAGT EVELECLGLGEPQHVTWSKVGGRI R P GVLVRA	3094
Gallus_gallus	RATLT VQALPRALINIRTA VQT VLAGMEVELECLGLGEPQHVTWSKVGGRI R P GVLVRA	3350
Anas_platyrhynchos	RATLT VQALPRALINIRTA VQT VLAGT AVELECLGLGDPQHVTWSKVGGRI R P GVLIRA	3250
Homo_sapiens	SAQLVI QALPSVLINIRTSVQT VVVGHAVEFECLALGD PKPQVTWSKVGGH LRP GIVQSG	3537
Pan_troglodytes	SAQLVV QALPSVLINIRTSVQT VVVGHAVEFECLALGD PKPQVTWSKVGGH LRP GIVQSG	3554
Macaca_mulatta	SAQLVV QALPSVLINIRTSVQT VVVGHAVEFECLALGD PKPQVTWSKVGGH LRP GIVQSG	3765
Callithrix_jacchus	SAQLVV QALPSVLINIRTSVQT VVVGHAVEFECLALGD PKPQVTWSKVGGRL R P GIVQSG	3554
Equus_caballus	SAQLVV QALPSVLINIRTSVQT VVVGHAVEFECLALGD PKPQVTWSKVGGRL R P GIVQSG	3556
Pteropus_alecto	SAQLVV QALPSVLINIRTSVQT VVVGHAVEFECLALGD PKPQVTWSKVGGRL R P SIVQSG	3001
Bos_taurus	SAQLVV QALPSVLINIRTSVQS VVVGHAVEFECLALGD PKPQVTWSKVGGRL R P GIVQSG	3710
Mus_musculus	TAQLIV QALPSVLINVRTSVHS VVVGHVSFEFECALGD PKPQVTWSKVGGH LRP GIVQSG	3533
Ornithorhynchus_anatinus	SAQLVV HALPSVLINARTAVQT VVVGHSLELECLARGD PKPVSWSKVRGQLRAGV VQSG	3649
Chelonia_mydas	SARLVI QALPKVMINVRTSVQSVLVGA AVEFECLVVGDPKARITWSKVGSRI R PEVVVSG	3310
Xenopus_tropicalis	SVRLVL QALPKVRINIRTSVQT VLAGNSVEFECLALGD PRAKVTWSKVGSRLPGDAVISG	3710
Rhinatrema_bivittatum	SAKLVI QALPRVMINIRTSVQT VLAGNAVEFECLAIGDPQARVTWSKVGSRLPPDVISG	3657
	.....4150.....4160.....4170.....4180.....4190.....4200	

	. : * .*: :***:***:*** * **::* **: **: :.: :..** .*:**	
Pavo_muticus	GILTIERVERADAGQYRCTATNSVGTIVQSHVILHVQAAPHIAGQPEVKEVSVGSAAVLPC	3154
Pavo_cristatus	GILTIERVERADAGQYRCTATNSVGTIVQSHVILHVQAAPHIAGQPEVKEVSVGSAAVLPC	3154
Gallus_gallus	GTLTIERVERADAGQYRCTATNSVGTIVQSHVILHVQAAPHIAGQPEVKEVSVGSAAVLPC	3410
Anas_platyrhynchos	GILTIERVERADAGQYRCTATNAVGTIVQSHVILHVQAAPHIAGQPEVKEVSAGSVAVLPC	3310
Homo_sapiens	GVVRIAHVELADAGQYRCTATNAAGTTQSHVLLLVQALPQISMPQEV-VPAGSAAVFPC	3596
Pan_troglodytes	GVVRIAHVELADAGQYRCTATNAAGTTQSHVLLLVQALPQISMPQEV-VPAGSAAVFPC	3613
Macaca_mulatta	GVVRIAHVELADAGQYRCTATNAAGTTQSHVLLLVQALPQISMPQEV-VPAGSAAVFPC	3824
Callithrix_jacchus	GVVRIHVELADAGQYRCTATNSAGTTQSHVLLLVQALPQISTPQEV-VPAGSAAVFPC	3613
Equus_caballus	GIVRIAHVELADAGQYRCTATNAAGTTQSHVLLLVQALPQISTPPEVH-VPAGSTAVFPC	3615
Pteropus_alecto	GIVRIAHVELADAGQYRCATNAAGTTQSHVLLLVQALPQISTPPEV-VPAGSAAVFPC	3060
Bos_taurus	GIVRIARVELADAGQYRCTATNAAGTTQSHVLLLVQALPQISTPPEV-VPAGSTAVFPC	3769
Mus_musculus	SIIRIAHVELADAGQYRCATNAAGTTQSHVLLLVQALPQISTPPEIR-VPAGSAAVFPC	3592
Ornithorhynchus_anatinus	NTIKIARVEQADAGEYRCTATNSAGTTQSHVLLLVQALPQISAPQEV-VPAGSAAVFPC	3708
Chelonia_mydas	GMVKIERVEQSDAGQYRCTATNDMGTMQSNVILHVQSIPIAAQPEVKEVITGSRVAVLPC	3370
Xenopus_tropicalis	GTLRIEQVKQSDAGQYRCTAANDVGEVQSHVILHVQSVPIAAQPEMKEITAGSTAVFPC	3770
Rhinatrema_bivittatum	GMLKIEEVKQSDAGQYRCTATNDMGTVQSHIILHVQSIPIAAQPEVKEVATGSSVVFPC	3717
	.....4210.....4220.....4230.....4240.....4250.....4260	

	..**.*. :.*:*.** . :. : * : :.* :*** *.*.* **.* : .** *	
Pavo_muticus	LASGFPVPEISWSKLEGE L PKGARVEGTALMLPAVRLEDAGVYACAASNRRGQETAFYVL	3214
Pavo_cristatus	LASGFPVPEISWSKLEGE L PKGARVEGTALMLPAVRLEDAGVYACAASNRRGQETAFYVL	3214
Gallus_gallus	LASGFPVPEISWSKLEGE L PGARVEGTALMLPAVRLEDAGVYACAASNRRGQETAFYVL	3470
Anas_platyrhynchos	LASGFPVPEISWSKLEGE L PGARVEGTALTLPAVRPEDAGVYACAATNRGQETAFYVL	3370
Homo_sapiens	IASGYPTPDISWSKLDGSLPPDSRLENNMLMLPSVRPQDAGTYVCTATNRGKVKAF AHL	3656
Pan_troglodytes	IASGYPTPDISWSKLDGSLPPDSRLENNMLMLPSVQPQDAGTYVCTATNRGKVKAF AHL	3673
Macaca_mulatta	IASGYPTPDISWSKLDGSLPPDSRLENNMLTLPSVRPQDAGTYVCTATNRGKVKAF AHL	3884
Callithrix_jacchus	IASGYPTPDISWSKVDGSLPPDSRLENNMLMLPSVRPQDAGTYVCTATNRGKVKAF AHL	3673
Equus_caballus	MASGYPTPDITWSKLDGNLPPDSRLENNMLVLP SVRPQDAGTYVCTATNRGKVKAF AQL	3675
Pteropus_alecto	MASGYPTPDITWSKLDGNLPPDSRLENNMLLLPSVRPQDAGTYVCTATNRGKVKAF AHL	3120
Bos_taurus	MVSGYPAPEITWSKLDGNLPPDSRLENHMLLLPSVQPQDAGTYVCTATNRGKVKAF AQL	3829
Mus_musculus	MASGYTPAITWSKVDGLDLPDSRLENNMLMLPSVRPEDAGTYVCTATNRGKVKAFAYL	3652
Ornithorhynchus_anatinus	MASGFPITPNVITWKLEGE LPPDSRLENHMLTIPAVRPQDAGTYVCTATNRGRVKAF AHL	3768
Chelonia_mydas	LASGFPVPEIKWTKLEGE LDKDICLENNILTIPSVKPEDAGTYVCTASNRGKVTAF SML	3430
Xenopus_tropicalis	LASGFPVDPDITWSKLEGE LPSDHDIDNNVLTILSVKPEDAGTYVCTAANRGGRVTA FSML	3830
Rhinatrema_bivittatum	LASGFPVPEISWTKLEGE LPRDARLEGNLTIPSVRPQDAGTYVCTAINRGKVTAF SML	3777
4270.....4280.....4290.....4300.....4310.....4320	

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Pavo_muticus      KVRERLVPYFTQTTPRSFLPLPTIKDAYKTFEIQITFRPDAAD-----GMLLYNGQRKS- 3267
Pavo_cristatus    KVRERLVPYFTQTTPRSFLPLPTIKDAYKTFEIQITFRPDAAD-----GMLLYNGQRKS- 3267
Gallus_gallus     KVQERLVPYFTQTTPRSFLPLPTIKDAYKTFEIQITFRPDAAD-----GMLLYNGQRKS- 3523
Anas_platyrhynchos KVRERLVPYFTQTTPRSFLPLPTIKDAYKMFIEIQITFRPDAAD-----GMLLYNGQRKS- 3423
Homo_sapiens      QVPERVVPYFTQTTPYSFLPLPTIKDAYRKFEIKITFRPDSAD-----GMLLYNGQKRVP 3710
Pan_troglodytes   QVPERVVPYFTQTTPYSFLPLPTIKDAYRKFEIKITFRPDSAD-----GMLLYNGQKRVP 3727
Macaca_mulatta    QVPERVVPYFTQTTPYSFLPLPTIKDAYRKFEIKITFRPDSADGLLLYSGMLLYNGQKRVP 3944
Callithrix_jacchus QVPERVVPYFTQTTPYSFLPLPTIKDAYRKFEIKITFRPDSADGLLLYSGMLLYNGQKRVP 3733
Equus_caballus    RVPERVVPYFTQTTPHSFLPLPTIKDAYRKFEIRITFRPDSADGLLLYSGMLLYNGQKQSP 3735
Pteropus_alecto   QVPERVVPYFTQTTPYSFLPLPTIKDAYRKFEIKITFRPDSAD-----GMLLYNGQKRIP 3174
Bos_taurus        QVPERVVPYFTQTTPYSFLPLPTIKDAYRKFEIKITFRPDSAD-----GMLLYNGQKQIP 3883
Mus_musculus      QVPERVVPYFTQTTPYSFLPLPTIKDAYRKFEIKITFRPDSAD-----GMLLYNGQKR-- 3704
Ornithorhynchus_anatinus QVPERVVPYFTQTTPHSFLPLPTIKDAYRKFEIQITFRPDAADALLLYSGMLLYNGQKQSP 3828
Chelonia_mydas    KVQERVVPYFTQNPQTFLALPTIKDAYKKFEIQITFRPDTAD-----GMLLYNGQKKS- 3483
Xenopus_tropicalis KVRERVVPYFTGQPQSYLSLPSIKDAHKKLEIKITFRPDTADALILYSGMLVYSGQKKS- 3889
Rhinatrema_bivittatum KVRERVVPYFTDSPRSHLKLPTIKDAYKKFEVRITFRPDTADALVLYSGMLVYNGQKNS- 3836
.....4330.....4340.....4350.....4360.....4370.....4380

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.*:*****.***** * :.* **::***: : *.*
Pavo_muticus      -----SGADFISFGLVGGRPPEFRFDAGSGMATIRDP TPLRLGKYHTVRLFRNLT 3316
Pavo_cristatus    -----SGADFISFGLVGGRPPEFRFDAGSGMATIRDP TPLRLGKYHTVRLFRNLT 3316
Gallus_gallus     -----SGADFISFGLVGGRPPEFRFDAGSGMATIRDP TPLRLGKYHTVRLFRNLT 3572
Anas_platyrhynchos -----SGADFISFGLVGGRPPEFRFDAGSGMATIRHPTPLRLGEYHTVRLFRNLT 3472
Homo_sapiens      GSPTNLAN---RQPDFISFGLVGGRPPEFRFDAGSGMATIRHPTPLALGHFHTVTLRLSLT 3767
Pan_troglodytes   GSPTNLAN---RQPDFISFGLVGGRPPEFRFDAGSGMATIRHPTPLALGHFHTVTLRLSLT 3784
Macaca_mulatta    GSPTNLAN---RQPDFISFGLVGGRPPEFRFDAGSGMATIRHPTPLALGHFHTVTLRLSLT 4001
Callithrix_jacchus GSPTNLAN---RQPDFISFGLVGGRPPEFRFDAGSGMATIRHPTPLALGHFHTVTLRLSLT 3790
Equus_caballus    GSPASLAH---RQPDFISFGLVGGRPPEFRFDAGSGMATIRHPTPLALGQFHTVTLRLSLT 3792
Pteropus_alecto   GSPTNLAN---RQPDFISFGLVGGRPPEFRFDAGSGMATIRHPTPLALGQFHTVTLRLSLT 3231
Bos_taurus        GSPANLAN---RQPDFISFGLVGGRPPEFRFDAGSGMATIRHPTPLALGQFHTVTLRLSLT 3940
Mus_musculus      -SPTNLAN---RQPDFISFGLVGGRPPEFRFDAGSGMATIRHPTPLALGQFHTVTLRLSLT 3760
Ornithorhynchus_anatinus GASVTSGSQAQROPDFISFGLVGGRPPEFRFDAGSGMATIRHPNPLALGQFHTVTLRLSLT 3888
Chelonia_mydas    -----TGADFVSFGLVGGRPPEFRFDAGSGMATIRHPAPIRLGEFHTVRLYRNLT 3532
Xenopus_tropicalis -----NGADFVSFGLVGGRPPEFRFDAGSGMATIRYPTAISLGEFHTVTLYRNLT 3938
Rhinatrema_bivittatum -----TGADFISFGLVGGRPPEFRFDAGSGMATIRYPNPIKLGEFHTVTLYRNLT 3885
.....4390.....4400.....4410.....4420.....4430.....4440

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:*** :. .*****.*****.* :.* * **::*****:*.***
Pavo_muticus      RGS LQVDAQPPVNGTSQGKFQGLDLNEELYLG GYPDYAVVAKTGLSRGFVGCVRQLRIQN 3376
Pavo_cristatus    RGS LQVDAQPPVNGTSQGKFQGLDLNEELYLG GYPDYAVVAKTGLSRGFVGCVRQLRIQN 3376
Gallus_gallus     RGS LQVDGQPPVNGTSQGKFQGLDLNEELYLG GYPDYTIVAKTGLSRGFVGCVRQLRIQN 3632
Anas_platyrhynchos RGS LVVDGLSPVNGTSQGKFQGLDLNEELYLG GYPDYAAVAKTGLSQGFVGCVRQLRIQN 3532
Homo_sapiens      QGSLIVGDLAPVNGTSQGKFQGLDLNEELYLG GYPDYGAIPKAGLSSGFIGCVRELRIQG 3827
Pan_troglodytes   QGSLIVGDLAPVNGTSQGKFQGLDLNEELYLG GYPDYGAIPKAGLSSGFIGCVRELRIQG 3844
Macaca_mulatta    QGSLIVGDLAPVNGTSQGKFQGLDLNEELYLG GYPDYGAIPKAGLSSGFIGCVRELRIQG 4061
Callithrix_jacchus QGSLIVGDLAPVNGTSQGKFQGLDLNEELYLG GYPDYGAIPKAGLSSGFIGCVRELRIQG 3850
Equus_caballus    QGSLIVGSLAPVNGTSQGKFQGLDLNEELYLG GYPDYSAIPKAGLSSGFIGCVRELRIQG 3852
Pteropus_alecto   QGSLIVGSLAPVNGTSQGKFQGLDLNEELYLG GYPDYGAIPKAGLSSGFIGCVRELRIQG 3291
Bos_taurus        QGSLIVGSLAPVNGTSQGKFQGLDLNEELYLG GYPDYGAIPKAGLSSGFIGCVRELRIQG 4000
Mus_musculus      QGSLIVGNLAPVNGTSQGKFQGLDLNEELYLG GYPDYGAIPKAGLSSGFIGCVRELRIQG 3820
Ornithorhynchus_anatinus QGSLVVGTFPAVNGTSQGKFQGLDLNEELYLG GYPDYGAISKAGHSGGFVGCVRQLLIQG 3948
Chelonia_mydas    QGSLVLDSSHPPVNGTSQGKFQGLDLNEELYLG GYPDYTAVAKSGLSSGFIGCVRELRIQG 3592
Xenopus_tropicalis QGSLVVDHRHVPVNGTSQGKFQGLDLNEELFLGGYSHYDSISKTGLNSGFVGCVRQLIIQG 3998
Rhinatrema_bivittatum QGSLVVDQPPVNGTSQGKFQGLDLNEELYLG GYPDYDAISKTGLRNGFVGCVRQLIIQG 3945
.....4450.....4460.....4470.....4480.....4490.....4500

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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** : * : : : * . * : : : * : : : * * * : : : * : * * * : : : * : : *
Pavo_muticus      EEVAFGELDLQAHGVSNCPTCQDQPCQNGGICEDAESSTYICRCPQGFTGSNCEYSQALH 3436
Pavo_cristatus    EEVAFGELDLQAHGVSNCPTCQDQPCQNGGICEDAESSTYICRCPQGFTGSNCEYSQALH 3436
Gallus_gallus     EEVAFGELDLQAHGVSNCPTCQDQPCQNGGICEDAESSTYICRCPQGFTGSNCEYSQALH 3692
Anas_platyrhynchos EEVAFGELDLQAHGVSNCPTCQDQPCQNGGICEDAESSTYVCRCPHGFTGSNCEYSQALH 3592
Homo_sapiens      EEIVFHDLNLTAHGISHCPTCRDRPCQNGGQCHDSESSSYVVCVPAGFTGSRCEHSQALH 3887
Pan_troglodytes   EEIVFHDLNLTAHGISHCPTCRDRPCQNGGQCHDSESSSYVVCVPAGFTGSRCEHSQALH 3904
Macaca_mulatta    EEIIFHDLNLTAHGISHCPTCRDRPCQNGGQCHDSESSSYMCVCPAGFTGSRCEHSQALH 4121
Callithrix_jacchus EEIVFHDLNLTVHGISHCPTCRDRPCQNGGQCHDSESSSYVVCVPAGFTGSRCEHSQALH 3910
Equus_caballus    EEIVFHDLNLTAHGISHCPTCRDRPCQNGGQCHDSESSSYVVCVCLPGFTGSRCEHSQALH 3912
Pteropus_alecto   EEIVFHDLNLTAHGISHCPTCRDRPCQNGGLQDSESSSYTCICPAGFTGSRCEHSQALH 3351
Bos_taurus        EEIVFHDLNLTAHGISHCPTCRDRPCQNGGQCHDSESSSYVVCVPAGFTGSRCEHSQALH 4060
Mus_musculus      EEVVFHVDVNLTTGHGISHCPTCQDRPCQNGGQCHDSESSSYTCVCPAGFTGSRCEHSQALH 3880
Ornithorhynchus_anatinus EEVIFHDLNLTAHGISHCPTCQDRPCQNGGQCHDSESSSYVCTCPAGFTGSRCEHSQALH 4008
Chelonia_mydas    EEVIFKDLDLGALGINSNCPTCRDRPCQNGGICRDSESSSYVCHCPQEFTGSNCEHSQALH 3652
Xenopus_tropicalis EEVIFKDLDLGANGVSNCPTRDRPCNNGTCQDSESSSYVVCVCSAGFTGSNCEHSQALH 4058
Rhinatrema_bivittatum EEVIFKDLDLHAQGINSNCPTCRDRPCNNGTCQDSESSSYVCICPQFTGSNCEHFQAFH 4005
.....4510.....4520.....4530.....4540.....4550.....4560

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***                               *****:***:.* ** ** *****: * * * .
Pavo_muticus      CHP-----EACGPDATCISRPDGGQYSCRCHLGKTGERCTEGEAV 3476
Pavo_cristatus    CHP-----EACGPDATCISRPDGGQYSCRCHLGKTGERCTEGEAV 3476
Gallus_gallus     CHP-----EACGPDATCISRPDGGQYSCRCHLGKMGGERCTEGEAV 3732
Anas_platyrhynchos CHP-----EACGPDATCVNRPDGGQYSCRCHLGKSGERCTEGEAV 3632
Homo_sapiens      CHP-----EACGPDATCVNRPDGRGYTCRCHLGRSGLRCEEVTV 3927
Pan_troglodytes   CHP-----EACGPDATCVNRPDGRGYTCRCHLGRSGLRCEEVTV 3944
Macaca_mulatta    CHP-----EACGPDATCVNRPDGRGYTCRCHLGRSGLRCEEVTV 4161
Callithrix_jacchus CHP-----EACGPDATCVNRPDGRGYTCRCHLGRSGLRCEEVTV 3950
Equus_caballus    CHPDRGCHPCHPNTHAASHLCCPEACGPDATCVNRPDGRGYTCRCHLGRSGIRCEEVTV 3972
Pteropus_alecto   CHP-----EACGPDATCVNRPDGRGYTCRCHLGRSGMRCEEVTV 3391
Bos_taurus        CHP-----EACGPDATCVNRPDGHGYTCRCHLGRSGMRCEEVTV 4100
Mus_musculus      CHP-----EACGPDATCVNRPDGRGYTCRCHLGRSGVRCEEVTV 3920
Ornithorhynchus_anatinus CHP-----EACGPDATCVNRPDGRGYSCRCHLGRSGEKKMAGVTV 4048
Chelonia_mydas    CHP-----EACGPDATCINRADGQGYRCRCHLGKSGETCMGEVMA 3692
Xenopus_tropicalis CHP-----EACGPDATCINRADGQGYTCRCHLGKSGEKKMDGTMV 4098
Rhinatrema_bivittatum CHP-----EACGPDATCINREDGLGYNCRCHLGKAGDGMEGTMV 4045
.....4570.....4580.....4590.....4600.....4610.....4620

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..* :. . : : : * .*** * * : : : * * * : : : * . * : : : : * * . *
Pavo_muticus      SVPSFNEAGAFVSYPPPLTNVHHELRLVEAEFLPRAPDGLLLFSAGKASPVEDFVALAMVSG 3536
Pavo_cristatus    SVPSFNEAGAFVSYPPPLTNVHHELRLVEAEFLPRAPDGLLLFSAGKASPVEDFVALAMVSG 3536
Gallus_gallus     SVPSFDEAGAFISYPPPLTNVHHELRLVEAEFLPRAPDGLLLFSAGKASPVEDFVALAMVSG 3792
Anas_platyrhynchos SVPSFGGAGAFVSYPPPLTNVHHELRLVEAEFLPRAPDGLLLFSAGKAAPVEDFVALAMVGG 3692
Homo_sapiens      TTPSLSGAGSYLALPALNTNTHHELRLDVEFKPLAPDGVLLFSGGKSGPVEDFVSLAMVGG 3987
Pan_troglodytes   TTPSLSGAGSYLALPALNTNTHHELRLDVEFKPLAPDGVLLFSGGKSGPVEDFVSLAMVGG 4004
Macaca_mulatta    TTPSLSGAGSYLALPALNTNTHHELRLDVEFKPLAPDGVLLFSGGKSGPVEDFVSLAMVGG 4221
Callithrix_jacchus TTPLMSGTGSYLALPALNTNTHHELRLDVEFKPLAPVGVLLFSGGKSGPVEDFVSLAMVGG 4010
Equus_caballus    TTPSMSGTGSYLALPALNTNTHHELRLDVEFKPLAPDGVLLFSGGKSGPVEDFVSLAMVGG 4032
Pteropus_alecto   TTPSMSGTGSYLVLPALNTNTHHELRLDVEFKPLAPDGIILFSGGKIGPVEDFVSLAMVGG 3451
Bos_taurus        TTPSLSGTDSYLALPALNTNTHHELRLDVEFKPLAPDGVLLFSGGKSGPVEDFVSLAMVGG 4160
Mus_musculus      TTPSMSGAGSYLALPALTNMHHELRLDVEFKPLEPNGIILFSGGKSGPVEDFVSLAMVGG 3980
Ornithorhynchus_anatinus TTPALSGRGSFLALPALNTNTHHELRLDAEFKPLAPDGLLLFSGGKAGPVEDFVSLAMSGG 4108
Chelonia_mydas    TTPSFNDSNSFISYPPPLTNHHELRLVEFKPLSPSGLILFSGGSGAPVEDFVSLAMASG 3752
Xenopus_tropicalis NTPSFNGDSSYISYPSLTNIHHELRLVDLEFKPISPDLGLLFSGGKAGPVEDFVSIAMVGG 4158
Rhinatrema_bivittatum TTPFFSGDSSFVAYPPPLTNHHELRLVDLEFKPLSPSGLLFFSGGKVGPMVDFVSLAMVDG 4105
.....4630.....4640.....4650.....4660.....4670.....4680

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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::*:***** *:*** .*:***:***:***:*****: *:.. . **:*****
Pavo_muticus      HLEFHYELGSGTAVLRSVEPVALGRWHRVTAERVHKDGTMTVDGGAPVQRSSPGKSQGLN 3596
Pavo_cristatus    HLEFHYELGSGTAVLRSVEPVALGRWHRVTAERVHKDGTMTVDGGAPVQRSSPGKSQGLN 3596
Gallus_gallus     HLEFHYELGSGTAVLRSVEPVALGRWHRVTAERVHKDGTMTVDGGAPVQRSSPGKSQGLN 3852
Anas_platyrhynchos HLEFRYELGSGPAVLRSAPVALGRWHRVMAERVHKDGTILVVDGGAPVQRSSPGKSQGLN 3752
Homo_sapiens      HLEFRYELGSGGLAVLRSAPPLALGRWHRVSAERLNKDGSLRVNGGRPVLRSSPGKSQGLN 4047
Pan_troglodytes   HLEFRYELGSGGLAVLRSAPPLALGRWHRVSAERLNKDGSLRVNGGRPVLRSSPGKSQGLN 4064
Macaca_mulatta    HLEFRYELGSGGLAVLRSAPPLALGRWHRVSAERLNKDGSLRVNGGRPVLRSSPGKSQGLN 4281
Callithrix_jacchus HLEFRYELGSGGLAILRSTPEPLALGRWHRVSAERLNKDGSLRVNGGRPVLRSSPGKSQGLN 4070
Equus_caballus    HLEFRYELGSGGLAVLRSAPPLALGRWHRVSAERLNKDGSLRVNGGRPVLRSSPGKSQGLN 4092
Pteropus_alecto   HLEFRYELGSGGLAILRSPPEPLALGRWHRVSAERLNKDGSLRVNGGRPVLRSSPGKSQGLN 3511
Bos_taurus        HLEFRYELGSGGLAVLRSAPPLALGRWHRVSAERLNKDGSLQVNGGRPVLRSSPGKSQGLN 4220
Mus_musculus      HLEFRYELGSGGLAVLRSAPPLALGRWHRVSAERLNKDGSLRVNGGRPVLRSSPGKSQGLN 4040
Ornithorhynchus_anatinus HLEFRFELGSGTAVLRSAPPLTLGHWRVSAERLNKDGSLRVNGGRPVLRSSPGKSQGLN 4168
Chelonia_mydas    HVEFRYELGSGMAVLQSTPEPLALGQWHKVSARLNKDGTLQVDDSSKPVKRSSPGKSQGLN 3812
Xenopus_tropicalis YLEFRYELGSGGLAILRSLPEVTLGQWHKVSARVNKDGTLIVDGTDPVKRSAPGKSQGLN 4218
Rhinatrema_bivittatum HVEFRYELGSGGLAILKSAPPLALGQWHKVSARVNKDGSLQVDDSSKAERSSPGKSQGLN 4165
.....4690.....4700.....4710.....4720.....4730.....4740

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* : :*****: . . . *:***:*****:*****:***:*** * .: * : **
Pavo_muticus      LRSPLYLGGVEPPLRPP----TNASFQGCIGEVSSINGKKVDLSYSFLRSRGVGCQCGQSSP 3652
Pavo_cristatus    LRSPLYLGGVEPPLRPP----TNASFQGCIGEVSSINGKKVDLSYSFLRSRGVGCQCGQSSP 3652
Gallus_gallus     LRSPLYLGGVEPPLRPP----TNASFQGCIGEVSSINGKKVDLSYSFLRSRGVGCQCGQSSP 3908
Anas_platyrhynchos LRSPLYLGGVEPPLQPP----TNASFQGCIGEVSSINGKKVDLSYSFLRSRGVGCQCGQSSP 3808
Homo_sapiens      LHTLLYLGGVEPSVPLSPATNMSAHFRGCVGEVSVNGKRLDLTYSFGLSQGIGQCYDSSP 4107
Pan_troglodytes   LHTLLYLGGVEPSVPLSPATNMSAHFRGCVGEVSVNGKRLDLTYSFGLSQGIGQCYDSSP 4124
Macaca_mulatta    LHTLLYLGGVEPSVPLSPATNMSAHFRGCVGEVSVNGKRLDLTYSFGLSQGIGQCYDSSP 4341
Callithrix_jacchus LHTLLYLGGVEPSVPLSPATNMSAHFRGCVGEVSVNGKRLDLTYSFGLSQGIGQCYDSSP 4130
Equus_caballus    LDTHLLYLGGVEPSVSLPPAANASAPFRGCVGEVSVNGKRLDLTYSFGLSRGIGQCYDSSP 4152
Pteropus_alecto   LHTLLYLGGVEPSVQLSPATNVSTPFRGCVGEVSVNGKRLDLTYSFGLSRGIGQCYDSSP 3571
Bos_taurus        LHTLLYLGGVEPSVPLSPATNMSAHFRGCVGEVSVNGKRLDLTYSFGLSQGIGQCYDSSP 4280
Mus_musculus      LHTLLYLGGVEPSVQLSPATNMSAHFRGCVGEVSVNGKRLDLTYSFGLSQGIGQCYDSSP 4100
Ornithorhynchus_anatinus LRTPLYLGGVEPTLSLPPAANVTAHFRGCVGEVSVNGKRLDLTYSFGLSQGIGQCYDSSP 4228
Chelonia_mydas    LRTPLYLGGVVDKSVTLPPAASISSTFHCIGEVSSINGKKVDISYSFGLSQRGITQCYDSSP 3872
Xenopus_tropicalis LKTLMYLGGVVDGSELPSAANISRHFGCVGEVSVNGKVDISYSFTSSAIGQCYDNPS 4278
Rhinatrema_bivittatum LRTLMYLGGVVDQSTELPAAVNLDRFHGCVGEVSVNGKVDISYSFTSSYIGIGQCYDRSP 4225
.....4750.....4760.....4770.....4780.....4790.....4800

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* ** :. * * .. :*** ** * ** . * : ***:. * : *
Pavo_muticus      CLHAPCLHGGRCPLPLPAGSPFFRCCLCTPGFSGPRCERVADRCLEHNPCLHGGTCKDNGCV 3712
Pavo_cristatus    CLHAPCLHGGRCPLPLPAGSPFFRCCLCTPGFSGPRCERVADRCLEHNPCLHGGTCKDNGCV 3712
Gallus_gallus     CLHAPCLHGGRCPLPLPAGSPFFRCCLCTPGFSGPRCERVADRCLEHNPCLHGGTCKDNGCI 3968
Anas_platyrhynchos CLHAPCLHGGRCPLPLPDGSPFFRCCLCPGFSGQLCERAEADRCLEHNPCLHGGTCKGNACI 3868
Homo_sapiens      CEROPCQHGAATCMP--AGEYEFQCLCRDGFKGDLCEHEENPCQLREPCLHGGTCQGTTRCL 4165
Pan_troglodytes   CEROPCQHGAATCMP--AGEYEFQCLCRDGFKGDLCEHEENPCQLREPCLHGGTCQGTTRCL 4182
Macaca_mulatta    CEROPCQHGAATCMP--AGEYEFQCLCRDGFKGDLCEHEENPCQLREPCLHGGTCQGTTRCL 4399
Callithrix_jacchus CEROPCQHGAATCMP--AGEYEFQCLCRDGFKGDLCEHEENPCQLHEPCLHGGTCQGTTRCL 4188
Equus_caballus    CEPQPCQHGAATCMP--AGEYEFQCLCQDGFKGDLCEHEENPCQLREPCLHGGTCRGTHCL 4210
Pteropus_alecto   CEROPCQHGAATCLP--AGEYEFQCLCRDGFKGDLCEHEENPCQLREPCLHGGTCQGTTRCL 3629
Bos_taurus        CEROPCQHGAATCMP--AGEYEFQCLCRDGFKGDLCEHEENPCQLHEPCLHGGTCQGTTRCL 4338
Mus_musculus      CEROPCQHGAATCMP--AGEYEFQCLCQDGFKGDLCEHEENPCQLHEPCLNGGTCRGARCL 4158
Ornithorhynchus_anatinus CEHOPCLHGAATCMP--AGEYEFQCLCQDGFKGDRCEHAEPCLLREPCLHGGTCQGTTRCL 4286
Chelonia_mydas    CDRRPCLHGAATCMP--TGEYEFQCLCQDGFGRNRCSEDSQCLLRNPCLNGGMCKANQCL 3930
Xenopus_tropicalis CDRMPCLHGGRCQP--TGEYEFQCLCLDGFKGDRCEHEDQCIHNPCLNGATCKDNRCH 4336
Rhinatrema_bivittatum CDRMPCLHGGRCRP--GGEDSFQCLCREGFGKARCELAENECLLHYPCPLNGGTCGRHCL 4283
.....4810.....4820.....4830.....4840.....4850.....4860

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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*  *:::  *:::  *****:*** ::: * ::::: * . :::: *
Pavo_muticus      CPEGYAGPYCOHSAALSELDQDWQ-EGSGGSDTPGQFSAVFREGSYLALPSHLFPRGAPD 3771
Pavo_cristatus    CPEGYAGPYCOHSAALSELDQDWQ-EGSGGSDTPGQFSAVFREGSYLALPSHLFPRGAPD 3771
Gallus_gallus     CPKGYAGPYCOHGAALSELDQDWQ-EGSGGSDTPGQFSAMFREGSYLALPGHLFPRGAPD 4027
Anas_platyrhynchos CPEGYTGPYCOHSTALSELDRDWQ-EGSGGDAPGQFSAAFRDGSYLALPGHLFPRGLPD 3927
Homo_sapiens      CLPGFSGPRCQQGSGHGIAESDWHLESGGNDAPGQYQAYFHDDGFLAFPGHVFSRSLPE 4225
Pan_troglodytes   CLPGFSGPRCQQGSGHGIAESDWHLESGGNDAPGQYQAYFHDDGFLAFPGHVFSRSLPE 4242
Macaca_mulatta    CLPGFSGPRCQQGSGHGIAESDWHLESGGNDAPGQYQAYFHDDGFLAFPGHVFSRSLPE 4459
Callithrix_jacchus CLPGFSGPRCQQGSGHGIAESDWHLESGGSDAPGQYQAYFHDDGFLAFPGHVFSRSLPE 4248
Equus_caballus    CPPGFSGPRCQQGSGHGTAESDWHLESGGNDAPGQYQAYFHDDGFLALPGHVLRSRLPE 4270
Pteropus_allecto  CPPGFSGPRCQQGSGHGTAESDWHLESGGNDAPGQYQAYFHDDGFLALPNHVFSRSLPE 3689
Bos_taurus        CPPGFSGPRCQHSAAHGLVESDWHLESGGNDAPGQYQAYFYDNGFLALPGHVFSRSLPE 4398
Mus_musculus      CLPGFSGPRCQQGAGYGVVESDWHLESGGNDAPGQYQAYFYDNGFLALPGHVFSRSLPE 4218
Ornithorhynchus_anatinus CAPGFSGPRCQQGSGQRGSGSEWHLESGGNDAPGQYQAYFQDGGYLVLPKGVFPRSPPE 4346
Chelonia_mydas    CPAGFSGTYCEQGLALAALDREWALESGGNDAPGQYQAYFQDSGYLALPRHLLPHSHPK 3990
Xenopus_tropicalis  CPGSGSGTYICEHGRTAGAEDRDWPVEGSGGNDAPGLYGSFFSDSYIALPKHVFPRSRPE 4396
Rhinatrema_bivittatum CRSGFSGTYCEQGAQVESLEPVSHEEGSGGNDAPGQYQAYFSDGAYIALPQMFPRSHPT 4343
.....4870.....4880.....4890.....4900.....4910.....4920

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:::***:  ..*:::***
Pavo_muticus      LQDTIELELRSTSSTEGMLLWHGAES-----GK---AKDFVGLGLKDGHLVF 3814
Pavo_cristatus    LQDTIELELRSTSSTEGMLLWHGAES-----GK---AKDFVGLGLKDGHLVF 3814
Gallus_gallus     LQDTIELELRSTSSTEGMLLWHGTES-----GK---AKDFVGLGLKDGHLVF 4070
Anas_platyrhynchos AQEAIELELRSTDADGLLLWHGAEN-----GK---AKDFVGLGLKDGHLVF 3970
Homo_sapiens      VPETIELEVRTSTASGLLLWQGVF-----GEAGQKDFISLGLQDGHVLF 4271
Pan_troglodytes   VPETIELEVRTSTASGLLLWQGVF-----GEAGQKDFISLGLQDGHVLF 4288
Macaca_mulatta    VPETIELEVRTSTANGLLWQGVF-----GEAGRGKDFISLGLQDGHVLF 4505
Callithrix_jacchus VPETIELEVQSTANGLLWQGVF-----GETGRGHDFISLGLQDGHVLF 4294
Equus_caballus    VPETIELEVRTSTASGLLLWQGVF-----GEASRGKDFISLGLQDGHVLF 4316
Pteropus_allecto  VPETIELEVRTSIASGLLLWQGVF-----GEASQKDFISLGLQDGHVLF 3735
Bos_taurus        VPETIELEVRTSTASGLLLWQGEET-----GQSGRGKDFISLGLQDGHVLF 4444
Mus_musculus      VPETIEFEVRTSTADGLLLWQGV-----REASRSKDFISLGLQDGHVLF 4263
Ornithorhynchus_anatinus LPETIELEVRTSSSSGLLLWQGAFA-----GEDGQKDFISLGLRQGHVLF 4392
Chelonia_mydas    SPETIELEVTRSPNGLLLWQGVF-----GONGKAKDFISLGLRDGHVLF 4036
Xenopus_tropicalis APETIELEIRTSSEGVILWQGMVSHSENHLLGTNQEENEQSKGKDFISLGLKDGHLVF 4456
Rhinatrema_bivittatum APETIELEIRTSSEGVILWQGV-----EKENGKAKDFISLGLQDGHVLF 4389
.....4930.....4940.....4950.....4960.....4970.....4980

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***** : ****:*****: . *::: * :::***: * * *** *: .*:..
Pavo_muticus      SYQLGSGEATIVSEDPVNDGEWHHVMVARQGRRGWLOVDGEEPVFGEPSGTNIMANTQGN 3874
Pavo_cristatus    SYQLGSGEATIVSEDPVNDGEWHHVMVARQGRRGWLOVDGEEPVFGEPSGTNIMANTQGN 3874
Gallus_gallus     SYQLGSGEATIVSEDPVNDGEWHHVMVARQGRRGWLOVDGEEPVFGEPSGTNIMANTQGN 4130
Anas_platyrhynchos SYQLGSGEATIVSEDPVNDGEWHHVMVARQGRRGWLOVDGEEPVFGEPSGTNIMANTQGN 4030
Homo_sapiens      RYQLGSGEARLVSEDPINDGEWHHVMVARQGRRGWLOVDGEEPVFGEPSGTNIMANTQGN 4331
Pan_troglodytes   RYQLGSGEARLVSEDPINDGEWHHVMVARQGRRGWLOVDGEEPVFGEPSGTNIMANTQGN 4348
Macaca_mulatta    RYQLGSGEARLVSEDPINDGEWHHVMVARQGRRGWLOVDGEEPVFGEPSGTNIMANTQGN 4565
Callithrix_jacchus RYQLGSGEARLVSEDPINDGEWHHVMVARQGRRGWLOVDGEEPVFGEPSGTNIMANTQGN 4354
Equus_caballus    SYQLGSGEARLVSEDPINDGEWHHVMVARQGRRGWLOVDGEEPVFGEPSGTNIMANTQGN 4376
Pteropus_allecto  SYQLGSGEARLVSEDPINDGEWHHVMVARQGRRGWLOVDGEEPVFGEPSGTNIMANTQGN 3795
Bos_taurus        SYQLGSGEARLVSEDPINDGEWHHVMVARQGRRGWLOVDGEEPVFGEPSGTNIMANTQGN 4504
Mus_musculus      SYQLGSGEARLVSEDPINDGEWHHVMVARQGRRGWLOVDGEEPVFGEPSGTNIMANTQGN 4323
Ornithorhynchus_anatinus SYQLGSGEANITSEDPINDGEWHHVMVARQGRRGWLOVDGEEPVFGEPSGTNIMANTQGN 4452
Chelonia_mydas    SYQLGSGEANITSEDPINDGEWHHVMVARQGRRGWLOVDGEEPVFGEPSGTNIMANTQGN 4096
Xenopus_tropicalis SYQLGSGEANITSEDPINDGEWHHVMVARQGRRGWLOVDGEEPVFGEPSGTNIMANTQGN 4516
Rhinatrema_bivittatum SYQLGSGEANITSEDPINDGEWHHVMVARQGRRGWLOVDGEEPVFGEPSGTNIMANTQGN 4449
.....4990.....5000.....5010.....5020.....5030.....5040

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /home/ceglab2/Desktop/ajinkya/pavo/MSD/MSFG2.Feb 15 16:23:03 2022
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Pavo_muticus	VYVGGAPDPRSLTAGKFLT	TGVS	GCVRGLVLAPAG	---	TPRH	PIDLRHGAVGGS	A-VAP	3930				
Pavo_cristatus	VYVGGAPDPRSLTAGKFLT	TGVS	GCVRGLVLAPAG	---	TPRH	PIDLRHGAVGGS	A-VAP	3930				
Gallus_gallus	VYVGGAPDPRSLTAGKFLT	TGVS	GCVRGLVLAPAG	---	TPRH	PIDLRHGAVGGS	A-VVP	4186				
Anas_platyrhynchos	IYIGGAPDPRSLTAGKFLT	TGVT	GCVRGLLLASAG	---	IPHP	PIDLRHGAVGGS	F-AA	4086				
Homo_sapiens	VYIGGAPDVATLTGGRFSS	GITG	CVKNLVLHSARPGAP	PP	PLDL	QHRAQAGAN	-TR	4390				
Pan_troglodytes	VYIGGAPDVATLTGGRFSS	GITG	CVKNLVLHSARPGAP	PP	PLDL	QHRAQAGAN	-TR	4407				
Macaca_mulatta	VYIGGAPDVATLTGGRFSS	GITG	CVKNLVLHSARPGAP	PP	PLDL	QHRAQAGAN	-TR	4624				
Callithrix_jacchus	IYIGGAPEVAMLTGRGFSS	GITG	CVKNVVLHSARPSAP	PP	PLDL	QHRAQAGAN	-TR	4413				
Equus_caballus	IYIGGAPDVATLTGGRFSS	GITG	CIKNLVLHSARPGAP	PP	PLDL	QHRAQAGAN	-TR	4435				
Pteropus_allecto	IYIGGAPNVAMLTGGRFSS	GITG	CLRNVLVHSARPGAP	PP	PLDL	QHSAQAGAN	-TR	3854				
Bos_taurus	IYVGGAPNAVLTGGRFSS	GITG	CIKNLVLHSARPGG	PP	PVDM	QHSAQAGAN	-TR	4563				
Mus_musculus	IYIGGAPDVATLTGRKFSS	GITG	CIKNLVLHTARPGAP	PP	PLDL	QHRAQAGAN	-TR	4382				
Ornithorhynchus_anatinus	IYLGGA	AAA	TLTGGRFQEGITG	CIRNLVLHG	ARLGA	VPP	PLDLQHRTGGTGP	VR	4512			
Chelonia_mydas	VYIGGAPAIRALTAGKFRS	GITG	CIKNLVLSHE	PGQ	PP	ROPIDLQH	HSEAGVN	-M	4155			
Xenopus_tropicalis	VYLGGA	PV	KTLTGK	KFSSG	ING	CIKNLVILN	ARPSQ	QHP	IDLKH	HAEAGHN	-T	4575
Rhinatrema_bivittatum	IYLGGA	PV	KTLTARKYLS	GITG	CLKNVILM	NSRLG	HE	PH	OPIDLKH	HAEAGHN	-I	4508
	5050	5060	5070	5080	5090	5100						

Pavo_muticus	S	3931
Pavo_cristatus	S	3931
Gallus_gallus	S	4187
Anas_platyrhynchos	S	4087
Homo_sapiens	S	4391
Pan_troglodytes	S	4408
Macaca_mulatta	S	4625
Callithrix_jacchus	S	4414
Equus_caballus	S	4436
Pteropus_alecto	S	3855
Bos_taurus	S	4564
Mus_musculus	S	4383
Ornithorhynchus_anatinus	P	4513
Chelonia_mydas	S	4156
Xenopus_tropicalis	S	4576
Rhinatrema_bivittatum	S	4509