

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /home/ceglab2/Desktop/ajinkya/pavo/MSD/MSD_KFT_TupsFeb 15 16:13:50 2022

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Pavo_muticus	-----SPSLSC-----SPVAWDSPRALVSVPPAGQPGQAEPTCG	34
Pavo_cristatus	-----SPSLSC-----SPVAWDSPRALVSVPPAGQPGQAEPTCG	34
Gallus_gallus	MGPDGPGQIQPTPSHSDSPSTSEGTERRAPPAHLNPAHAHRPAALTALTAAPGRAEPPDA	60
Anas_platyrhynchos	-----	
Chelonia_mydas	-----MGLKAEAAQP-----	9
Homo_sapiens	-----	
Pan_troglodytes	-----	
Macaca_mulatta	-----	
Callithrix_jacchus	-----MTASERAALGLEPACAAREDLARPOAGPEPS	31
Mus_musculus	-----	
Bos_taurus	-----MIERPSERLQGWEEQQ	15
Equus_caballus	-----	
Pteropus_alecto	-----	
Ornithorhynchus_anatinus	-----	
Latimeria_chalumnae	-----	
Rhinatrema_bivittatum	-----	
Xenopus_tropicalis	-----	
	1.....10.....20.....30.....40.....50.....60	

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Pavo_muticus	AAEPXXXXRPAMGPEGAAVRVAVRVRPLLPKEVLRGHRSCLRGDAATGEVALGHRRRFRF	94
Pavo_cristatus	AAEPXXXXRPAMGPEGAAVRVAVRVRPLLPKEVLRGHRSCLRGDAATGEVALGHRRRFRF	94
Gallus_gallus	IAPRRRAALRPAMGPEGAAVRVAVRVRPLLPKEVLRGHRSCLRGDAATGEVALGHRRRFRF	120
Anas_platyrhynchos	-----MAPEGAAVRVAVRVRPLLPKEVLRGHRSCLRGDAATGEVALGHRRRFRF	49
Chelonia_mydas	-----RAEETPVRVAVRIRPLLPKELLHGHEACLHGDPETNEVTLGRNRHFHF	57
Homo_sapiens	---MGLEAQRPLPGAEEAPVRVALRVRLPLLPKELLHGHSCLQVEPGLGRVTLGRDRHFGF	57
Pan_troglodytes	---MGLEAQRPLPGAEEAPVRVALRVRLPLLPKELLHGHSCLQVEPGLGRVTLGRDRHFGF	57
Macaca_mulatta	---MGLEAQRPLPGPEEAPVRVALRVRLPLLPKELLHGHSCLQVEPGLGRITLGRDRHFGF	57
Callithrix_jacchus	SLNMGLEAQRPLPAAEEVPVRVALRVRLPLLPKELLYGHQSCLQVEPRLGRITLGRDRHFGF	91
Mus_musculus	---MGLEAQRPLPGAEEAPVRVALRVRLPLLPKELLHGHSCLRVEPERGRITLGRDRHFGF	57
Bos_taurus	SLNMGLEAQRPLPGAEEAPVRVALRVRLPLLPKELLHGHSCLTVEPGRSRVTLGRDRHFGF	75
Equus_caballus	---MGLEAQRPLPGAEEAPVRVALRVRLPLLPKELLHGHSCLRVEPGHGRVTLGRDRHFGF	57
Pteropus_alecto	---MGLEAQRPPGAEEAPVRVALRVRLPLLPKELLHGHSCLRVEPGQGRVTLGRDRHFGF	57
Ornithorhynchus_anatinus	---MGLKAO--PRPEETPVKVALRVRLPLLPKERLHGHSCLRVEAEPQVTLGRDRHFGF	55
Latimeria_chalumnae	---MGPKLQGHPRAEETPVRVALRIRPLLPKEVLHGLQPCIRVNQEACQVTLGNDRHFKF	57
Rhinatrema_bivittatum	---MGPKSQGRPIAEEAPVRVVRIRPLLPKELLHGHSCLHANAESRQVTLGHNHRHFKF	57
Xenopus_tropicalis	---MGPKVLQS-KTEETAVRVVRVRPLLPKEVLHGQCHLWTEPDQRRLLTLGTRHFKF	56
70.....80.....90.....100.....110.....120	

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Pavo_muticus	AAVLPEAAGQEAVYGACVRPLLRAFFQGFNATVFAYGQTGSGKTYTIGEASVASINEDEQ	154
Pavo_cristatus	AAVLPEAAGQEAVYGACVRPLLRAFFQGFNATVFAYGQTGSGKTYTIGEASVASINEDEQ	154
Gallus_gallus	AAVLPEAAGQEAVYSACVRPLLRAFFQGFNATVFAYGQTGSGKTYTIGEASVASINEDEQ	180
Anas_platyrhynchos	AAVLPEAAGQEAVYSACVRPLLRAFFQGFNATVFAYGQTGSGKTYTIGEASVAINEDEQ	109
Chelonia_mydas	DAVFTESSNQESVYGACVQPLVEAFFEGFNATVFAYGQTGSGKTYTIGEASVSSINEDEQ	117
Homo_sapiens	HVVLAEDAGQEAVYQACVQPLLEAFFEGFNATVFAYGQTGSGKTYTMGEASVASLLEDEQ	117
Pan_troglodytes	HVVLAEDARQEAVYQACVQPLLEAFFEGFNATVFAYGQTGSGKTYTMGEASVASLLEDEQ	117
Macaca_mulatta	HVVLAEDAGQEAVYQACVQPLLEAFFEGFNATVFAYGQTGSGKTYTMGEASVASLLEDEQ	117
Callithrix_jacchus	HVVLAEDAGQEAVYQACVQPLLEAFFEGFNATVFAYGQTGSGKTYTMGEASVASLLEDEQ	151
Mus_musculus	HVVLDGEDTGQEAVYQACVQPLLEAFFEGFNATVFAYGQTGSGKTYTMGEASVASLHEDEQ	117
Bos_taurus	HVVLDDEDAGQEAVYQACVQPLLEAFFEGFNATVFAYGQTGSGKTYTMGEASVASLHEDEQ	135
Equus_caballus	HVVLDDEDAGQEAVYQACVQPLLEAFFEGFNATVFAYGQTGSGKTYTMGEASVASLHEDEQ	117
Pteropus_alecto	PVVLDDEDAGQEAVYQACVQPLLEAFFEGFNATVFAYGQTGSGKTYTMGEASVASLHEDEQ	117
Ornithorhynchus_anatinus	DEVFAEADQEAVYEACVQPLLEAFFEGFNATVFAYGQTGSGKTYTIGEASVASLHEDEQ	115
Latimeria_chalumnae	DFVFDASEQEAVYSVCVQPLIEAFFEGFNATVFAYGQTSSGKTYTIGEANISSISEEEQ	117
Rhinatrema_bivittatum	HDVFDESSDQESVYSVCVQPLVEAFFEGFNATVFAYGQTGSGKTYTIGEASLASISEDEQ	117
Xenopus_tropicalis	QDILDETCSQDATYNACVQPLLAFFQGFNVTVFAYGQTGSGKTYTIGEASISSISEDEQ	116
130.....140.....150.....160.....170.....180	

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**::**::** *::***.* * ::****:***:***:***. *:***.* **:***:
Pavo_muticus      GIIPRAMAETFQLIDENDLIDYTVRVSYLEVYKEEFRDLLQVDTASKDIIQIREDDKGNIV 214
Pavo_cristatus    GIIPRAMAETFQLIDENDLIDYTVRVSYLEVYKEEFRDLLQVDTASKDIIQIREDDKGNIV 214
Gallus_gallus     GIIPRAMAETFQLIDENDLIDYTVRVSYLEVYKEEFRDLLQVDTASKDIIQIREDDKGNIV 240
Anas_platyrhynchos GIIPRAMAETFRLIDENDLVDYTVRVSYLEVYKEEFRDLLQVDTASKDIIQIREDDKGNVV 169
Chelonia_mydas    GIIPRAMAETFKLIDENDLIDYTVRVSYLEVYKEEFDLLQVETASKDIIQIREDDKGNIV 177
Homo_sapiens      GIVPRAMAEAFKLIDENDLLDCLVHVSYLEVYKEEFRDLLLEVGTASRDIQLREDERGNVV 177
Pan_troglodytes   GIVPRAMAEAFKLIDENDLLDCLVHVSYLEVYKEEFRDLLLEVGTASRDIQLREDERGNVV 177
Macaca_mulatta    GIVPRAMAEAFKLIDENDLLDCLVHVSYLEVYKEEFRDLLLEVGTASRDIQLREDEHGNVV 177
Callithrix_jacchus GIVPRAMAEAFKLIDENDLLDCLVHVSYLEVYKEEFRDLLLEVGTASRDIQLREDERGNVV 211
Mus_musculus      GIIPRAMAEAFKLIDENDLLDCLVHVSYLELYKEEFRDLLLEVGTASRDIQLREDDRGNVV 177
Bos_taurus        GIIPRAMAEAFKLIDENDLLDCLVHVSYLEVYKEEFRDLLLEVGTASRDIQLREDDRGNVV 195
Equus_caballus    GIIPRAMAEAFKLIDENDLLDCLVHVSYLEVYKEEFRDLLLEVGTASRDIQLREDDRGNVV 177
Pteropus_alecto   GIIPRAMAEAFKLIDENDLLDCLVHVSYLEVYKEEFRDLLLEVGTASRDIQLREDDRGNVV 177
Ornithorhynchus_anatinus GIIPRAMAEAFKVMDEGLLDFTVRVSYLEVYKEEFDLLLEVGTASKDIIQIREDDKGSILV 175
Latimeria_chalumnae GIIPRAIAEIFKLIDENNLDYTVRVSYLEVYKEDFRDLLLEVETASKDIIQIREDDKGNIV 177
Rhinatrema_bivittatum GIIPRAMAEIFRLIDENDLIDYTVKISYLEVYKEDFRDLLLEVETASKDIIQIREVEKGNIV 177
Xenopus_tropicalis GIIPRSMAEIFKLIDENDLIDFTLRVSYLEVYKEEFRDLLLEVHTTSKSIILIREDEKGNVV 176
.....190.....200.....210.....220.....230.....240

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Pavo_muticus      LCGVKESSEVEGLDEVLSLLEMGNITAKHTGATHINAQSSRSHTIFTVTMEQR-RGAGRVTR 273
Pavo_cristatus    LCGVKESSEVEGLDEVLSLLEMGNITAKHTGATHINAQSSRSHTIFTVTMEQR-RGAGRVTR 273
Gallus_gallus     LCGVKESSEVEGLDEVLSLLEMGNITAKHTGATHINAQSSRSHTIFTVTMEQR-RGAGRVTR 299
Anas_platyrhynchos LSGVKESSEVEGLDEVLSLLEMGNITAKHTGATHINAQSSRSHTIFTVTMEQR-RGAGRLTR 228
Chelonia_mydas    LYGVKETEVEGLDEVLSLLEMGNITVKTGATHINTQSSRSHTIFTVTMEQR-RGAGRLTR 236
Homo_sapiens      LCGVKEVDVEGLDEVLSLLEMGNIAARHTGATHNLSSRSHTVFTVTLEQRGRAPSRRLPR 237
Pan_troglodytes   LCGVKEVDVEGLDEVLSLLEMGNIAARHTGATHNLSSRSHTVFTVTLEQRGRAPSRRLPR 237
Macaca_mulatta    LCGVKEVDVEGLDEVLSLLEMGNIAARHTGATHNLSSRSHTVFTVTLEQRGRAPSRRLPR 237
Callithrix_jacchus LCGVKEVDVEGLDEVLSLLEMGNIAARHTGATHNLSSRSHTVFTVTLEQRGRTPSRRLPR 271
Mus_musculus      LCGVKEVDVEGLDEVLSLLEMGNIAARHTGATHNLSSRSHTVFTVTLEQRGRTPSRRLPR 237
Bos_taurus        LCGVKEVDVEGLDEVLSLLEMGNIAARHTGATHNLSSRSHTIFTVTLEQRGRAPSRRLPR 255
Equus_caballus    LCGVKEVDVEGLDEVLSLLEMGNIAARHTGATHNLSSRSHTVFTVTLEQRGRTPSRRLPR 237
Pteropus_alecto   LCGVKEVDVEGLDEVLSVLEMGNIAARHTGATHNLSSRSHTVFTVTLEQRGRTPSRRLPR 237
Ornithorhynchus_anatinus LCGVKEVAVEGLDEVLSLLEMGNIAARHTGATHNLSSRSHTVFTVALEQR-RGPGRLPR 234
Latimeria_chalumnae LSGVKECEVEGLDEVLSLLEMGNITAKHTGATHINQSSRSHTIFTVTMEQR-RAAGRATR 236
Rhinatrema_bivittatum LCGVKENEVEGLDEVLSLLEMGNITAKHTAATQINVQSSRSHTIFTVTMEQR-RGPSRLTR 236
Xenopus_tropicalis LCGIKECEVEGLDEVLSLLEMGNIAAKHTGATHNVHSSRSHTVFTVTMEQR-RCVGRVAR 235
.....250.....260.....270.....280.....290.....300

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Pavo_muticus      LALSNOPI-----TIPASGQVLVSKFHFVDLAGSERIVKTGNTGERLKESIQINSGLLA 326
Pavo_cristatus    LALSNOPI-----TIPASGQVLVSKFHFVDLAGSERIVKTGNTGERLKESIQINSGLLA 326
Gallus_gallus     LALSNOPI-----TIPASGQVLVSKFHFVDLAGSERIVKTGNTGERLKESIQINCGLLA 352
Anas_platyrhynchos LALHNHP-----SVPASGQVLVSKFHFVDLAGSERIVKTGNTGERLKESIQINCGLLA 281
Chelonia_mydas    LTLHDRA-----SVPASGQVLASKFHFVDLAGSERVVKTGNTGERLKESIQINSGLLA 289
Homo_sapiens      -----PAPGQLLVSKFHFVDLAGSERVLKTGSTGERLKESIQINSSLLA 281
Pan_troglodytes   -----PAPGQLLVSKFHFVDLAGSERVLKTGSTGERLKESIQINSSLLA 281
Macaca_mulatta    -----PAQGQLLVSKFHFVDLAGSERVLKTGSTGERLKESIQINSSLLA 281
Callithrix_jacchus -----PAAGQLLVSKFHFVDLAGSERVLKTGSTGERLKESIQINSSLLA 315
Mus_musculus      -----PAAGHLLVSKFHFVDLAGSERVLKTGSTGERLKESIQINSTLLA 281
Bos_taurus        -----PAAGQLLVSKFHFVDLAGSERVLKTGSTGERLKESIQINSSLLA 299
Equus_caballus    -----PAAGQLLLSKFHFVDLAGSERVLKTGSTGERLKESIQINSSLLA 281
Pteropus_alecto   -----PAQGQLLVSKFHFVDLAGSERVLKTGSTGERLKESIQINSSLLA 281
Ornithorhynchus_anatinus LAPSG-----PGAGQLLVSKFRFVDLAGSERVVKTGNTGERLKESIQINSSLLA 283
Latimeria_chalumnae LAGGEPAAIIVSAASGPGLAQIIASKFHFVDLAGSERIVKTGNTGERLKESIQINSGLLA 296
Rhinatrema_bivittatum LALKDQDSILG-----LGQVLISKFHFVDLAGSERILKTGNTGERLKESIQINSGLLA 289
Xenopus_tropicalis VATDEHETLPD-----IGQVLSSKFHFVDLAGSERVLKTGNTGERLKESIQINSGLLA 288
.....310.....320.....330.....340.....350.....360

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      ::::  *  ***:..  .:
Pavo_muticus      RSELTSAG-LDRGIESTS-AEECSLEAQGCKLPKAGQASTTEKGCEVIKDKHVNLRQV 554
Pavo_cristatus    RSELTSAG-LDRGIESTS-AEECSLEAQGCKLPKAGQASTTEKGCEVIKDKHVNLRQV 554
Gallus_gallus     RSELTSAG-LDSGIESTS-AEDCSLEAQGCKLPKAGQASTENGCEAIKDKHVNLRQV 580
Anas_platyrhynchos RSELTSAG-LDSGIESTS-AEEQGLDTRGSKL--AKGQVNTTEKGCESIKDEHVAKLRQV 507
Chelonia_mydas    RSELTSASGLDSGIESTS-AEDRRPQAQGSKPP--QTQVSTTEKACEAARDEHLAQLQROV 516
Homo_sapiens      RSALSSASGPDSGIESAS-VEDQAAQGAGGRK-----EDEGAQQLLTQNOV 496
Pan_troglodytes   RSALSSASGPDSGIESAS-VEDQAAQGAGGRK-----EDEGAQQLLTQNOV 496
Macaca_mulatta    RSALSSASGPDSGIESAS-VEGQAAQGAGGRK-----EDEGAQQLRTQNOV 496
Callithrix_jacchus RSNMSSASGPDSGIDSAS-VEDQVAQEAGGRK-----EDEGVFQLLTQNOV 535
Mus_musculus      RSTLSSASGPDSGIESAP-AEDCAAQGTSGRK-----GDEGTQQLLTQSOV 496
Bos_taurus        RSALSSASGPDSGIESAS-AEECATQGPGRK-----EDEGPLQLLALQSOV 514
Equus_caballus    RSALSSASGPDSGIESAS-AEERAAQAPGARKG-----A--KGQEDEGALQLLALQSOV 501
Pteropus_alecto   --ALSSASGPDSGIESASAAEECATQGPGRK-----EDEG--ALLALQSOV 400
Ornithorhynchus_anatinus RSLSSASRPDSGIDSTSAADELGPREGKHA-----SGTQGPGEEDQQLLILQSOV 517
Latimeria_chalumnae RSELTASGQDSGIESTS-VEEASEREKGRGLSKYETGISCEKECEESRDYIAKLQSOV 528
Rhinatrema_bivittatum RYEMTSTPGIDSGIESTT-AEECKPKE----LSKCGPSGLEKASEMNKNKYITDLEROV 518
Xenopus_tropicalis RSDVSSASGLDSGIESTS-AEEK-LKELGKRQIKDKGVLTFEKECEIEKDKLIEKLQLQI 520
      .....550.....560.....570.....580.....590.....600

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Pavo_muticus      ERLEEENRDFLAALADAMEQYKLSQDKLQEQDDKISELHVRLEMAMPNLCVPELLENLHL 614
Pavo_cristatus    ERLEEENRDFLAALADAMEQYKLSQDKLQEQDDKISELHVRLEMAMPNLCVPELLENLHL 614
Gallus_gallus     ERLEEENRDFLAALADAMEQYKLSQDKLQEQDDKISELHVRLEMAMPNLCVPELLENLHL 640
Anas_platyrhynchos ERLEEENRDFLAALADAMEQYKLSQDKLQEQDDTISELHVRLEMAMPNLCVPELLEDLHL 567
Chelonia_mydas    ERLEEENRDFLAALADAMEQYKLSQDKLQEQDDAISELHVCELEMAMPDLQVPELLQNLHL 576
Homo_sapiens      ARLEEENRDFLAALADAMEQYKLSQDRLREQQEEEMVELRLRLLELVRPGWGGRLLNGLPP 556
Pan_troglodytes   ARLEEENRDFLAALADAMEQYKLSQDRLREQQEEEMVELRLRLLELVRPGWGGRLLNGLPP 556
Macaca_mulatta    ARLEEENRDFLAALADAMEQYKLSQDRLREQQEEEMVELRLRLLELVRPGWGCPGLLNGLPP 556
Callithrix_jacchus ARLEEENRDFLAALADAMEQYKLSQDRLREQQEEEMVELRLRLLELVRPGWGSPGLLPGLPS 595
Mus_musculus      ARLEEENRDFLAALADAMEQYKLSQDRLREQQEEEMVELRLRLLELVRPGWGAPGLLQGLPP 556
Bos_taurus        ARLEEENRDFLAALADAMEQYKLSQDRLREQQEEEMAEELRLRLLELVRPGWGAPGILQGLPP 574
Equus_caballus    ARLEEENRDFLAALADAMEQYKLSQDRLREQQEEEMAEELRLRLLELVRPGWGAPGLLQGLPP 561
Pteropus_alecto   ARLEEENRDFLAALADAMEQYKLSQDRLREQQEEEMAEELRLRLLELVRPGWGAPGLLQGLAP 460
Ornithorhynchus_anatinus ARLEEENRDFLAALADAMEQYKRSQDQLQGGQDEITELRLRLLELARPWGSGELLOGLSL 577
Latimeria_chalumnae QCLEEENKDFLAALADAMEQYKQSSKLQNRDITIVELQSSLKALRSGRSTSELLENVHL 588
Rhinatrema_bivittatum QHLEDENMDFLAALADAMEQYKLNQDKLQDDQDKITELQYHLECGNSSLSVSALENNVHL 578
Xenopus_tropicalis QRLEDENREFLSALEDAMEQYKLSQTKLQEQDDKIKHQNILRLRPLGSASTLLEDVHV 580
      .....610.....620.....630.....640.....650.....660

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      **  ***:  :  :
Pavo_muticus      VTATQRPHTAPLAATQP---HGLSKIPT-----EQSRRGLCQKQLDSS-PSLKEDLASCH 665
Pavo_cristatus    VTATQRPHTAPLAATQP---HGLSKIPT-----EQSRRGLCQKQLDSS-PSLKEDLASCH 665
Gallus_gallus     VTATQRPHTAPLTATQP---HSLNRVPT-----EQSGRGLCQKQLDSS-LSLKENSTSCH 691
Anas_platyrhynchos VTATQRPHTAPLAAQAS---HGLCGVPSGLLPAAEQSGRVLCRK-----DEDLAGCH 615
Chelonia_mydas    VELAQRPHHTAPLDTRRS---HGLSLVQSRPSHTSQSRRVHCGKLSSSP-SHLGEDLVVHC 632
Homo_sapiens      GSFVPRPHTAPLGGAHA---HVLGMVPPACLPGEVGVSEQRGEQVTNG-REAGAEELLTEV 612
Pan_troglodytes   GSFVPRPHTAPLGGAHA---HVLGMVPPACLPGEVGVSEQRGEQVTNG-REAGAEELLTEV 612
Macaca_mulatta    GSFVPRPHTAPLGGAHG---HVLGMVPPACLPGEVGVSEQRGEQVTNG-REAGAEELLTEV 612
Callithrix_jacchus RSFLPRPHTAPLGGAHG---HVLGMVPPACLPGEVGVSEQRGEQVTNG-REAGAEELLTEV 651
Mus_musculus      GSFVPRPHTAPLGGHAHT---HMLGMPSTCLPGEVVSSEQ---QVVSQ-KEVKAELVLAQA 609
Bos_taurus        GSFVPRPHTAPLGGHAHT---HVLGMVPPACIPGEVGPESRGEQMKNG-REAGAKFLTEG 630
Equus_caballus    GSFVPRPHTAPLGGHAHT---RVLGMVPPACLPEDQVDPENWGEQVTDG-REAGAKVLAEV 617
Pteropus_alecto   GSFVPRPHTAPLGGVHS---HVLGMVPPACLPDAVGPEQNGVEQVTDG-REAGVKLLEET 516
Ornithorhynchus_anatinus GESAPRPHTAPLEAARS---HALGLAPSTCLLG-EEGDQGPPEQGGQE-DGVAGSSWPEG 632
Latimeria_chalumnae VELHPRPHTAPLDTHTP---FTFSMLHPNCTLNAGRIHSRKVH---LCCVENMVPGF 641
Rhinatrema_bivittatum VEMSQRPRHTAPLENTHTTYSPLKLDMLQSGSISHCRIGRIHGRKVSQGYGMSDVAEHMVEGC 638
Xenopus_tropicalis LQLGGRPSTAPIIQIRP---HDSLEQKSSSWEFSKSKKISSSCIS-----SLSKEFTKSF 633
      .....670.....680.....690.....700.....710.....720

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Pavo_muticus	PN---	LPSSAELRDTALRKEHSQSGSEKAAEELSLEEDEEW---EQRRSLYQRRNGIP---	715
Pavo_cristatus	PN---	LPSSAELRDTALRKEHSQSGSEKAAEELSSEDEEW---EQRRSLYQRRNGIP---	715
Gallus_gallus	PN---	LRSSAELKEMALRRERSQGLEKAAEELSSEDEEW---ERRQSQYQRRNGIP---	741
Anas_platyrhynchos	PNHTQRLPSSAEVKDITVLRRRELSQDSEKLAELSSEEEEEW---EQKQSLCQRRNGIQ---	669	
Chelonia_mydas	QS---	RACSLEAKDVMLMRECSEDSE-----PSLDGEG--EQKRSLHQRRNGIR---	676
Homo_sapiens	NR---	LGSGSSA-----ASEEE-----EEEEE----PPRRTLHLRRNRIS---	645
Pan_troglodytes	NR---	LGSGSSA-----ASEEE-----EEEEE----LPRRTLHLRRNGIS---	645
Macaca_mulatta	NR---	LGSGSSA-----ASEEE-----EEEEEEE---LPRRTLHLRRNGIS---	646
Callithrix_jacchus	NR---	LGSGSSA-----ASEEE-----DEKEE----PPRRTLHLRRNGIS---	684
Mus_musculus	DK---	LRSASST-----ISEEEGEFEEEEEEEEEEEE---PPRRTLVLRRNGIS---	650
Bos_taurus	DR---	PGSGSSD-----ASEAE-----EEEEEEEEKEGLPROQLYPRRNGVS---	668
Equus caballus	DR---	LGSGSSA-----ASEEE-----EEKEED--LARRTLHLRRNGIS---	652
Pteropus_alecto	DR---	LEGGST-----ASEDE-----EEEGEQP--PPORTLHLRRDGIS---	551
Ornithorhynchus_anatinus	VE---	LEDGFSL-----SEEEE-----EEEEEGEAEPKRSLYLRRNGIW---	669
Latimeria_chalumnae	QSRNQCLTRSLEEVGGAALQVGTEDSETSPERSDEEAENE---EPRKGKQRKKLANR---	695	
Rhinatrema_bivittatum	QSHDEGLMCNLEDGGTVLQKAFSENSEMAESNLDEDSDV---DVEKEPNGTRIKCRKEG	695	
Xenopus_tropicalis	QTGTQNLVSLSEADITVLQRFSEDSNSAEEDDKDCCKG---QQGKPPIRRERITKP---	687	
	 730 740 750 760 770 780	

Pavo_muticus	-SWSRREVSSKLNEL-SCGHPLLIQEEQLELPKEA-----CRRQERP----	756
Pavo_cristatus	-SWSRREVSSKLNEL-SCGHPLLIQEEQLELPKEA-----CRRQERP----	756
Gallus_gallus	-SWSKREVSSKLEEF-NRGHP-LIQEEQLELPKEM-----CRRQERP----	781
Anas_platyrhynchos	-SWSKREACSKLGEEL-GGSGPRLMQEEQLELLKEA-----CRRRERL----	710
Chelonia_mydas	-SWSKKDVSSKVC EEQ-SRGNSLHROEEPP ELAKEA-----CGRREQAGPR----	720
Homo_sapiens	-NCSQRAGARPGSLPE-RKGPELCL EELDAAIPGSR-----AVGGSKARVQAR----	691
Pan_troglodytes	-NCSQRAGARPGSLPE-RKGPELCL EELDAAIPGSR-----AVGGSKARVQAR----	691
Macaca_mulatta	-NCSQRAGALPGSLPE-RKGPELCL EELDAAIPGSR-----AVGGSKARVQAR----	692
Callithrix_jacchus	-NCIQRAGA QPGSPSD--RRGP ELCLEEL EAAIPGSRVGAHRLPVA AVGGSKARVQAR----	739
Mus_musculus	-NWSQRAGLSPGSPPD-RKGPEVCPEEPAAAI PAPQ-----AVGSGKVPVQTR----	696
Bos_taurus	-KWNQRMGACPE SPLN-RKGPELRLEELGAAIPGPR-----VVGGSKALAQPR----	714
Equus_caballus	-RWSQRGGPRPGSPPD-RKGS EHL EELGTAIPGSR-----AVAGSKAHARLR----	698
Pteropus_alecto	-KGSQRPEAGPGSPHS-RKDSELRLEELGA AVELEPR-----AVRGSKAQAARPH----	597
Ornithorhynchus_anatinus	-SKKEPDGRANGE PVGGTESLDLSLGESQ PDSQQPR-----ATTGGRKEAE-----	714
Latimeria_chalumnae	-TWTKREVVAAS SPLREAG--DLGWECH ELSNTSCSR-----RDGGLLGIVGEVGLP----	744
Rhinatrema_bivittatum	LPWNNKEVNSVSVINEEQSRISQAQE QDSMDDGIVKR-----TQRNLHGFLHTRKKPAIL----	750
Xenopus_tropicalis	-GSNRSHYKQSRRISESEG-----EKSTSTLLN-----INSSL SQSAQNVPRE----	729
790.....800.....810.....820.....830.....840	

		:	:	*	:	*:*	:*****:	*****:	**	**:	**:	***:	*:	*	:	*	
Pavo_muticus	-----AGKDS	EWRLVQAQOKI	RDLAINIR	MKEELIT	LIKTGRD	AQALNKQY	CCKI		807								
Pavo_cristatus	-----AGKDS	EWRLVQAQOKI	RDLAINIR	MKEELIT	LIKTGRD	AQALNKQY	CCKI		807								
Gallus_gallus	-----ARKDS	EWRLGQAQOKI	RELAINIR	MKEELIT	LIKTGRD	AQALNKQY	CCKI		832								
Anas platyrhynchos	-----PGKDS	EWRLVQAQOKI	RELAINIR	MKEELIT	LIKTGKD	AQALNKQY	CCKI		761								
Chelonia_mydas	-----EGLSG	KDSERRLVQAQOKI	RELAINIR	MKEELIA	ELIKTKGD	AQAMNRQY	CCKI		774								
Homo_sapiens	-----QVP	PATASEWRLAQAQOKI	RELAINIR	MKEELIG	ELVRTGKA	AQALNRQHSORI		745									
Pan_troglodytes	-----QVP	PATASEWRLAQAQOKI	RELAINIR	MKEELIG	ELVRTGKA	AQALNRQHSORI		745									
Macaca_mulatta	-----QVPS	TATASEWRLAQAQOKI	RELAINIR	MKEELIG	ELVRTGKA	AQALNRQHSORI		746									
Callithrix_jacchus	-----QVPS	TATASEWRLAQAQOKI	RELAINIR	MKEELIG	ELVCTGKA	AQALNRQHSORI		793									
Mus_musculus	-----QAPA	AMASEWRLAQAQOKI	RELAINIR	MKEELIG	ELVRTGKA	AQALNRQHSORI		750									
Bos_taurus	-----QAPA	AMASEWRLAQAQOKI	RELAINIR	MKEELIG	ELVRTGKA	AQALNRQHSORI		768									
Equus_caballus	-----QGPA	AMASEWRLAQAQOKI	RELAINIR	MKEELIG	ELVRTGKA	AQALNRQHSORI		752									
Pteropus_alecto	-----QAP--	AASEWRLAQAQOKI	RELAINIR	MKEELIG	ELVRTGKA	AQALNRQHSORI		649									
Ornithorhynchus_anatinus	-----GPS	AKAAEWRLARAQOKI	RELAINIR	MKEDLIG	ELIRTGKA	AQAMNRQHORI		767									
Latimeria_chalumnae	-----DAR	LVKDSEWRLVQAQOKI	RELAINIR	MKEELIKE	LKVKTGKD	AQAMNRQY	CCKI	798									
Rhinatrema_bivittatum	DRSHPF	GAHSEKNS	EWRLVQAQOKI	RELAINIR	MKEELIKE	LIKTKGD	AQAMNKC	CLKI	810								
Xenopus_tropicalis	-----SQIL	GNDSEWRLVQAQOKI	RELAINIR	MKEELIKE	LKVKTGKE	AQAMNKC	CLKI	783									
850.....	860.....	870.....	880.....	890.....	900											

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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	:*::*::: : *: ..*:*****. . *: ::*:~* :~** : ~*~* SELEQEAECVRAELSDSQKQLQELEGGKEPWPDPGEKRKLQYRTRVAAAQSKARVLSKKKQ SELEQEAECVRAELSDSQKQLQELEGGKEPWPDPGEKRKLQYRTRVAAAQSKARVLSKKKQ GELQEAECVRAELSDSQKQLQELEGGKEPWPDPGEKRKLQYRTRVAAAQSKAVLSKKKQ SELEQEAECVRAELSDSQKQLQELEGGKEPWPDPGEKRKLQYRTRVAAAQSKAVLCKKKQ FELEQEAECVRAELSSGQKQLQELEGGKEPDAGECKKLQYRTRVAAAQSKARVLSKKKQ RELEQEAECVRAELSEGQRLRELEGGKELQDAGERSRLQEFRRRVAAAQSQVQVLKEKKQ RELEQEAECVRAELSEGQRLRELEGGKEPDAGERSRLQEFRRRVAAAQSQVQVLKEKKQ RELEQEAERVRAELSEGQRLRELEGGKEPDAGERSRLQEFRRRVAAAQSQVQVLKEKKQ RELEQEAERVRAELSEGQRLRELEGGKEPDAGERSRLQEFRRRVAAAQSQVQVLKEKKQ RELEQEAERVRAELCEGQRLRELEGGKEPDAGERSRLQEFRRRVAAAQSQVQVLKEKKQ QELERAERVRAELSEGQRLWELEGGKEPDAGERSRLQEFRRRVAAAQSQVQVLKEKKQ RELEQEAERVRAELSEGQRLRELEGGKEPDAGERSRLQEFRRRVAAAQSQVQVLKEKKQ QELQEAERVRAELNEGQRLRELEGGKEPDAGERTQLQEFRRRVAAAQSQVQVLKEKKQ GELEREAQVRLELSEGQKELRELEGGKEPDAGERSRLQEFRRRVAAAQSQVQVLKEKKQ SDLEREAECARAELTEAQRLQELEGGKEPRDPVEKSKLQYRRKIAVAQSKVQVLKKKKQ SELKKESEQVHMELESQRLQELEDELPGSLVEKSKVQYRRKKVAMAQNKVQVLKKKKQ SELENAEQIRAEVSESQRLLELEGGKASRDPAEKCKLQYRRKKIAAASKVQVLNEKKQ910.....920.....930.....940.....950.....960	
<i>Pavo muticus</i>	SELEQEAECVRAELSDSQKQLQELEGGKEPWPDPGEKRKLQYRTRVAAAQSKARVLSKKKQ	867
<i>Pavo cristatus</i>	SELEQEAECVRAELSDSQKQLQELEGGKEPWPDPGEKRKLQYRTRVAAAQSKARVLSKKKQ	867
<i>Gallus gallus</i>	GELQEAECVRAELSDSQKQLQELEGGKEPWPDPGEKRKLQYRTRVAAAQSKAVLSKKKQ	892
<i>Anas platyrhynchos</i>	SELEQEAECVRAELSDSQKQLQELEGGKEPWPDPGEKRKLQYRTRVAAAQSKAVLCKKKQ	821
<i>Chelonia mydas</i>	FELEQEAECVRAELSSGQKQLQELEGGKEPDAGECKKLQYRTRVAAAQSKARVLSKKKQ	834
<i>Homo sapiens</i>	RELEQEAECVRAELSEGQRLRELEGGKELQDAGERSRLQEFRRRVAAAQSQVQVLKEKKQ	805
<i>Pan troglodytes</i>	RELEQEAECVRAELSEGQRLRELEGGKEPDAGERSRLQEFRRRVAAAQSQVQVLKEKKQ	805
<i>Macaca mulatta</i>	RELEQEAERVRAELSEGQRLRELEGGKEPDAGERSRLQEFRRRVAAAQSQVQVLKEKKQ	806
<i>Callithrix jacchus</i>	RELEQEAECVRAELSEGQRLRELEGGKEPDAGERSRLQEFRRRVAAAQSQVQVLKEKKQ	853
<i>Mus musculus</i>	RELEQEAERVRAELCEGQRLRELEGGKEPDAGERSRLQEFRRRVAAAQSQVQVLKEKKQ	810
<i>Bos taurus</i>	QELERAERVRAELSEGQRLWELEGGKEPDAGERSRLQEFRRRVAAAQSQVQVLKEKKQ	828
<i>Equus caballus</i>	RELEQEAERVRAELSEGQRLRELEGGKEPDAGERSRLQEFRRRVAAAQSQVQVLKEKKQ	812
<i>Pteropus alecto</i>	QELQEAERVRAELNEGQRLRELEGGKEPDAGERTQLQEFRRRVAAAQSQVQVLKEKKQ	709
<i>Ornithorhynchus anatinus</i>	GELEREAQVRLELSEGQKELRELEGGKEPDAGERSRLQEFRRRVAAAQSQVQVLKEKKQ	827
<i>Latimeria chalumnae</i>	SDLEREAECARAELTEAQRLQELEGGKEPRDPVEKSKLQYRRKIAVAQSKVQVLKKKKQ	858
<i>Rhinatrema bivittatum</i>	SELKKESEQVHMELESQRLQELEDELPGSLVEKSKVQYRRKKVAMAQNKVQVLKKKKQ	870
<i>Xenopus tropicalis</i>	SELENAEQIRAEVSESQRLLELEGGKASRDPAEKCKLQYRRKKIAAASKVQVLNEKKQ	843

	.*. ** : * : **.* : * : ** ** : **.* : **.* : ** : **.* : *	
Pavo_muticus	ATERLVLSLSAQSEKRVQELERNIQLMRROQGQLORRLREESEQKRRLEAEMNKROHRVKE	927
Pavo_cristatus	ATERLVLSLSAQSEKRVQELERNIQLMRROQGQLORRLREESEQKRRLEAEMNKROHRVKE	927
Gallus_gallus	ATERLVLSLSAQSEKRVQELERNIQLMRROQGQLORRLREESEQKRRLEAEMNKROHRVKE	952
Anas platyrhynchos	ATERLVLSLSAQSEKRVQELERNIQLMRROQGQLORRLREESEQKRRLEAEMNKROHRVKE	881
Chelonia_mydas	ATERLVLSLSAQSEKRVRELERNVELMRROQGQLORRLREETE QKRRLETEMHKROHRVKE	894
Homo_sapiens	ATERLVLSLSAQSEKRLQELERNVQLMRQQQGQLORRLREETE QKRRLEAEMSKROHRVKE	865
Pan_troglodytes	ATERLVLSLSAQSEKRLQELERNVQLMRQQQGQLORRLREETE QKRRLEAEMSKROHRVKE	865
Macaca_mulatta	ATERLVLSLSAQSEKRLQELERNVQLMRQQQGQLORRLREETE QKRRLEAEMSKROHRVKE	866
Callithrix_jacchus	ATERLVLSLSAQSEKRLQELERNVQLMRQQQGQLORRLREETE QKRRLEAEMSKROHRVKE	913
Mus_musculus	ATERLVLSLSAQSETRLQELERNVQLMRROQGQLORRLREETE QKRRLETEMNKROHRVKE	870
Bos_taurus	ATERLASLSAQSEKRLQELERNVQLMRQQQGQLORRLREETE QKRRLEAEMNKROHRVKE	888
Equus_caballus	ATERLVLSLSAQSERRLOELERNVQLMRQQQGQLORRLREETE QKRRLETEMNKROHRVKE	872
Pteropus_alecto	ATERLASLSAQSEKRLQELERNVQLMRQQQGQLORRLREETE QKRRLEAEMSKROHRVKE	769
Ornithorhynchus_anatinus	ATERLVLSLSAQSEKRVSELERNVQLMRQQQGQLORRLREEMD QKRRLETEMHRRQQRVQE	887
Latimeria_chalumnae	DTEHLASLSVQSERRIQDLERNVQMQKQQQGQLORKLKEETE QKRRLEAEMQKGRHRVKE	918
Rhinatrema_bivittatum	ATEKLVLSLSQSQTRILELERNVQLMKQQQGQLQKKLKEEVE QKRLQEMQKRRHRVKE	930
Xenopus_tropicalis	ATEKLVLSLSAQSERRIEELEKNIQMQKQQQGQLORKLKEETE QKRRLESEMQRKSHRVKE	903
970.....980.....990.....1000.....1010.....1020	

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Pavo_muticus	LELKHEQHOKILRIKTEETAAAFORKRRSGSNGSVISLEQQQKIEEQKKWLDMEMDKVLEQ	987
Pavo_cristatus	LELKHEQHOKILRIKTEETAAAFORKRRSGSNGSVISLEQQQKIEEQKKWLDMEMDKVLEQ	987
Gallus_gallus	LELKHEQHOKILRIKTEETAAAFORKRRSGSNGSVISLEQQQKIEEQKKWLDMEMDKVLEQ	1012
Anas platyrhynchos	LELKHEQHOKILRIKTEETAAAFORKRRSGSNGSVISLEQQQKIEEQKKWLDMEMDKVLEQ	941
Chelonia_mydas	LELKHEQHOKILRIKTEETAAAFORKRRSGSNGSVISLEQQQKIEEQKKWLDLEMDKVLEQ	954
Homo_sapiens	LELKHEQQQKILKIKTEETAAAFORKRRSGSNGSVVLSLEQQQKIEEQKKWLDOEMEKVLQQ	925
Pan_troglodytes	LELKHEQQQKILKIKTEETAAAFORKRRSGSNGSVVLSLEQQQKIEEQKKWLDOEMEKVLQQ	925
Macaca_mulatta	LELKHEQQQKILKIKTEETAAAFORKRRSGSNGSVVLSLEQQQKIEEQKKWLDOEMEKVLQQ	926
Callithrix_jacchus	LELKHEQQQKILKIKTEETAAAFORKRRSGSNGSVVLSLEQQQKIEEQKKWLDOEMEKVLQQ	973
Mus_musculus	LELKHEQQQKILKIKTEETAAAFORKRRSGSNGSVVLSLEQQQKIEEQKKWLDOEMEKVLQQ	930
Bos_taurus	LELKHEQQQKILKIKTEETAAAFORKRRSGSNGSVVLSLEQQQKIEEQKKWLDOEMEKVLQQ	948
Equus_caballus	LELKHEQQQKILKIKTEETAAAFORKRRSGSNGSVVLSLEQQQKIEEQKKWLDOEMEKVLQQ	932
Pteropus_alecto	LELKHEQQQKVLRIKTEETAAAFORKRRSGSGSVLSLEQQQKIEEQKKWLDOEMEKALQQ	829
Ornithorhynchus_anatinus	LELKHEQQQKILKIKTEETAAAFORKRRSGSNGSVVLSLEQQQKIEEQKKWLDOEMEKVLGQ	947
Latimeria_chalumnae	LEIRNEQQQKILKIKTEETAAAFORKRRSGSNGSVISLEEQQKIEEQRKWLDSLEMEKVLEQ	978
Rhinatrema_bivittatum	LELKHEQHOKILRIKTEETAAAFORKRRSGSNGSVISLEQHOKIEEQKKWLDLEMDKVLEQ	990
Xenopus_tropicalis	LELKHEQQQKVLRIKTEETAAAFORKRRSGSNGSVISLEQQQKIEEQKKWLDSEIDKVLEQ	963
1030.....1040.....1050.....1060.....1070.....1080	

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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Pavo_muticus      RRALDELEDELKREAIIVAKKEALLQEKNGLESKRLRSSQALTDDIVRVSSRLEHLEKEL 1047
Pavo_cristatus    RRALDELEDELKREAIIVAKKEALLQEKNGLESKRLRSSQALTDDIVRVSSRLEHLEKEL 1047
Gallus_gallus     RRALDELEDELKREAIIVAKKEALLQEKNGLESKRLRSSQALTDDIVRVSSRLEHLEKEL 1072
Anas_platyrhynchos RRALDELEDELKREAIIVAKKEALLQEKNGLESKRLRSSQALTDDIVRVSSRLEHLEKEL 1001
Chelonia_mydas    RRALDELEDELKREAIIVAKKEALLQEKNGLEKKRRRSSQALTDDIVRVSSRLEHLEKEL 1014
Homo_sapiens      RRALDELEDELKREAIIVAKKEALLQEKNGLESKRLRSSQALNEDIVRVSSRLEHLEKEL 985
Pan_troglodytes   RRALDELEDELKREAIIVAKKEALLQEKNGLESKRLRSSQALNEDIVRVSSRLEHLEKEL 985
Macaca_mulatta    RRALDELEDELKREAIIVAKKEALLQEKNGLESKRLRSSQALNEDIVRVSSRLEHLEKEL 986
Callithrix_jacchus RRALDELEDELKREAIIVAKKEALLQEKNGLESKRLRSSQALNEDIVRVSSRLEHLEKEL 1033
Mus_musculus      RRALDELEDELKREAIIVAKKEALLQEKNGLESKRLRSSQALNEDIVRVSSRLEHLEKEL 990
Bos_taurus        RRALDELEDELKREAIIVAKKEALLQEKNGLESKRLRSSQALNEDIVRVSSRLEHLEKEL 1008
Equus_caballus    RRALDELEDELKREAIIVAKKEALLQEKNGLESKRLRSSQALNEDIVRVSSRLEHLEKEL 992
Pteropus_alecto   RRALDELEDELKREAIIVAKKEALLQEKNGLESKRLRSSQALTDDIVRVSSRLEHLEKEL 889
Ornithorhynchus_anatinus RRALDELEDELKREAIIVAKKEALLQEKNGLESKRLRSSQALTDDIVRVSSRLEHLEKEL 1007
Latimeria_chalumnae RRSLEELGEEELKREAIIVAKKEALLQEKNGLESKRLRSSQALSNDIVRVSSRLEHLEKEL 1038
Rhinatrema_bivittatum RRALDELEDELKREAIIVAKKEALLQEKNGLESKRLRSSQALSNDIVRVSSRLEHLEKEL 1050
Xenopus_tropicalis RRSLEELGEEELKREAIIVAKKEALLQEKNGLESKRLRSSQALSNDIVRVSSRLEHLEKEL 1023
.....1090.....1100.....1110.....1120.....1130.....1140

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Pavo_muticus      TEKNGQLRHGSAHDQQQIRQEISNLQEKDQLLKORLELDNKLQSGTLLSPEERILFQL 1107
Pavo_cristatus    TEKNGQLRHGSAHDQQQIRQEISNLQEKDQLLKORLELDNKLQSGTLLSPEERILFQL 1107
Gallus_gallus     TEKNGQLRHGSAHDQQQIRQEISNLQEKDQLLKORLELDNKLQSGTLLSPEERILFQL 1132
Anas_platyrhynchos TEKSGQLRHGSAHDQQQIRQEISNLQEKDQLLKORLELDNKLQSGTLLSPEERILFQL 1061
Chelonia_mydas    TEKSGQLRHGSAHDQQQIRQEISNLQEKDQLLKORLELDNKLQSGTLLSPEERILFQL 1074
Homo_sapiens      SEKSGQLRQGSAGSQQQIRGEISDLQEKDQLLKORLELDNKLQSGTLLSPEERILFQL 1045
Pan_troglodytes   SEKSGQLRQGSAGSQQQIRGEISDLQEKDQLLKORLELDNKLQSGTLLSPEERILFQL 1045
Macaca_mulatta    SEKSGQLRQGSAGSQQQIRGEISDLQEKDQLLKORLELDNKLQSGTLLSPEERILFQL 1046
Callithrix_jacchus SEKSGQLRQGSAGSQQQIRGEISDLQEKDQLLKORLELDNKLQSGTLLSPEERILFQL 1093
Mus_musculus      SEKSGQLRQGSAGSQQQIRGEISDLQEKDQLLKORLELDNKLQSGTLLSPEERILFQL 1050
Bos_taurus        SEKSGQLRQGSAGSQQQIRGEISDLQEKDQLLKORLELDNKLQSGTLLSPEERILFQL 1068
Equus_caballus    SEKSGQLRQGSAGSQQQIRGEISDLQEKDQLLKORLELDNKLQSGTLLSPEERILFQL 1052
Pteropus_alecto   SEKSGQLRQGSAGSQQQIRGEISDLQEKDQLLKORLELDNKLQSGTLLSPEERILFQL 949
Ornithorhynchus_anatinus SEKSGQLRQGSAGSQQQIRGEISDLQEKDQLLKORLELDNKLQSGTLLSPEERILFQL 1067
Latimeria_chalumnae CEKSGQLRQGSAGSQQQIRGEISDLQEKDQLLKORLELDNKLQSGTLLSPEERILFQL 1098
Rhinatrema_bivittatum LEKNGQLRQGSAGSQQQIRGEISDLQEKDQLLKORLELDNKLQSGTLLSPEERILFQL 1110
Xenopus_tropicalis SEKNGQLRQGSAGSQQQIRGEISDLQEKDQLLKORLELDNKLQSGTLLSPEERILFQL 1083
.....1150.....1160.....1170.....1180.....1190.....1200

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Pavo_muticus      DEAI EALDAAIEYKNESITCRQVLRASASLLSQCEMNLMAKLSYLSSESSETRALLCKYFD 1167
Pavo_cristatus    DEAI EALDAAIEYKNESITCRQVLRASASLLSQCEMNLMAKLSYLSSESSETRALLCKYFD 1167
Gallus_gallus     DEAI EALDAAIEYKNESITCRQVLRASASLLSQCEMNLMAKLSYLSSESSETRALLCKYFD 1192
Anas_platyrhynchos DEAI EALDAAIEYKNESITCRQVLRASASLLSQCEMNLMAKLSYLSSESSETRALLCKYFD 1121
Chelonia_mydas    DEAI EALDAAIEYKNESITCRQVLRASASLLSQCEMNLMAKLSYLSSESSETRALLCKYFD 1134
Homo_sapiens      DEAI EALDAAIEYKNESITCRQVLRASASLLSQCEMNLMAKLSYLSSESSETRALLCKYFD 1105
Pan_troglodytes   DEAI EALDAAIEYKNESITCRQVLRASASLLSQCEMNLMAKLSYLSSESSETRALLCKYFD 1105
Macaca_mulatta    DEAI EALDAAIEYKNESITCRQVLRASASLLSQCEMNLMAKLSYLSSESSETRALLCKYFD 1106
Callithrix_jacchus DEAI EALDAAIEYKNESITCRQVLRASASLLSQCEMNLMAKLSYLSSESSETRALLCKYFD 1153
Mus_musculus      DEAI EALDAAIEYKNESITCRQVLRASASLLSQCEMNLMAKLSYLSSESSETRALLCKYFD 1110
Bos_taurus        DEAI EALDAAIEYKNESITCRQVLRASASLLSQCEMNLMAKLSYLSSESSETRALLCKYFD 1128
Equus_caballus    DEAI EALDAAIEYKNESITCRQVLRASASLLSQCEMNLMAKLSYLSSESSETRALLCKYFD 1112
Pteropus_alecto   DEAI EALDAAIEYKNESITCRQVLRASASLLSQCEMNLMAKLSYLSSESSETRALLCKYFD 1009
Ornithorhynchus_anatinus DEAI EALDAAIEYKNESITCRQVLRASASLLSQCEMNLMAKLSYLSSESSETRALLCKYFD 1127
Latimeria_chalumnae DEAI EALDAAIEYKNESITCRQVLRASASLLSQCEMNLMAKLSYLSSESSETRALLCKYFD 1158
Rhinatrema_bivittatum DEAI EALDAAIEYKNESITCRQVLRASASLLSQCEMNLMAKLSYLSSESSETRALLCKYFD 1170
Xenopus_tropicalis DEAI EALDAAIEYKNESITCRQVLRASASLLSQCEMNLMAKLSYLSSESSETRALLCKYFD 1143
.....1210.....1220.....1230.....1240.....1250.....1260

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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Pavo_muticus      KVVTLREDQHRQHIAFSELEMOLEEQQQLVHWLEAAVERORLEMDRQLTLQOKEHEQSMQ 1227
Pavo_cristatus    KVVTLREDQHRQHIAFSELEMOLEEQQQLVHWLEAAVERORLEMDRQLTLQOKEHEQSMQ 1227
Gallus_gallus     KVVTLREDQHRQHIAFSELEMOLEEQQQLVHWLEAAVERORLEMDRQLTLQOKEHEQSMQ 1252
Anas_platyrhynchos KVVTLREEQHRQHIAFSELEMOLEEQQQLVHWLEVALERORLETDRQLTLQOKEHEQSVQ 1181
Chelonia_mydas    KVVTLREDQHRQHIAFSELEMOLEEQQQVYWLEVAVERORLEMDRQLTLQOKEHEQNIO 1194
Homo_sapiens      KVVTLREEQHQQQIAFSELEMOLEEQQRLVYWLEVALERORLEMDRQLTLQOKEHEQNMQ 1165
Pan_troglodytes   KVVTLREEQHQQQIAFSELEMOLEEQQRLVYWLEVALERORLEMDRQLTLQOKEHEQNMQ 1165
Macaca_mulatta    KVVTLREEQHQQQIAFSELEMOLEEQQRLVYWLEVALERORLEMDRQLTLQOKEHEQNMQ 1166
Callithrix_jacchus KVVTLREEQHQQQIAFSELEMOLEEQQRLVYWLEVALERORLEMDRQLTLQOKEHEQNMQ 1213
Mus_musculus      KVVTLREEQHQQQIAFSELEMOLEEQQRLVYWLEVALERORLEMDRQLTLQOKEHEQNMQ 1170
Bos_taurus        KVVTLREEQHQQQVAFSELEMOLEEQQRLVYWLEVALERORLEMDRQLTLQOKEHEQHVO 1188
Equus_caballus    KVVTLREEQHQQQVAFSELEMOLEEQQRLVYWLEVALERORLEMDRQLTLQOKEHEQNIO 1172
Pteropus_alecto   KVVTLREEQHQQQVAFSELEMOLEEQQRLVYWLEVALERORLEMDRQLTLQOKEHEQNVO 1069
Ornithorhynchus_anatinus KVVTLREEQHROHLAFSELEMOLEEQQRLVYWLEAAVERORLEMDRQLTLQOKEHQONIR 1187
Latimeria_chalumnae KVVTLREEERKLQLAYFEMEMRLEEQQRLVYWLEAAVERORLETDRLTLQOKEHERNVQ 1218
Rhinatrema_bivittatum KVVTLREEEHKQMAFSELEMOLEEQQRLVYWLEAAVERORLEVDRLMLQOKEHERNLQ 1230
Xenopus_tropicalis KVVTLREEEHKLQIAFSELEMKLEEQQQVYWLEVALERORLEMDRQLTLQOKEHERNMQ 1203
.....1270.....1280.....1290.....1300.....1310.....1320

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Pavo_muticus      LLLQOSREHMEEGLASSKLOYEGRIQVLEKELSRYMRAHQELSQRNLNSINL-----HP 1280
Pavo_cristatus    LLLQOSREHMEEGLASSKLOYEGRIQVLEKELSRYMRAHQELSQRNLNSINL-----HP 1280
Gallus_gallus     LLLQOSREHMEEGLASSKLOYEGRIQVLEKELSRYMRAHQELSQRNLNSINL-----HP 1305
Anas_platyrhynchos LLLQOSREHMEEGLASSKLOYEGRIQVLEKELSRYLRAHQELSQRNLSSLSL-----QP 1234
Chelonia_mydas    FLLQOSQEHMGEGLASSKLOYEGRIQVLEKELSRVYVWVNLQRLNSLSL-----HP 1246
Homo_sapiens      LLLQOSRDHLGEGGLADSRROYEARIQALEKELGRYMWINQELKQKLGGVNA-----VG 1218
Pan_troglodytes   LLLQOSRDHLGEGGLADSRROYEARIQALEKELGRYMWINQELKQKLGGVNA-----VG 1218
Macaca_mulatta    LLLQOSRDHLGEGGLADSRROYEARIQALEKDLGRYMWINQELKQKLGGVNT-----VG 1219
Callithrix_jacchus LLLQOSRDHLGEGGLADSKROYEARIQALEKELGRYMWINQELKQKLGGVNT-----AG 1266
Mus_musculus      LLLQOSRDHLGEGGLADSKROYEARIHAEKELGRHMWINQELKQKLSAGST-----AG 1223
Bos_taurus        LLLQOSRDHLGEGGLADSRROYETRIQALEKELGRHVRLNQLKQKLSLSLSA-----AS 1241
Equus_caballus    LLLQOSRDHFGEGGLADSKRLYETRIQALEREELGRHMWINQELKQKLGSLSA-----AS 1225
Pteropus_alecto   LLLQOSRDHLGEGGLADSKRLYETRIQALEKELGRHMWINQELKQKLSGVDA-----TG 1122
Ornithorhynchus_anatinus LLLQOSREHLEGLAGSRQOYEARIQALEQDLRCLWANQELTQKLHGVS-----AG 1240
Latimeria_chalumnae LLLQQCRDQTDDEGLALRQOYEGRTQLEERELNRYKWNQELNQLKREIAMQPSNQGMAD 1278
Rhinatrema_bivittatum LLLQQCQEHMSEGLSGRKQOYEGRLQILEKELSWYMWAHQELTQRLSLLTG-HSPHVMGS 1289
Xenopus_tropicalis LILKQFQGMGEGLAGSKROYEARIQMLEKELCWYMQAHQELSQRLIKVST-PKQNAQPGQ 1262
.....1330.....1340.....1350.....1360.....1370.....1380

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Pavo_muticus      GVAKG-MERNVHTG-----TCEEFSH--GEL--PLPPAEENHRGRDESRLDVHAPL 1326
Pavo_cristatus    GVAKG-MERNVHTG-----TCEEFSH--GEL--PLPPAEENHRGRDESRLDVHAPL 1326
Gallus_gallus     GAAKAGVERNHTG-----TCEEFSH--GEP--PLPPAEENHRGRDESRLDVHAPL 1352
Anas_platyrhynchos GGPKG-MERNTHG-----PCEEPSP--GELPVPLAATEESHRLRDESRLDVHAPL 1281
Chelonia_mydas    GQSKAGADRSMGLGAGDRPPAVLTGCEESGTGIVEQQVQVAVTEGSHKCRDENRELHAPL 1306
Homo_sapiens      HSR--GGEKRSCLSEGRQAPGNEDELHLAP---ELLWLSPLTEGAPRTREETRDVHAPL 1273
Pan_troglodytes   HSR--GGEKRSCLSEGRQAPGNEDELHLAP---ELLWLSPLTEGAPRTREETRDVHAPL 1273
Macaca_mulatta    HSR--GGEKRSCLSEGRQAPGNEDELHPAP---ELLWLYPLTEGAPRTREETRDVHAPL 1274
Callithrix_jacchus HSR--GGEKRSCLSEGRQAPGNE-ELHPAP---ELLRLSPLTEGAPRTREEMRDVHAPL 1320
Mus_musculus      QSR--GCERRSLCLENRQCLGNEDGLHPAAP--EPLWQSSLLLEGVSRVWDESRLDVHAPL 1279
Bos_taurus        QSRVMGGEKRTPCLENRQAPGSEDELYPAP---EPLWQPTGMGAPRPREEMRDVHAPL 1298
Equus_caballus    QSR--GGEKRTPCLENRQPPGSEDELYPAP---E-LWQCPLTEGAPRAREEMRDVHAPL 1279
Pteropus_alecto   QSR--GGEKRTLCLLENRLPPGNEDEPHAP---EVLWQPPVAEGSARAREEMRDVLRAPL 1177
Ornithorhynchus_anatinus QSR--GGDRRALCPGDRQ-----APAP---TIDEPVVSEGP-----LRDLVRAPL 1280
Latimeria_chalumnae FCKPAGMDGRAHSIVDRLSHGAGGTTEESGNTALPEQLPSNPEHKRRLREESRDWIHTPL 1338
Rhinatrema_bivittatum HSKVTEGDGRAFHIAEQPLVAG-SLEETNGVVLEQSPASMERHPRPWEESRLDVHAPL 1348
Xenopus_tropicalis QVNVALGDGRSLTTAEKQ-----TTEHSAIVNLNNPVFGTDKNIQPRE---DFLYAPL 1313
.....1390.....1400.....1410.....1420.....1430.....1440

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /home/ceglab2/Desktop/ajinkya/pavo/MSD/MSD.fasta Date: Feb 15 16:13:50 2022

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*  *:***  :                               *                               .  :*
Pavo_muticus      PATWRRSSLPT-DSTGDPR-----QEVHLPRSLGP-AKPRREP-RRR 1365
Pavo_cristatus    PATWRRSSLPT-DSTGDPR-----QEVHLPRSLGP-AKPRREP-RRR 1365
Gallus_gallus     PATWRRSSLPT-DSTGDSR-----HEVHLPRSLGP-AKPRREP-RRR 1391
Anas_platyrhynchos PSTWRRSSLPS-DSPGDPRRD---AEHSLR--AGQPHEVQLPRGLPP-AKPRWEP-RRR 1332
Chelonia_mydas    PSTWRRSSLPS-DSPLGPEGIGQREAEYLLR--LGQPQEVVLPWNLAPLPKPWREL-RRR 1362
Homo_sapiens      PLTWKRSSLCG-EEQGSPEELRQREAAEPLVGRVLPVGEAGLPWNFGPLSKPRREL-RRR 1331
Pan_troglodytes   PLTWKRSSLCG-EEQGSPEELRQREAAEPLVGRVLPVGEAGLPWNFGPLSKPRREL-RRR 1331
Macaca_mulatta    PLTWKRSSLCG-EEQGSPEELRQREAAEPLVGRVLPVGEAGLPWNFGPLSKPRREL-RRR 1332
Callithrix_jacchus PLTWKRSSLGG-EEQGSSEELRQREAAEPLPGRVMPMGEAGLPWNFGPSSKPPWREL-RRR 1378
Mus_musculus      PLTWKRSSLCS-E-QGSSEESRVRETTEPPVGRVLPVGEAGLPWNFGPSSKPPWEP-RRR 1336
Bos_taurus        PLTWKRSSLCS-EEQGSPEELRQREAAEPLVGRVLPVGEAGLPWNFGPSSKPPWREL-RRR 1356
Equus_caballus    PLTWRRSSLCGGEEQGSSEELRPR-EAEPLAGRVLPVGEAGLPWNFGPSSKPPWREL-RRR 1337
Pteropus_alecto   PLTWKRSSLCG-EEQGSPEELRQREAAEPLVGRVLPVGEAGLPWNFGPSSKPPWREL-RRR 1236
Ornithorhynchus_anatinus PLMWRPSSLPS-DEHGPPEEPGQHEAGDAVFGRGLPPGEVFLPRNPFSSLPKVRWGLRRP 1339
Latimeria_chalumnae PPSWRRSSLPT-EDQSGLEELRQREAAELPCNRTTQPGEGATLWSVGQVLPKSRREFRRS 1397
Rhinatrema_bivittatum PPTWRRSSLPS-DNPPGLDDLCQQ---GSTLGRGIQPNVANTKTLNLYLTP-GRRELQRT 1403
Xenopus_tropicalis PPTWRRSSLPT-EEQHGLEELRNRE-TVLENSKLVQPAEALCQRNLSYLPK-SRRELRRRC 1370
.....1450.....1460.....1470.....1480.....1490.....1500

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Pavo_muticus      SLNVTPLPYHPAMIDVRKNPL 1386
Pavo_cristatus    SLNVTPLPYHPAMIDVRKNPL 1386
Gallus_gallus     SLNVTPLPYHPAMIDVRKNPL 1412
Anas_platyrhynchos SLNVSPMPHHPAMIDVRKNPL 1353
Chelonia_mydas    SLNVAPVPSHPGMIDVRRNPV 1383
Homo_sapiens      SP-----GMIDVRKNPL 1343
Pan_troglodytes   SP-----GMIDVRKNPL 1343
Macaca_mulatta    SP-----GMIDVRKNPL 1344
Callithrix_jacchus SP-----GMIDVRKNPL 1390
Mus_musculus      SP-----GMIDVRKNPL 1348
Bos_taurus        SP-----GMIDVRKNPL 1368
Equus_caballus    SP-----GMIDVRRNPL 1349
Pteropus_alecto   SP-----GMIDVRRNPL 1248
Ornithorhynchus_anatinus SLN-----GMIDVRKNPL 1351
Latimeria_chalumnae SLNSS-----SGIIDVRKNPL 1413
Rhinatrema_bivittatum NLNASPLISSSGMIDVRINPL 1424
Xenopus_tropicalis NVNTVPVISNLEMIDVRKNPL 1391
.....1510.....1520.

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