

# CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /home/ceglab2/Desktop/ajinkya/pavo/MSDAd.PCps Feb 15 17:14:21 2022

Page 1 of 13

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      ...      .      *      .      :
Pavo_muticus      -----MAAASYDQLLKQVEALKMENSNLROELEDNSNHLTKLETEASNM      44
Pavo_cristatus    -----MAAASYDQLLKQVEALKMENSNLROELEDNSNHLTKLETEASNM      44
Gallus_gallus     -----MAAASYDQLLKQVEALKMENSNLROELEDNSNHLTKLETEASNM      44
Anas_platyrhynchos -----MAAASYDQLLKQVEALKMENSNLROELEDNSNHLTKLETEASNM      44
Chelonia_mydas    -----MAAASYDQLLKQVEALKMENSNLROELEDNSNHLTKLETEASNM      44
Homo_sapiens      -----MAAASYDQLLKQVEALKMENSNLROELEDNSNHLTKLETEASNM      44
Pan_troglodytes   MWLYWCSPPGCHWRQNGGAAGLNGDTCIGGQKREETKPLQMADEVNLVERATGDERKRRR      60
Macaca_mulatta    MYASLGSGP-----VAALPVSVPSTLRWSVTGGSRSQVROETKSPGGARTSG-HWASVW      54
Callithrix_jacchus MYASLGSGP-----VAALPASLPSTLGSWSTGGG-SCVWQEGKSEGGARTSG-HWASVW      53
Bos_taurus        MYTPLCSA-----VAALPASVPPCAVRSRSSGGGRGCVROEKRPQGCVRASV-RGASVW      54
Equus_caballus     MYTSLGSGP-----VAALPASGPPSPLGSWSSGGRRGCVPOEGKRPQGCVRASG-HGTSVW      54
Pteropus_alecto   -----MAAASYDQLLKQVEALKMENSNLROELEDNSNHLTKLETEASNM      44
Mus_musculus      -----MAAASYDQLLKQVEALKMENSNLROELEDNSNHLTKLETEASNM      44
Ornithorhynchus_anatinus -----MAAASYDQLLKQVEALKMENSNLROELEDNSNHLTKLETEASNM      44
Xenopus_tropicalis -----MAAASYDQLLKQVAALKMENTNLROELEDNSNHLTKLESEASNM      44
1.....10.....20.....30.....40.....50.....60

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Pavo_muticus      K-----EVLKQLOGSIEDEAIASSGQIDLLERLKLNLLESTSFPGVKLRPKVS      92
Pavo_cristatus    K-----EVLKQLOGSIEDEAIASSGQIDLLERLKLNLLESTSFPGVKLRPKVS      92
Gallus_gallus     KMVDPAIGICTYLEEVLKQLOGSIEDEAIASSGQIDLLERLKLNLLESTSFPGVKLRQKVS      104
Anas_platyrhynchos K-----EVLKQLOGSIEDEAMASSGQIDLLERLKLNLLESTNFPGVKLRPKVS      92
Chelonia_mydas    K-----EVLKQLOGSIEDEAMASSGQIDLLERLKLNLNLDSSNFPGVKLRPKMS      92
Homo_sapiens      K-----EVLKQLOGSIEDEAMASSGQIDLLERLKLNLNLDSSNFPGVKLRPKMS      92
Pan_troglodytes   Q-----EVLKQLOGSIEDEAMASSGQIDLLERLKLNLNLDSSNFPGVKLRPKMS      108
Macaca_mulatta    Q-----EVLKQLOGSIEDEAMASSGQIDLLERLKLNLNLDSSNFPGVKLRPKMS      102
Callithrix_jacchus Q-----EVLKQLOGSIEDEAMASSGQIDLLERLKLNLNLDSSNFPGVKLRPKMS      101
Bos_taurus        Q-----EVLKQLOGSIEDEAMASSGQIDLLERLKLNLNLDSSNFPGVKLRPKMS      102
Equus_caballus     Q-----EVLKQLOGSIEDEAMASSGQIDLLERLKLNLNLDSSNFPGVKLRPKMS      102
Pteropus_alecto   K-----EVLKQLOGSIEDEAMTSSGQIDLLERLKLNLNLDSSNFPGVKLRPKMS      92
Mus_musculus      K-----EVLKQLOGSIEDEMTS-GQIDLLERLKEFNLDSSNFPGVKLRPKMS      90
Ornithorhynchus_anatinus K-----EVLKQLOGSIEDEAMASSGQIDLLERLKLNLNLDSSNFPGVKLRPKMS      92
Xenopus_tropicalis K-----EVLKQLOGSIEDEAMASSGQIDLLERLKLNLNLDSSNFPAGKTRPKMS      92
.....70.....80.....90.....100.....110.....120

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:*****:.*:*****:*** ** :*****.***** ***:.*:***
Pavo_muticus      VRSYGSREGSVSSRSGECSVPVPMGSFPRRGFMNGSRESTGYLEELEKERSLLLAEELEKEE      152
Pavo_cristatus    VRSYGSREGSVSSRSGECSVPVPMGSFPRRGFMNGSRESTGYLEELEKERSLLLAEELEKEE      152
Gallus_gallus     VRSYGSREGSVSSRSGECSVPVPMGSFPRRGFMNGSRESTGYLEELEKERSLLLAEELEKEE      164
Anas_platyrhynchos VRSYGSREGSVSSRSGECSVPVPMGSFPRRGFMNGSRESTGYLEELEKERSLLLAEELEKEE      152
Chelonia_mydas    LRSYGSREGSMSSRSGECSVPVPMGSFPRRGFMNGSRESTGYLEELEKERSLLLAEELEKEE      152
Homo_sapiens      LRSYGSREGSVSSRSGECSVPVPMGSFPRRGFMNGSRESTGYLEELEKERSLLLAADLDKEE      152
Pan_troglodytes   LRSYGSREGSVSSRSGECSVPVPMGSFPRRGFMNGSRESTGYLEELEKERSLLLAADLDKEE      168
Macaca_mulatta    LRSYGSREGSVSSRSGECSVPVPMGSFPRRGFMNGSRESTGYLEELEKERSLLLAADLDKEE      162
Callithrix_jacchus LRSYGSREGSVSSRSGECSVPVPMGSFPRRGFMNGSRESTGYLEELEKERSLLLAADLDKEE      161
Bos_taurus        LRSYGSREGSVSSRSGECSVPVPMGSFPRRGFMNGSRENTGYLEELEKERSLLLAADLDKEE      162
Equus_caballus     LRSYGSREGSVSSRSGECSVPVPMGSFPRRGFMNGSRENTGYLEELEKERSLLLAADLDKEE      162
Pteropus_alecto   LRSYGSREGSVSSRSGECSVPVPMGSFPRRGFMNGSRENTGYLEELEKERSLLLAADLDKEE      152
Mus_musculus      LRSYGSREGSVSSRSGECSVPVPMGSFPRRTFVNGSRESTGYLEELEKERSLLLAADLDKEE      150
Ornithorhynchus_anatinus MRSYGSREGSVSSRSGECSVPVPMGSFPRRGFMNGSRESTGYLEELEKERSLLLAEELEKEE      152
Xenopus_tropicalis MRSYGSREGSLSGHSGECSVPVPMGSFQRRGLLNGSRESTGYLEELEKERLLLIAEHEKEE      152
.....130.....140.....150.....160.....170.....180

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Pavo_muticus      KEKDWWYQAQLQNLTKRIDSLPLTENFSLQDMTRRQLEYEARQIRAAMEEQLGTCQDMEK      212
Pavo_cristatus    KEKDWWYQAQLQNLTKRIDSLPLTENFSLQDMTRRQLEYEARQIRAAMEEQLGTCQDMEK      212
Gallus_gallus     KEKDWWYQAQLQNLTKRIDSLPLTENFSLQDMTRRQLEYEARQIRAAMEEQLGTCQDMEK      224
Anas_platyrhynchos KEKDWWYQAQLQNLTKRIDSLPLTENFSLQDMTRRQLEYEARQIRAAMEEQLGTCQDMEK      212
Chelonia_mydas    KEKDWWYQAQLQNLTKRIDSLPLTENFSLQDMTRRQLEYEARQIRAAMEEQLGTCQDMEK      212
Homo_sapiens      KEKDWWYQAQLQNLTKRIDSLPLTENFSLQDMTRRQLEYEARQIRVAMEEQLGTCQDMEK      212
Pan_troglodytes   KEKDWWYQAQLQNLTKRIDSLPLTENFSLQDMTRRQLEYEARQIRVAMEEQLGTCQDMEK      228
Macaca_mulatta    KEKDWWYQAQLQNLTKRIDSLPLTENFSLQDMTRRQLEYEARQIRVAMEEQLGTCQDMEK      222
Callithrix_jacchus KEKDWWYQAQLQNLTKRIDSLPLTENFSLQDMTRRQLEYEARQIRVAMEEQLGTCQDMEK      221
Bos_taurus        KEKDWWYQAQLQNLTKRIDSLPLTENFSLQDMTRRQLEYEARQIRVAMEEQLGTCQDMEK      222
Equus_caballus     KEKDWWYQAQLQNLTKRIDSLPLTENFSLQDMTRRQLEYEARQIRVAMEEQLGTCQDMEK      222
Pteropus_alecto   KEKDWWYQAQLQNLTKRIDSLPLTENFSLQDMTRRQLEYEARQIRVAMEEQLGTCQDMEK      212
Mus_musculus      KEKDWWYQAQLQNLTKRIDSLPLTENFSLQDMTRRQLEYEARQIRAAMEEQLGTCQDMEK      210
Ornithorhynchus_anatinus KEKDWWYQAQLQNLTKRIDSLPLTENFSLQDMTRRQLEYEARQIRAAMEEQLGTCQDMEK      212
Xenopus_tropicalis KEKRWWYQAQLQNLTKRIDSLPLTENFSLQDMTRRQLEYEARQIRAAMEEQLGTCQDMEK      212
.....190.....200.....210.....220.....230.....240

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## CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /home/ceglab2/Desktop/ajinkya/pavo/MSD/Ad.PC.ps Feb 15 17:14:21 2022

Page 2 of 13

	*.**: :*****:*****:*****: ** *:.*: *	
Pavo_muticus	RAQVRVARIQQIEKDILRIROLLQSQAEEA-ERAPQGGKHDAGSHDTERQSEGQGAPEISM	271
Pavo_cristatus	RAQVRVARIQQIEKDILRIROLLQSQAEEA-ERAPQGGKHDAGSHDTERQSEGQGAPEISM	271
Gallus_gallus	RAQVRVARIQQIEKDILRIROLLQSQAEEA-ERAPQGGKHDAAASHDTERQSEGQGAPEISM	283
Anas_platyrhynchos	RAQVRVARIQQIEKDILRIROLLQSQAEEA-ERAPQSKHDAGSHDTERQSEGQGAEEISM	271
Chelonia_mydas	RAQVRVARIQQIEKDILRIROLLQSQAEEA-ERAPQSKHDSGSHEAERQNEGQGAEEISM	271
Homo_sapiens	RAQRRIARIQQIEKDILRIROLLQSQAEEA-ERSSQNKHETGSHDAERQNEGQGVGEINM	271
Pan_troglodytes	RAQRRIARIQQIEKDILRIROLLQSQAEEA-ERSSQNKHETGSHDAERQNEGQGVGEINM	287
Macaca_mulatta	RAQRRIARIQQIEKDILRIROLLQSQAEEA-ERSSQNKHETGSHDAERQNEGQGVAEINM	281
Callithrix_jacchus	RAQRRIARIQQIEKDILRIROLLQSQAEEA-ERSSQNKHETGSHDAERQNEGQGVTEINM	280
Bos_taurus	RAQRRIARIQQIEKDILRIROLLQSQAEEA-ERSSQSKHEAGSHEAERQNEGQGVAEINM	281
Equus_caballus	RAQRVVTRIQQIEKDILRIROLLQSQAEEA-ERSSQSKHEAGSHEAERQNEGQGVAEINM	281
Pteropus_alecto	RAQRVVTRIQQIEKDILRIROLLQSQAEEA-ERSSQNKHEAGSHEAERQNEGQGVAEINM	271
Mus_musculus	RAQRRIARIQQIEKDILRVROLLQSQAEEA-ERSSQSRHDAASHEAGRQHEGHGVAESNT	269
Ornithorhynchus_anatinus	RAQLRVARIQQIEKDILRIROLLQSQAEEA-ERTPQSKHDAGSHEAERQNEGQGTAEISM	271
Xenopus_tropicalis	RVQTRVGKIQQIEKDILRIROLLQSQAEEAERTPQSKHDAGSRDADKLPDGGTSEIVT	272
	.....250.....260.....270.....280.....290.....300	

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Pavo_muticus	ST	SN	TG	Q	-----GSAARM	DHETASVMSSS	NN	297																																															
Pavo_cristatus	ST	SN	TA	Q	-----GSAARM	DHETASVMSSS	NN	297																																															
Gallus_gallus	ST	SN	TG	Q	F	PKL	N	E	E	V	A	S	G	N	F	T	N	R	K	R	R	K	Q	Q	R	Q	K	I	K	R	G	S	A	A	R	M	D	H	E	T	A	S	V	M	S	S	S	N	N	342					
Anas_platyrhynchos	PT	SS	TG	Q	-----GSAARM	DHETASVMSSS	NN	297																																															
Chelonia_mydas	AT	TG	NG	Q	-----GSTARM	DHETASVM	ST	---	294																																														
Homo_sapiens	AT	SG	NG	-----QG	ST	TR	MD	HETASVL	SS	SS	ST	297																																											
Pan_troglodytes	AT	SG	NG	-----QG	ST	TR	MD	HETASVL	SS	SS	ST	313																																											
Macaca_mulatta	AT	SG	NG	-----QG	ST	TR	MD	HETASVL	SS	SS	ST	307																																											
Callithrix_jacchus	AT	SG	NG	-----QG	ST	TR	MD	HETASVL	SS	SS	ST	306																																											
Bos_taurus	AT	SG	SG	Q	V	T	A	S	L	V	P	L	K	D	V	G	A	D	L	I	I	L	K	R	P	R	K	S	D	S	G	S	G	L	Q	G	S	T	T	R	I	D	H	E	T	A	S	V	L	S	S	S	S	T	340
Equus_caballus	AT	SG	SG	-----QG	ST	AR	MD	HETASVL	SS	SS	ST	307																																											
Pteropus_alecto	AT	SG	NG	-----QG	ST	AR	MD	HETASVL	SS	SS	ST	297																																											
Mus_musculus	AA	SS	SG	-----Q	S	P	A	T	R	V	D	HETASVL	SS	SS	GT	295																																							
Ornithorhynchus_anatinus	AT	AG	SG	-----Q	G	ST	AR	MD	HETASVM	SS	SS	ST	297																																										
Xenopus_tropicalis	SS	N	V	G	SG	-----Q	G	S	S	S	R	A	D	H	D	T	A	S	V	M	S	S	N	ST	299																														
	.....	310	.....	320	.....	330	.....	340	.....	350	.....	360																																											

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Pavo_muticus	Y S V P R R L T S H L G T K V T E D Y K P Q V E M V Y S L L S M L G T H D K D D M S R T L L A M S S S Q D S C I A M R Q	357
Pavo_cristatus	Y S V P R R L T S H L G T K V T E D Y K P Q V E M V Y S L L S M L G T H D K D D M S R T L L A M S S S Q D S C I A M R Q	357
Gallus_gallus	Y S V P R R L T S H L G T K V T E D Y K P Q V E M V Y S L L S M L G T H D K D D M S R T L L A M S S S Q D S C I A M R Q	402
Anas_platyrhynchos	Y S V P R R L T S H L G T K V T E D Y K P Q V E M V Y S L L S M L G T H D K D D M S R T L L A M S S S Q D S C I A M R Q	357
Chelonia_mydas	Y S V P R R L T S H L G T K V T E D Y K P Q V E M V Y S L L S M L G T H D K D D M S R T L L A M S S S Q D S C I A M R Q	354
Homo_sapiens	H S A P R R L T S H L G T K V ----- E M V Y S L L S M L G T H D K D D M S R T L L A M S S S Q D S C I S M R Q	349
Pan_troglodytes	H S A P R R L T S H L G T K V ----- E M V Y S L L S M L G T H D K D D M S R T L L A M S S S Q D S C I S M R Q	365
Macaca_mulatta	H S A P R R L T S H L G T K V ----- E M V Y S L L S M L G T H D K D D M S R T L L A M S S S Q D S C I S M R Q	359
Callithrix_jacchus	H S A P R R L T S H L G T K V ----- E M V Y S L L S M L G T H D K D D M S R T L L A M S S S Q D S C I S M R Q	358
Bos_taurus	H S A P R R L T S H L G T K V ----- E M V Y S L L S M L G T H D K D D M S R T L L A M S S S Q D S C I S M R Q	392
Equus_caballus	H S A P R R L T S H L G T K V ----- E M V Y S L L S M L G T H D K D D M S R T L L A M S S S Q D S C I S M R Q	359
Pteropus_alecto	H S A P R R L T S H L G T K V ----- E M V Y S L L S M L G T H D K D D M S R T L L A M S S S Q D S C I S M R Q	349
Mus_musculus	H S A P R R L T S H L G T K V ----- E M V Y S L L S M L G T H D K D D M S R T L L A M S S S Q D S C I S M R Q	347
Ornithorhynchus_anatinus	Y S V P R R L T S H L G T K V T E D Y K P Q V E M V Y S L L S M L G T H D K D D M S R T L L A M S S S Q D S C I S M R Q	357
Xenopus_tropicalis	Y S V P R R L T S H L G T K V ----- E M V Y S L L S M L G T H D K D D M S R T L L A M S S S Q D S C I A M R Q	351
	.....370.....380.....390.....400.....410.....420	

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Pavo_muticus	SGCLPLLIQLLHGNDKDSVLLGNSRGSKEARARASAALHNIHSQPDDKGRGREIRVLHL	417
Pavo_cristatus	SGCLPLLIQLLHGNDKDSVLLGNSRGSKEARARASAALHNIHSQPDDKGRGREIRVLHL	417
Gallus_gallus	SGCLPLLIQLLHGNDKDSVLLGNSRGSKEARARASAALHNIHSQPDDKGRGREIRVLHL	462
Anas_platyrhynchos	SGCLPLLIQLLHGNDKDSVLLGNSRGSKEARARASAALHNIHSQPDDKGRGREIRVLHL	417
Chelonia_mydas	SGCLPLLIQLLHGNDKDSVLLGNSRGSKEARARASAALHNIHSQPDDKGRGREIRVLHL	414
Homo_sapiens	SGCLPLLIQLLHGNDKDSVLLGNSRGSKEARARASAALHNIHSQPDDKGRGREIRVLHL	409
Pan_troglodytes	SGCLPLLIQLLHGNDKDSVLLGNSRGSKEARARASAALHNIHSQPDDKGRGREIRVLHL	425
Macaca_mulatta	SGCLPLLIQLLHGNDKDSVLLGNSRGSKEARARASAALHNIHSQPDDKGRGREIRVLHL	419
Callithrix_jacchus	SGCLPLLIQLLHGNDKDSVLLGNSRGSKEARARASAALHNIHSQPDDKGRGREIRVLHL	418
Bos_taurus	SGCLPLLIQLLHGNDKDSVLLGNSRGSKEARARASAALHNIHSQPDDKGRGREIRVLHL	452
Equus_caballus	SGCLPLLIQLLHGNDKDSVLLGNSRGSKEARARASAALHNIHSQPDDKGRGREIRVLHL	419
Pteropus_alecto	SGCLPLLIQLLHGNDKDSVLLGNSRGSKEARARASAALHNIHSQPDDKGRGREIRVLHL	409
Mus_musculus	SGCLPLLIQLLHGNDKDSVLLGNSRGSKEARARASAALHNIHSQPDDKGRGREIRVLHL	407
Ornithorhynchus_anatinus	SGCLPLLIQLLHGNDKDSVLLGNSRGSKEARARASAALHNIHSQPDDKGRGREIRVLHL	417
Xenopus_tropicalis	SGCLPLLIQLLHGNDKDSVLLGNSRGSKEARARASAALHNIHSQPDDKGRGREIRVLHL	411
	.....430.....440.....450.....460.....470.....480	

# CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /home/ceglab2/Desktop/ajinkya/pavo/MSDAD.PCps Feb 15 17:14:21 2022

Page 3 of 13

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*****.*.*****.***:*****
Pavo_muticus      LEQIRAYCETCWEWQEAHEQGMDQKNPMPAPVDHQICPAVCVLMKLSFDEEHRHAMNEL 477
Pavo_cristatus    LEQIRAYCETCWEWQEAHEQGMDQKNPMPAPVDHQICPAVCVLMKLSFDEEHRHAMNEL 477
Gallus_gallus     LEQIRAYCETCWEWQEAHEQGMDQKNPMPAPVDHQICPAVCVLMKLSFDEEHRHAMNEL 522
Anas_platyrhynchos LEQIRAYCETCWEWQEAHEQGMDQKNPMPAPVDHQICPAVCVLMKLSFDEEHRHAMNEL 477
Chelonia_mydas    LEQIRAYCETCWEWQEVHEQGMDQKNPMPAPVEHQICPAVCVLMKLSFDEEHRHAMNEL 474
Homo_sapiens      LEQIRAYCETCWEWQEAHEQGMDDKNPMPAPVEHQICPAVCVLMKLSFDEEHRHAMNEL 469
Pan_troglodytes   LEQIRAYCETCWEWQEAHEQGMDQKNPMPAPVEHQICPAVCVLMKLSFDEEHRHAMNEL 485
Macaca_mulatta    LEQIRAYCETCWEWQEAHEQGMDQKNPMPAPVEHQICPAVCVLMKLSFDEEHRHAMNEL 479
Callithrix_jacchus LEQIRAYCETCWEWQEAHEQGMDQKNPMPAPVEHQICPAVCVLMKLSFDEEHRHAMNEL 478
Bos_taurus        LEQIRAYCETCWEWQEAHEQGMDQKNPMPAPVEHQICPAVCVLMKLSFDEEHRHAMNEL 512
Equus_caballus    LEQIRAYCETCWEWQEAHEQGMDQKNPMPAPVEHQICPAVCVLMKLSFDEEHRHAMNEL 479
Pteropus_alecto   LEQIRAYCETCWEWQEAHEQGMDQKNPMPAPVEHQICPAVCVLMKLSFDEEHRHAMNEL 469
Mus_musculus      LEQIRAYCETCWEWQEAHEQGMDQKNPMPAPVEHQICPAVCVLMKLSFDEEHRHAMNEL 467
Ornithorhynchus_anatinus LEQIRAYCETCWEWQEAHEQGMDQKNPMPAPVEHQICPAVCVLMKLSFDEEHRHAMNEL 477
Xenopus_tropicalis LEQIRAYCETCWEWQEAHEQGMDQKNPMPAPVDHQICPAVCVLMKLSFDEEHRHAMNEL 471
.....490.....500.....510.....520.....530.....540

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*               *****.****:*****
Pavo_muticus      G-----GLOAIAELLQVDCEMYGLTNDHYSVTLRRYAGMALTNLTFG 519
Pavo_cristatus    G-----GLOAIAELLQVDCEMYGLTNDHYSVTLRRYAGMALTNLTFG 519
Gallus_gallus     G-----GLOAIAELLQVDCEMYGLTNDHYSVTLRRYAGMALTNLTFG 564
Anas_platyrhynchos G-----GLOAIAELLQVDCEMYGLTNDHYSVTLRRYAGMALTNLTFG 519
Chelonia_mydas    G-----GLOAIAELLQVDCEMYGLTNDHYSVTLRRYAGMALTNLTFG 516
Homo_sapiens      G-----GLOAIAELLQVDCEMYGLTNDHYSITLRRYAGMALTNLTFG 511
Pan_troglodytes   GRKATRGISSQELGQGLSGGLQIAIAELLQVDCEMYGLTNDHYSITLRRYAGMALTNLTFG 545
Macaca_mulatta    GRKATRGISSQELGQGLSGGLQIAIAELLQVDCEMYGLTNDHYSITLRRYAGMALTNLTFG 539
Callithrix_jacchus GRKATRGISSQELGQGLSGGLQIAIAELLQVDCEMYGLTNDHYSITLRRYAGMALTNLTFG 538
Bos_taurus        GRKATRGISSQELGQGLSGGLQIAIAELLQVDCEMYGLTNDHYSITLRRYAGMALTNLTFG 572
Equus_caballus    GRKATRGISSQELGQGLSGGLQIAIAELLQVDCEMYGLTNDHYSITLRRYAGMALTNLTFG 539
Pteropus_alecto   GRKATRGISSQELGQGLSGGLQIAIAELLQVDCEMYGLTNDHYSITLRRYAGMALTNLTFG 529
Mus_musculus      G-----GLOAIAELLQVDCEMYGLTNDHYSVTLRRYAGMALTNLTFG 509
Ornithorhynchus_anatinus G-----GLOAIAELLQVDCEMYGLTNDHYSVTLRRYAGMALTNLTFG 519
Xenopus_tropicalis G-----GLOAIAELLQVDCEMYGLTNDHYSVTLRRYAGMALTNLTFG 513
.....550.....560.....570.....580.....590.....600

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Pavo_muticus      DVANKATLCSMKGCMRALVAQLKSEEDLQQVIASVLRNLSWRADVNSKKTTLREVGSVKA 579
Pavo_cristatus    DVANKATLCSMKGCMRALVAQLKSEEDLQQVIASVLRNLSWRADVNSKKTTLREVGSVKA 579
Gallus_gallus     DVANKATLCSMKGCMRALVAQLKSEEDLQQVIASVLRNLSWRADVNSKKTTLREVGSVKA 624
Anas_platyrhynchos DVANKATLCSMKGCMRALVAQLKSEEDLQQVIASVLRNLSWRADVNSKKTTLREVGSVKA 579
Chelonia_mydas    DVANKATLCSMKGCMRALVAQLKSEEDLQQVIASVLRNLSWRADVNSKKTTLREVGSVKA 576
Homo_sapiens      DVANKATLCSMKGCMRALVAQLKSEEDLQQVIASVLRNLSWRADVNSKKTTLREVGSVKA 571
Pan_troglodytes   DVANKATLCSMKGCMRALVAQLKSEEDLQQVIASVLRNLSWRADVNSKKTTLREVGSVKA 605
Macaca_mulatta    DVANKATLCSMKGCMRALVAQLKSEEDLQQVIASVLRNLSWRADVNSKKTTLREVGSVKA 599
Callithrix_jacchus DVANKATLCSMKGCMRALVAQLKSEEDLQQVIASVLRNLSWRADVNSKKTTLREVGSVKA 598
Bos_taurus        DVANKATLCSMKGCMRALVAQLKSEEDLQQVIASVLRNLSWRADVNSKKTTLREVGSVKA 632
Equus_caballus    DVANKATLCSMKGCMRALVAQLKSEEDLQQVIASVLRNLSWRADVNSKKTTLREVGSVKA 599
Pteropus_alecto   DVANKATLCSMKGCMRALVAQLKSEEDLQQVIASVLRNLSWRADVNSKKTTLREVGSVKA 589
Mus_musculus      DVANKATLCSMKGCMRALVAQLKSEEDLQQVIASVLRNLSWRADVNSKKTTLREVGSVKA 569
Ornithorhynchus_anatinus DVANKATLCSMKGCMRALVAQLKSEEDLQQVIASVLRNLSWRADVNSKKTTLREVGSVKA 579
Xenopus_tropicalis DVANKATLCSMKGCMRALVAQLKSEEDLQQVIASVLRNLSWRADVNSKKTTLREVGSVKA 573
.....610.....620.....630.....640.....650.....660

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*****:*****.*.***:*****
Pavo_muticus      LMECALEVKKESTLKS SVLSALWNLSAHCTENKADICAVD GALAFLVGTLTYSQTNTLAI 639
Pavo_cristatus    LMECALEVKKESTLKS SVLSALWNLSAHCTENKADICAVD GALAFLVGTLTYSQTNTLAI 639
Gallus_gallus     LMECALEVKKESTLKS SVLSALWNLSAHCTENKADICAVD GALAFLVGTLTYSQTNTLAI 684
Anas_platyrhynchos LMECALEVKKESTLKS SVLSALWNLSAHCTENKADICAVD GALAFLVGTLTYSQTNTLAI 639
Chelonia_mydas    LMECALEVKKESTLKS SVLSALWNLSAHCTENKADICAVD GALAFLVGTLTYSQTNTLAI 636
Homo_sapiens      LMECALEVKKESTLKS SVLSALWNLSAHCTENKADICAVD GALAFLVGTLTYSQTNTLAI 631
Pan_troglodytes   LMECALEVKKESTLKS SVLSALWNLSAHCTENKADICAVD GALAFLVGTLTYSQTNTLAI 665
Macaca_mulatta    LMECALEVKKESTLKS SVLSALWNLSAHCTENKADICAVD GALAFLVGTLTYSQTNTLAI 659
Callithrix_jacchus LMECALEVKKESTLKS SVLSALWNLSAHCTENKADICAVD GALAFLVGTLTYSQTNTLAI 658
Bos_taurus        LMECALEVKKESTLKS SVLSALWNLSAHCTENKADICAVD GALAFLVGTLTYSQTNTLAI 692
Equus_caballus    LMECALEVKKESTLKS SVLSALWNLSAHCTENKADICAVD GALAFLVGTLTYSQTNTLAI 659
Pteropus_alecto   LMECALEVKKESTLKS SVLSALWNLSAHCTENKADICAVD GALAFLVGTLTYSQTNTLAI 649
Mus_musculus      LMECALEVKKESTLKS SVLSALWNLSAHCTENKADICAVD GALAFLVGTLTYSQTNTLAI 629
Ornithorhynchus_anatinus LMECALEVKKESTLKS SVLSALWNLSAHCTENKADICAVD GALAFLVGTLTYSQTNTLAI 639
Xenopus_tropicalis LMECALDVKKESTLKS SVLSALWNLSAHCTENKADICAVD GALAFLVGTLTYSQTNTLAI 633
.....670.....680.....690.....700.....710.....720

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## CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /home/ceglab2/Desktop/ajinkya/pavo/MSD/Ad.Ps Feb 15 17:14:21 2022

Page 4 of 13

	*****.*****	
Pavo_muticus	IESGGGILRNVSSLIATNEDHQILRENSCLOTLLOHLKSHSLTIVSNACGTLWNLSARN	699
Pavo_cristatus	IESGGGILRNVSSLIATNEDHQILRENSCLOTLLOHLKSHSLTIVSNACGTLWNLSARN	699
Gallus_gallus	IESGGGILRNVSSLIATNEDHQILRENSCLOTLLOHLKSHSLTIVSNACGTLWNLSARN	744
Anas_platyrhynchos	IESGGGILRNVSSLIATNEDHQILRENSCLOTLLOHLKSHSLTIVSNACGTLWNLSARN	699
Chelonia_mydas	IESGGGILRNVSSLIATNEDHQILRENSCLOTLLOHLKSHSLTIVSNACGTLWNLSARN	696
Homo_sapiens	IESGGGILRNVSSLIATNEDHQILRENNCLOTLLOHLKSHSLTIVSNACGTLWNLSARN	691
Pan_troglodytes	IESGGGILRNVSSLIATNEDHQILRENNCLOTLLOHLKSHSLTIVSNACGTLWNLSARN	725
Macaca_mulatta	IESGGGILRNVSSLIATNEDHQILRENNCLOTLLOHLKSHSLTIVSNACGTLWNLSARN	719
Callithrix_jacchus	IESGGGILRNVSSLIATNEDHQILRENNCLOTLLOHLKSHSLTIVSNACGTLWNLSARN	718
Bos_taurus	IESGGGILRNVSSLIATNEDHQILRENNCLOTLLOHLKSHSLTIVSNACGTLWNLSARN	752
Equus_caballus	IESGGGILRNVSSLIATNEDHQILRENNCLOTLLOHLKSHSLTIVSNACGTLWNLSARN	719
Pteropus_alecto	IESGGGILRNVSSLIATNEDHQILRENNCLOTLLOHLKSHSLTIVSNACGTLWNLSARN	709
Mus_musculus	IESGGGILRNVSSLIATNEDHQILRENNCLOTLLOHLKSHSLTIVSNACGTLWNLSARN	689
Ornithorhynchus_anatinus	IESGGGILRNVSSLIATNEDHQILRESSCLOTLLOHLKSHSLTIVSNACGTLWNLSARN	699
Xenopus_tropicalis	IESGGGILRNVSSLIATNEDHQILRENNCLOTLLOHLKSHSLTIVSNACGTLWNLSARN	693
	.....730.....740.....750.....760.....770.....780	

	AKDQ	EALW	DMGAV	SMLKN	LIHSH	SKHKM	MIAMG	SAAAL	RNLMA	NRPA	KYKDA	NIMSP	GSSSL	PS	
Pavo_muticus	AKDQ	EALW	DMGAV	SMLKN	LIHSH	SKHKM	MIAMG	SAAAL	RNLMA	NRPA	KYKDA	NIMSP	GSSSL	PS	759
Pavo_cristatus	AKDQ	EALW	DMGAV	SMLKN	LIHSH	SKHKM	MIAMG	SAAAL	RNLMA	NRPA	KYKDA	NIMSP	GSSSL	PS	759
Gallus_gallus	AKDQ	EALW	DMGAV	SMLKN	LIHSH	SKHKM	MIAMG	SAAAL	RNLMA	NRPA	KYKDT	NIMSP	GSSSL	PS	804
Anas_platyrhynchos	AKDQ	EALW	DMGAV	SMLKN	LIHSH	SKHKM	MIAMG	SAAAL	RNLMA	NRPA	KYKDA	NIMSP	GSSSL	PS	759
Chelonia_mydas	AKDQ	EALW	DMGAV	SMLKN	LIHSH	SKHKM	MIAMG	SAAAL	RNLMA	NRPA	KYKDA	NIMSP	GSSSL	PS	756
Homo_sapiens	PKDQ	EALW	DMGAV	SMLKN	LIHSH	SKHKM	MIAMG	SAAAL	RNLMA	NRPA	KYKDA	NIMSP	GSSSL	PS	751
Pan_troglodytes	PKDQ	EALW	DMGAV	SMLKN	LIHSH	SKHKM	MIAMG	SAAAL	RNLMA	NRPA	KYKDA	NIMSP	GSSSL	PS	785
Macaca_mulatta	PKDQ	EALW	DMGAV	SMLKN	LIHSH	SKHKM	MIAMG	SAAAL	RNLMA	NRPA	KYKDA	NIMSP	GSSSL	PS	779
Callithrix_jacchus	PKDQ	EALW	DMGAV	SMLKN	LIHSH	SKHKM	MIAMG	SAAAL	RNLMA	NRPA	KYKDA	NIMSP	GSSSL	PS	778
Bos_taurus	PKDQ	EALW	DMGAV	SMLKN	LIHSH	SKHKM	MIAMG	SAAAL	RNLMA	NRPA	KYKDA	NIMSP	GSSSL	PS	812
Equus_caballus	PKDQ	EALW	DMGAV	SMLKN	LIHSH	SKHKM	MIAMG	SAAAL	RNLMA	NRPA	KYKDA	NIMSP	GSSSL	PS	779
Pteropus_alecto	PKDQ	EALW	DMGAV	SMLKN	LIHSH	SKHKM	MIAMG	SAAAL	RNLMA	NRPA	KYKDA	NIMSP	GSSSL	PS	769
Mus_musculus	PKDQ	EALW	DMGAV	SMLKN	LIHSH	SKHKM	MIAMG	SAAAL	RNLMA	NRPA	KYKDA	NIMSP	GSSSL	PS	749
Ornithorhynchus_anatinus	AKDQ	EALW	DMGAV	SMLKN	LIHSH	SKHKM	MIAMG	SAAAL	RNLMA	NRPA	KYKDA	NIMSP	GSSSL	PS	759
Xenopus_tropicalis	AKDQ	EALW	DMGAV	SMLKN	LIHSH	SKHKM	MIAMG	SAAAL	RNLMA	NRPA	KYKDA	NIMSP	GSSVPS		753

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Pavo_muticus	LHVRKQKALEAELDAQHLSETFDNIDNLSPKASHRNKQRHKQNIYSEYVLDS SRHDDGVC	819
Pavo_cristatus	LHVRKQKALEAELDAQHLSETFDNIDNLSPKASHRNKQRHKQNIYSEYVLDS SRHDDGVC	819
Gallus_gallus	LHVRKQKALEAELDAQHLSETFDNIDNLSPKASHRNKQRHKQNIYGEYVLDS SRHDDGVC	864
Anas_platyrhynchos	LHVRKQKALEAELDAQHLSETFDNIDNLSPKTSHRNKQRHKQNIYSEYVLDS SRHDDAIC	819
Chelonia_mydas	LHVRKQKALEAELDAQHLSETFDNIDNLSPKTSHRNKQRHKONLYSEYVLDS SRHDDGIC	816
Homo_sapiens	LHVRKQKALEAELDAQHLSETFDNIDNLSPKASHRSKQRHKQSLYG DYVFD TNRHDD--N	809
Pan_troglodytes	LHVRKQKALEAELDAQHLSETFDNIDNLSPKASHRSKQRHKQSLYG DYVFD TNRHDD--N	843
Macaca_mulatta	LHVRKQKALEAELDAQHLSETFDNIDNLSPKASHRSKQRHKQSLYG DYVFD TNRHED--N	837
Callithrix_jacchus	LHVRKQKALEAELDAQHLSETFDNIDNLSPKASHRSKQRHKQSLYG DYVFD TNRHDD--N	836
Bos_taurus	LHVRKQKALEAELDAQHLSETFDNIDNLSPKASHRSKQRHKONLYG DYVFD TNRHDD--N	870
Equus_caballus	LHVRKQKALEAELDAQHLSETFDNIDNLSPKASHRSKQRHKQSLYG DYVFD TNRHDD--N	837
Pteropus_alecto	LHVRKQKALEAELDAQHLSETFDNIDNLSPKASHRSKQRHKQSLYG DYVFD TNRHDE--N	827
Mus_musculus	LHVRKQKALEAELDAQHLSETFDNIDNLSPKASHRSKQRHKONLYG DYAFDAN RHDD--S	807
Ornithorhynchus_anatinus	LHVRKQKALEAELDAQHLSETFDNIDNLSPKASHRNKQRHKONLYSDYVFP NRHDE--S	817
Xenopus_tropicalis	LHVRKQKALEAELDAQHLSETFDNIDNLSPKTTHRNKQRHKQNLCSEYVLDS SRHDDSTC	813
	.....850.....860.....870.....880.....890.....900	

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Pavo_muticus	RTESFNTGNMTVLSPYLNSTVLPG--SSSSSRGNIENCLSEKDRSLDRDRAVGLNAYHPA	877
Pavo_cristatus	RTESFNTGNMTVLSPYLNSTVLPG--SSSSSRGNIENCLSEKDRSLDRDRAVGLNAYHPA	877
Gallus_gallus	RTESFNTGNMTVLSPYLNSTVLPG--SASSSRGNIENCLSEKDRSLDRDRAVGLNAYHPA	922
Anas_platyrhynchos	RSEFNTGNMTVLSPYLNTTVLPG--SSSSSRGNIENCRSEKDRSLDRDRAVGLNTYHPA	877
Chelonia_mydas	RSEFNTSNVTVLSPYLNTTVLPG--SSSSNRGNIENSRSEKDRSVDRETRMGLGNYHPA	874
Homo_sapiens	RSDNFNTGNMTVLSPYLNTTVLPS---SSSSRGSLDSSRSEKDRSLERERGIGLGNYPHA	866
Pan_troglodytes	RSDNFNTGNMTVLSPYLNTTVLPS---SSSSRGSLDSSRSEKDRSLERERGIGLGNYPHA	900
Macaca_mulatta	RSDNFNAGNMTVLSPYLNTTVLPS---SSSSRGSLDSSRSEKDRSLERERGIGLGNYPHA	894
Callithrix_jacchus	RSENFNTGNMTVLSPYLNTTVLPS---SSSSRGSLDSSRSEKDRSLERERGIGLGNYPHA	893
Bos_taurus	RSDNFNTGNMTVLSPYLNTTVLPS---SSSSRGSLDSSRSEKDRSLERERGISLGNYPHA	927
Equus_caballus	RPDNFNTGNMTVLSPYLNTTVLPS---SSSSRGSLDSSRSEKDRSLERERGISLGNYPHA	894
Pteropus_alecto	RSDNFNTGNMTVLSPYLNTTVLPS---SSSSRGSLDSSRSEKDRSLERERGISLGNYPHA	884
Mus_musculus	RSDNFNTGNMTVLSPYLNTTVLPS---SSSSRGSLDSSRSEKDRSLERERGIGLSAYHPT	864
Ornithorhynchus_anatinus	RSEFNTGNVTVLSPYLNAVLPVPGSSSSARGGLESSRSEKDRSLDRERGIGLGAYHPA	877
Xenopus_tropicalis	RSDNFSGLNLTVLSPYINSTVLPG---SSSPRPTEGMRPEKD---RERTAGLSNYHSA	866

## CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /home/ceglab2/Desktop/ajinkya/pavo/MSD/Ad.Ps Feb 15 17:14:21 2022

Page 5 of 13

	***.*.:*** *.:*.:*.: ***:***:***: *	*:*****.:***: *.:*.: *.:						
Pavo_muticus	TENSGN	SSKRIGMOISTAAAI	AKVMEEVTS	SMHIPQEDRSSS	STSEMHS	LTEDRN	NATRRA	937
Pavo_cristatus	TENSGN	SSKRIGMOISTAAAI	AKVMEEVTS	ISTHIPPQEDRSSS	STSEMHS	LTEDRN	NATRRA	937
Gallus_gallus	TENSGN	SSKRIGMOISTAAAI	AKVMEEVTS	SMHIPQEDRSSS	STSEMHS	LTEDRN	NATRRA	982
Anas_platyrhynchos	TENTGN	SSKRIGMOISTAAAI	AKVMEEVTS	SMHVPPQEDRSSS	STSEMHS	CLTEDRN	APRRA	937
Chelonia_mydas	TENAGN	ASKRIGMOISTAAAI	AKVMEEVTS	NMHIPOEDRSSG	STAEMHS	CLTEDRN	NALRRT	934
Homo_sapiens	TENPGT	TSSKR-GLOISTTAA	AKVMEEVS	AIHTSQEDRSSG	STTELHC	VTDERNAL	RRS	925
Pan_troglodytes	TENPGT	TSSKR-GLOISTTAA	AKVMEEVS	AIHTSQEDRSSG	STTELHC	VTDERNAL	RRS	959
Macaca_mulatta	TENPGT	TSSKR-GLOISTTAA	AKVMEEVS	AIHTSQEDRSSG	STTELHC	VTDERNAL	RRS	953
Callithrix_jacchus	TENPGT	TSSKR-GLOITTTAA	AKVMEEVS	AIHTSQEDRSSG	STTELHC	VTDERNAL	RRS	952
Bos_taurus	TENPGT	TSSKR-GLOISTTAA	AKVMEEVS	AIHTSQEDRSSG	STTELHC	GTDERNAL	RRS	986
Equus_caballus	TENSGS	SSKR-GLOISTTAA	AKVMEEVS	AIHTSQEDRSSG	STTELHC	GTDERNAL	RRS	953
Pteropus_alecto	TENPGT	TSSKR-GLOISTTAA	AKVMEEVS	AIHTSQEDRSSG	STTELHC	GADERNAL	RRS	943
Mus_musculus	TENAGT	TSSKR-GLOITTTAA	AKVMEEVS	AIHTSQDDRSSA	STTEFH	CVADDR	SAARRS	923
Ornithorhynchus_anatinus	PENPGN	SSKRIGMOLSTTAA	AKVMEEVS	SIHVAQDDRSSG	PPTTEMH	CMADE	TALRRA	937
Xenopus_tropicalis	TENSGN	SSKRIGVOLSTT	AQISKVMDEV	NIHMQEDRSSG	SAEMH	CMSDERT	SQRKP	925
	.....970.....	980.....	990.....	1000.....	1010.....	1020		

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Pavo_muticus	TTAHTHSNTY-FPKSENSSRPCVPVPTKMEYKRASND	SLNSVSSSDGYGKRGOMKPSIES	996						
Pavo_cristatus	TTAHTHSNTY-FPKSENSSRPCVPVPTKMEYKRASND	SLNSVSSSDGYGKRGOMKPSIES	996						
Gallus_gallus	ATAHTHSNTY-FPKSENSSRPCVPVPTKMEYKRASND	SLNSVSSSDGYGKRGOMKPSIES	1041						
Anas_platyrhynchos	ASALTHSSTY-FPKPENSRTCPVPYAKMEYKRASND	SLNSVSSSDGYGKRGOMKPSIES	996						
Chelonia_mydas	STAHAHSNTYNFPKPENSNRACVPVYAKMEYTRASND	SLNSVSSSDGYGKRGOMKPSIES	994						
Homo_sapiens	SAAHTHSNTYNFTKSENSNRTCSPMPYAKLEYKRSSND	SLNSVSSSDGYGKRGOMKPSIES	985						
Pan_troglodytes	SAAHTHSNTYNFTKSENSNRTCSPMPYAKLEYKRSSND	SLNSVSSSDGYGKRGOMKPSIES	1019						
Macaca_mulatta	SAAHTHSNTYNFTKSENSNRTCSPMPYAKLEYKRSSND	SLNSVSSSDGYGKRGOMKPSIES	1013						
Callithrix_jacchus	STAHTHSNTYNFTKSENSNRTCSPMPYAKLEYKRSSND	SLNSVSSSDGYGKRGOMKPSIES	1012						
Bos_taurus	STTHTHANTYNFTKSENSNRTCPPIPAKVKEYKRSSND	SLNSVSSSDGYGKRGOMKPSIES	1046						
Equus_caballus	STAHTHANTYNFTKSENSNRTCPMPYAKLEYKRSSND	SLNSVSSSDGYGKRGOMKPSIES	1013						
Pteropus_alecto	STAHTHSNTYNFTKSETSNRTCSPMPYAKLEYKRSSND	SLNSVSSSDGYGKRGOMKPSIES	1003						
Mus_musculus	SASHTHSNTYNFTKSENSNRTCSPMPYAKVEYKRSSND	SLNSVTSSDGYGKRGOMKPSVES	983						
Ornithorhynchus_anatinus	STAHPHSSTYSFPPKENANRTCPVPYPKMEYERASND	SLNSVSSSDGYGKRGOMKPSVES	997						
Xenopus_tropicalis	SSNHPSNPFSFAKGDSNRCGPVAFMKMEYKMASND	SLNSVSSTDGYGKRGOVKPSVES	985						
	.....1030.....1040.....1050.....1060.....1070.....1080								

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Pavo_muticus	YSEDDESKFCSYGQYPADLAHKIHSANHMDDNDGELDTPINYSLKYSDEQLNSGRQSPSQ	1056
Pavo_cristatus	YSEDDESKFCSYGQYPADLAHKIHSANHMDDNDGELDTPINYSLKYSDEQLNSGRQSPSQ	1056
Gallus_gallus	YSEDDESKFCSYGQYPADLAHKIHSANHMDDNDGELDTPINYSLKYSDEQLNSGRQSPSQ	1101
Anas_platyrhynchos	YSEDDESKFCSYGQYPADLAHKIHSANHMDDNDGELDTPINYSLKYSDEQLNSGRQSPSQ	1056
Chelonia_mydas	YSEDDESKFCSYGQYPADLAHKIHSANHMDDNDGELDTPINYSLKYSDEQLNSGRQSPSQ	1054
Homo_sapiens	YSEDDESKFCSYGQYPADLAHKIHSANHMDDNDGELDTPINYSLKYSDEQLNSGRQSPSQ	1045
Pan_troglodytes	YSEDDESKFCSYGQYPADLAHKIHSANHMDDNDGELDTPINYSLKYSDEQLNSGRQSPSQ	1079
Macaca_mulatta	YSEDDESKFCSYGQYPADLAHKIHSANHMDDNDGELDTPINYSLKYSDEQLNSGRQSPSQ	1073
Callithrix_jacchus	YSEDDESKFCSYGQYPADLAHKIHSANHMDDNDGELDTPINYSLKYSDEQLNSGRQSPSQ	1072
Bos_taurus	YSEDDESKFCSYGQYPADLAHKIHSANHMDDNDGELDTPINYSLKYSDEQLNSGRQSPSQ	1106
Equus_caballus	YSEDDESKFCSYGQYPADLAHKIHSANHMDDNDGELDTPINYSLKYSDEQLNSGRQSPSQ	1073
Pteropus_alecto	YSEDDESKFCSYGQYPADLAHKIHSANHMDDNDGELDTPINYSLKYSDEQLNSGRQSPSQ	1063
Mus_musculus	YSEDDESKFCSYGQYPADLAHKIHSANHMDDNDGELDTPINYSLKYSDEQLNSGRQSPSQ	1043
Ornithorhynchus_anatinus	YSEDDESKFCSYGQYPADLAHKIHSANHMDDNDGELDTPINYSLKYSDEQLNSGRQSPSQ	1057
Xenopus_tropicalis	YSEDDEGKFGSYGHYPAGLAHKIHSANHMDDNDTELDTPINYSLKYSDEQLNSGRQSPSQ	1045
	.....1090.....1100.....1110.....1120.....1130.....1140	

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Pavo_muticus	NERWARPKHIIDEMKQNDQRQSRSQSATYPVYTESGDDKHKTKYQSPFGQQDCVPFSFR-S	1115	
Pavo_cristatus	NERWARPKHIIDEMKQNDQRQSRSQSATYPVYTESGDDKHKTKYQSPFGQQDCVPFSFR-S	1115	
Gallus_gallus	NERWARPKHIIDEMKQNDQRQSRSQSATYPVYTESGDDKHKMKYQSPFGQQDCVPFSFR-S	1160	
Anas_platyrhynchos	NERWARPKHIIDEIKONEQRSRQSAAYPVYNESGDDKHKMKYQSPFGQQDCVPFSFR-S	1115	
Chelonia_mydas	NERWARPKHIIIEDEIKONEQRSRSQSTTYPGYTEGGDDNKMVKYQSPFGQQD---LFR-S	1110	
Homo_sapiens	NERWARPKHIIIEDEIKQSEQRQSRNQSTTYPVYTESTD DKHLKFQPHFGQQECVSPYR-S	1104	
Pan_troglodytes	NERWARPKHIIIEDEIKQSEQRQSRNQSTTYPVYTESTD DKHLKFQPHFGQQECVSPYR-S	1138	
Macaca_mulatta	NERWARPKHIIIEDEIKQSEQRQSRSQSTTYPVYTESTD DKHLKFQPHFGQQECVSPYR-S	1132	
Callithrix_jacchus	SERWARPKHIIIEDEIKQSEQRQSRSQSTTYPVYTETDDKHLKFQPHFGQQECVSPYR-S	1131	
Bos_taurus	NERWARPKHILEDEIKPNEQRQSRSQSTAYPVPESTD DKHLKFQPHFGQQECVSPYR-S	1165	
Equus caballus	NERWARPKHIIIEDEIKQSEQRQSRSQSTTYPVYTESTD DKHLKFQPHFGQQECVSPYR-S	1132	
Pteropus_alecto	NERWARPKH-IEDEMKQSEQRQSRSQSTTYPVYTESTD DKHLKFQPHFGQQECVSPYR-S	1121	
Mus_musculus	NERWARPKHVIEDEIKONEQRQARSQNTSYPVYSENTDDKHLKFQPHFGQQECVSPYR-S	1102	
Ornithorhynchus_anatinus	NERWARPKHMIEDELKONEQRQSRGPSTTYPGYGESDDKHIFQSHFGQQECVSPYR-S	1116	
Xenopus_tropicalis	NERWARPKHIIDSEMKQSEQRQPRITKITTYSSYTENKEEKKHKFPFHFNPENAPAYS	1105	
	.....1150.....1160.....1170.....1180.....1190.....1200		

## CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /home/ceglab2/Desktop/ajinkya/pavo/MSD/Ad.Ps Feb 15 17:14:21 2022

Page 6 of 13

	*...::*:*:. . . . . ** ***:** *...:***** *: * .. .	
Pavo_muticus	RGSN-GSDQNRVGS TLGINQKVNQSLCQVDDYDDDKPTNYSERYSEEEQHEEEDRPTN	1172
Pavo_cristatus	RGSN-GSDQNRVGS TLGINQKVNQSLCQVDDYDDDKPTNYSERYSEEEQHEEEDRPTN	1172
Gallus_gallus	RGSN-GSDQNRVGS TLGINQKVNQSLCQVDDYDDDKPTNYSERYSEEEQHEEEDRPTN	1217
Anas_platyrhynchos	RASN-GSDQNRVGS TLGMNQKVNQSLCQVDDYDDDKPTNYSERYSEEEQHEEEDRPTN	1172
Chelonia_mydas	RGSN-SSEQNRVGTTHGMNQKVNQSLCQVDDYDDDKPTNYSERYSEGEQHEDEEDRPTI	1168
Homo_sapiens	RGAN-GSETNRVGSNHGINQNVQSLSQEDDYEDDKPTNYSERYSEEEQHEEEE-RPTN	1161
Pan_troglodytes	RGAN-GSETNRVGSNHGINQNVQSLSQEDDYEDDKPTNYSERYSEEEQHEEEE-RPTN	1195
Macaca_mulatta	RGAN-SSETNRVGSNHGINQNVQSLSQEDDYEDDKPTNYSERYSEEEQHEEEE-RPTN	1189
Callithrix_jacchus	RGAN-GSETNRVGSNHGINQNVQSLSQEDDYEDDKPTNYSERYSEEEQHEEEE-RPTN	1188
Bos_taurus	RAAN-GSETNRVGSNHGISQNVNQSLSQEDDYEDDKPTNYSERYSEEGQHEEEE-RPTN	1222
Equus_caballus	RGAN-GSETNRVGSNHGINQNVQSLSQEDDYEDDKPTNYSERYSEEEQHEEEE-RPTN	1189
Pteropus_alecto	RGAN-GSETNRVGSNHGINQNVQSLSQEDDYEDDKPTNYSERYSEEEQHEEEE-RPTN	1178
Mus_musculus	RGTS-GSETNRMGSSHAINQNVNQSLSQEDDYEDDKPTNYSERYSEEEQHEEEERPTN	1160
Ornithorhynchus_anatinus	RGAN-NAEPNRVGS GHGMNQKVNPSLCQEDDYDDDDKPTNYSERYSEEEQHEEDR--PTN	1173
Xenopus_tropicalis	RGTNNQADQSRVGSNLSNNKASKPHCQVDDYDDDKTTNFSERYSEGEQQEDNERQNK	1164
	.....1210.....1220.....1230.....1240.....1250.....1260	

	*.*.* * .: .: :***** **:::.*.* :*:.*:.*.*.* ..* :*:.*.*.*.* ..*	
Pavo_muticus	YSIK-YNEEEHHVDQPIDYSLKYSTEVPSSSQKPSFTFSKTSSVPSTKTDHISSSSGNTS	1231
Pavo_cristatus	YSIK-YNEEEHHVDQPIDYSLKYSTEVPSSSQKPSFTFSKTSSVQSTKTDHISSSSGNTS	1231
Gallus_gallus	YSIK-YNEEEHQVDQPIDYSLKYSTEVPSSSQKPSFTFSKTSSVQSTKTDHISSSSGNTS	1276
Anas_platyrhynchos	YSIK-YNEEEHHVDQPIDYSLKYSTEVPSSSQKPSFTFSKTSSVQSTKTDHISSTGNAS	1231
Chelonia_mydas	YSIK-YSEEEHHVDQPIDYSLKYSTEVPSSSQKPSFSSFSKSSSVQSTKTDHISSSSGNTS	1227
Homo_sapiens	YSIK-YNEEKRHVDQPIDYSLKYATDIP-SSQKQSFSSFSKSSSGQSSKTEHMSSSSENTS	1219
Pan_troglodytes	YSIK-YNEEKHHVDQPIDYSLKYATDIP-SSQKQSFSSFSKSSSGQSSKTEHMSSSSENTS	1253
Macaca_mulatta	YSIK-YNEEKHHVDQPIDYSLKYATDIP-SSQKQSFSSFSKSSSGQSTKTEHISSSSENTS	1247
Callithrix_jacchus	YSIK-YNEEKHHVDQPIDYSLKYTTDIP-SSQKQSFSSFSKSSSGQSTKTEHISSSSENTS	1246
Bos_taurus	YSIK-YSEEKHHVDQPIDYSLKYTTDIP-SSQKPAFSSFSKSSSGQSTKTEHISSSSENTS	1280
Equus_caballus	YSIK-YNEEKHHVDQPIDYSLKYTTDIP-SSQKPSFSSFSKSSSGQSTKTEHISSSSENTS	1247
Pteropus_alecto	YSIK-YNEEKHHVDQPIDYSLKYATDIS-SSQKPAFSSFSKSSSGQSTKTEHISSSSENTS	1236
Mus_musculus	YSIK-YNEEKHHVDQPIDYSLKYATDIS-SSQKPSFSSFSKSSSAQSTKPEHLSPPSENTA	1218
Ornithorhynchus_anatinus	YSIK-YSEETHHTDQPIDYSLKYASDVPPSSSQKPSFSSFSKSSSVQSAKAEHISTSGNVIS	1232
Xenopus_tropicalis	YNIKPYSADDEHHGEQPIDYSRKYPDVPSSAQKPSFPFPYSNNPSKQKPKKEQVSSSS-NTP	1223
	.....1270.....1280.....1290.....1300.....1310.....1320	

	.... : **.*:*..: * *	:	* .**.****** ***	
Pavo_muticus	APSAGSKRONQLHPSSAQSRRGGHAAKSAS--CKTPSINQETIQTYCVEDTPICFSRCSSL	1289		
Pavo_cristatus	APSAGSKRONQLHPSSAQSRRGGHAAKSAS--CKTPSINQETIQTYCVEDTPICFSRCSSL	1289		
Gallus_gallus	APSAGSKRONQLHPSSAQSRRGGHAAKTAS--CKTPSINQETIQTYCVEDTPICFSRCSSL	1334		
Anas_platyrhynchos	APSAVSKRONQLHPSSAQSRRGGHAAKTAS--CKTPSINQETIQTYCVEDTPICFSRCSSL	1289		
Chelonia_mydas	TPSASSKRONQLHPSSAAQ-RGGHAAKPAS--CKTPSINQETIQTYCVEDTPICFSRCSSL	1284		
Homo_sapiens	TPSSNAKRONQLHPSSAQSRSRGOTPKAAT--CKVSSINQETIQTYCVEDTPICFSRCSSL	1277		
Pan_troglodytes	TPSSNAKRONQLHPSSAQSRSRGOTPKAAT--CKVSSINQETIQTYCVEDTPICFSRCSSL	1311		
Macaca_mulatta	TPSSNAKRONQLHPSSAQSRSRGOTPKAAT--CKVSSINQETIQTYCVEDTPICFSRCSSL	1305		
Callithrix_jacchus	TPSSNAKRONQLHPSSAQNRSRGOTPKAAT--CKVSSINQETIQTYCVEDTPICFSRCSSL	1304		
Bos_taurus	TTSSNAKRONQLHPSSAQSRSRGOTPKATSSSCKVPSINQETIQTYCVEDTPICFSRCSSL	1340		
Equus_caballus	TPSSNAQRCSOLHPSSAQGRSGOTPKAAS--CKVPSINQETIQTYCVEDTPICFSRCSSL	1305		
Pteropus_alecto	TPSSNAKRONQLHPSSAQSRSRGOTPKATS--CKVPSINQETIQTYCVEDTPICFSRCSSL	1294		
Mus_musculus	VPPSNAKRONQLRPSAQ-RNGQTQKGIT--CKVPSINQETIQTYCVEDTPICFSRCSSL	1275		
Ornithorhynchus_anatinus	TSSAGAKRGOLHPSSVPGRGGOTPKAAS--CKAPSINQETIQTYCVEDTPICFSRCSSL	1290		
Xenopus_tropicalis	TPSPNSGRONQLHPNLSAQTRPGLNRPKQTS-SKPPSITQETIQTYCVEDTPICFSRGSSL	1282		
	.....1330.....1340.....1350.....1360.....1370.....1380			

	*****:** : * :: :: .. *** :* *:. . * : . . : : :: *:* . *	
Pavo_muticus	SSLSSAEDEI-GRDQSTRVTDINNTLQIAELKENS GALSTEAAVSEITSTSQHIRTKSSR	1348
Pavo_cristatus	SSLSSAEDEI-GRDQSTRVTHINNTLQIAELKENS GALSTEAAVSEITSTSQHIRTKSSR	1348
Gallus_gallus	SSLSSAEDEI-GRDQSTRVTDINATLQISELKENS GALSAEAAVSEITSTSQHIRTKSSR	1393
Anas_platyrhynchos	SSLSSAEDEI-GRDQSTRVADANNTLQIAELKENS GALSAEASVSEITSTSQHIRTKSSR	1348
Chelonia_mydas	SSLSSAEDEI-GRDQATRVTDASNTLQIAELKDN SVTLSTEGAVSEVPSTSQHIRTKSSNR	1343
Homo_sapiens	SSLSSAEDEI-GCNQTTQEADSAANTLQIAEIKEKIGTRSAEDPVSEVPAVSQHPRTKSSR	1336
Pan_troglodytes	SSLSSAEDEI-GCNQTTQEADSAANTLQIAEIKEKIGTRSAEDPVSEVPAVSQHTRTKSSR	1370
Macaca_mulatta	SSLSSAEDEI-GCDQTTQEADSAANTLQIAEIKDKIGTRSTEDPVSEVPAVSQHTRTKSSR	1364
Callithrix_jacchus	SSLSSAEDEI-GCDQTTQEADSAANTLQIAEIKENNGTRSTEDPVSEVPAVSQHTRTKSSR	1363
Bos_taurus	SSLSSAEDEV-GCDQTTQEASANTLQIAEIKDNGSPRSNEDSVKVPAGSQHIRTKSSR	1399
Equus_caballus	SSLSSAEDEI-GCEQTTQETESASTLQIAEIKESSGTRSTEDSVSEVPAVSQHVRTKSSR	1364
Pteropus_alecto	SSLSSAEDEI-GCDQTTKETDSANTLQRAEIKENNGTRSTEDSVNEVPTVSQHIRTKSSR	1353
Mus_musculus	SSLSSADDEI-GCDQTTQEADSAANTLQTAEVKENDVIRSAEDPATEVPAVSQNAKAPSR	1334
Ornithorhynchus_anatinus	SSLSSAEDEI-GRDQVIRSTDPASTLQITELKESAGAGSTEDAASEVPSASQHMRTKSSR	1349
Xenopus_tropicalis	SSLSSAEDEIEGRERSRRQESNNTLQITEPKENKSAVSKDGAINETRSVHHTRTKNNR	1342
	.....1390.....1400.....1410.....1420.....1430.....1440	



# CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /home/ceglab2/Desktop/ajinkya/pavo/MSDAd.Cps Feb 15 17:14:21 2022

Page 7 of 13

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*  *.: *::** *:::*****:*****:*****
Pavo_muticus      LPTSSLSPSDSSRH-KAVEFSSGAKSPSKSGAOTPKSPPEHYVQETPLMFSRCTSVSSLD 1407
Pavo_cristatus    LPTSSLSPSDSSRH-KAVEFSSGAKSPSKSGAOTPKSPPEHYVQETPLMFSRCTSVSSLD 1407
Gallus_gallus     LPTSSLSPSESSRH-KAVEFSSGAKSPSKSGAOTPKSPPEHYVQETPLMFSRCTSVSSLD 1452
Anas_platyrhynchos LPTSSLSPSDSSRH-KAVEFSSGAKSPSKSGAOTPKSPPEHYVQETPLMFSRCTSVSSLD 1407
Chelonia_mydas    LQASSLSPSDSSRH-KAVEFSSGAKSPSKSGAOTPKSPPEHYVQETPLMFSRCTSVSSLD 1402
Homo_sapiens      LQGSLSL-SESARH-KAVEFSSGAKSPSKSGAOTPKSPPEHYVQETPLMFSRCTSVSSLD 1394
Pan_troglodytes   LQGSLSL-SESARH-KAVEFSSGAKSPSKSGAOTPKSPPEHYVQETPLMFSRCTSVSSLD 1428
Macaca_mulatta    LQGSLSL-SESTRH-KAVEFSSGAKSPSKSGAOTPKSPPEHYVQETPLMFSRCTSVSSLD 1422
Callithrix_jacchus LQGSLSL-SESTRH-KAVEFSSGAKSPSKSGAOTPKSPPEHYVQETPLMFSRCTSVSSLD 1421
Bos_taurus        LQASGLS-SESARH-KAVEFSSGAKSPSKSGAOTPKSPPEHYVQETPLMFSRCTSVSSLD 1457
Equus_caballus    LQASGLS-SESTRH-KAVEFSSGAKSPSKSGAOTPKSPPEHYVQETPLMFSRCTSVSSLD 1422
Pteropus_alecto   LQSSGLP-SESTRH-KTVELSSGAKSPSKSGAOTPKSPPEHYVQETPLMFSRCTSVSSLD 1411
Mus_musculus      LQASGLS-SESTRH-KAVEFSSGAKSPSKSGAOTPKSPPEHYVQETPLVFSRCTSVSSLD 1393
Ornithorhynchus_anatinus LQTSNISPSDSSRH-KAVEFSSGAKSPSKSGAOTPKSPPEHYVQETPLMFSRCTSVSSLD 1408
Xenopus_tropicalis LQTSNISPSDSSRH-KSVEFSSGAKSPSKSGAOTPKSPPEHYVQETPLMFSRCTSVSSLD 1401
.....1450.....1460.....1470.....1480.....1490.....1500

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****:*****: * . * :*****:*****:
Pavo_muticus      SFESRSIASSVQSEPCSG-MVSGIISPDLPSPGQTMPPSRSKTTPPPAQ-----GAQVK 1461
Pavo_cristatus    SFESRSIASSVQSEPCSG-MVSGIISPDLPSPGQTMPPSRSKTTPPPAQ-----GAQVK 1461
Gallus_gallus     SFESRSIASSVQSEPCSG-MVSGIISPDLPSPGQTMPPSRSKTTPPPAQ-----GVQVK 1506
Anas_platyrhynchos SFESRSIASSVQSEPCSG-MVSGIISPDLPSPGQTMPPSRSKTTPPPSQ-----GVPVK 1461
Chelonia_mydas    SFESRSIASSVQSEPCSG-MVSGIISPDLPSPGQTMPPSRSKTTPPPAQ-----AVPVK 1456
Homo_sapiens      SFESRSIASSVQSEPCSG-MVSGIISPDLPSPGQTMPPSRSKTTPPPPP-----QTAQTK 1449
Pan_troglodytes   SFESRSIASSVQSEPCSG-MVSGIISPDLPSPGQTMPPSRSKTTPPPPP-----QTAQTK 1483
Macaca_mulatta    SFESRSIASSVQSEPCSG-IVSGIISPDLPSPGQTMPPSRSKTTPPPPP-----QTAQTK 1477
Callithrix_jacchus SFESRSIASSVQSEPCSG-MVSGIISPDLPSPGQTMPPSRSKTTPPPPP-----QTAQTK 1476
Bos_taurus        SFESRSIASSVQSEPCSG-MVSGIISPDLPSPGQTMPPSRSKTTPPPPPPPPPQTQVTK 1516
Equus_caballus    SFESRSIASSVQSEPCSG-MVSGIISPDLPSPGQTMPPSRSKTTPPPPP-----PQTQVTK 1478
Pteropus_alecto   SFESRSIASSVQSEPCSG-MVSGIISPDLPSPGQTMPPSRSKTTPPPPP-----QTVQAK 1466
Mus_musculus      SFESRSIASSVQSEPCSG-MVSGIISPDLPSPGQTMPPSRSKTTPPPPP-----QTVQAK 1448
Ornithorhynchus_anatinus SFESRSIASSVQSEPCSG-MVSGIISPDLPSPGQTMPPSRSKTTPPPPP-----VVQAK 1462
Xenopus_tropicalis SFESHSIASSIASSVASEHMGISGIISPDLPSPGQTMPPSRSKTTPPPPP-----TVHAK 1456
.....1510.....1520.....1530.....1540.....1550.....1560

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:: . * * :::: .: .: .: ***** :.***:*** *****:*****
Pavo_muticus      RDVAKGKVPKSAEKREPGPRQAAVNAAVQVQVLPDADTLLHFATESTPDGFSCSSSLSLAL 1521
Pavo_cristatus    RDVAKGKVPKSAEKREPGPRQAAVNAAVQVQVLPDADTLLHFATESTPDGFSCSSSLSLAL 1521
Gallus_gallus     RDVTGKGVPTAEKREPGPRQAAVNAAVQVQVLPDADTLLHFATESTPDGFSCSSSLSLAL 1566
Anas_platyrhynchos RDVAKGKVPKSAEKREPGPRQAAVNAAVQVQVLPDADTLLHFATESTPDGFSCSSSLSLAL 1521
Chelonia_mydas    RETAKGKVPNVEKRESGSRQAAVNAAVQVQVLPDADTLLHFATESTPDGFSCSSSLSLAL 1516
Homo_sapiens      REVPKNKAPTAEKRESGPKQAAVNAAVQVQVLPDADTLLHFATESTPDGFSCSSSLSLAL 1509
Pan_troglodytes   REVPKNKAPTAEKRESGPKQAAVNAAVQVQVLPDADTLLHFATESTPDGFSCSSSLSLAL 1543
Macaca_mulatta    REVPKNKAPTAEKRESGPKQAAVNAAVQVQVLPDADTLLHFATESTPDGFSCSSSLSLAL 1537
Callithrix_jacchus REVPKSKAPSAEKRESGPKQAAVNAAVQVQVLPDADTLLHFAMESTPDGFSCSSSLSLAL 1536
Bos_taurus        QEVPKNKAPSAEKRESGPKQAAVNAAVQVQVLPDADTLLHFATESTPDGFSCSSSLSLAL 1576
Equus_caballus    REVPKNKVPNAEKRESGPKQAAVNAAVQVQVLPDADTLLHFATESTPDGFSCSSSLSLAL 1538
Pteropus_alecto   QEVPKAKVPNAEKRESGPKQAANAAVQVQVLPDADTLLHFATESTPDGFSCSSSLSLAL 1526
Mus_musculus      REVPKSKVPNAEKRESGPKQAANAAVQVQVLPDADTLLHFATESTPDGFSCSSSLSLAL 1508
Ornithorhynchus_anatinus RDAASKGLHPDKREPGPRLAAVSAAVQVQVLPDADTLLHFATESTPDGFSCSSSLSLAL 1522
Xenopus_tropicalis KDSKPKVSG-EERDKVAKQTGVHSAIQVQVLPDADTLLHFATESTPDGFSCASSLSAL 1515
.....1570.....1580.....1590.....1600.....1610.....1620

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*****:*****:***. * **::***:..: :...: .. : * : ***:***: .
Pavo_muticus      SLDEPFIQKDVELRIMPPVHENEHGNEAEPEQSDDTKDNQEDKAEKPPEAEKDILDDSD 1581
Pavo_cristatus    SLDEPFIQKDVELRIMPPVHENEHGNEAEPEQSDDTKDNQEDKAEKPPEAEKDILDDSD 1581
Gallus_gallus     SLDEPFIQKDVELRIMPPVHENEHGNEAEPEQSDDTKDNQENKAEKPEAEKDILDDSD 1626
Anas_platyrhynchos SLDEPFIQKDVELRIMPPVHENEHGNEAEPEQSDDTKDNQEKKAKEKPEAEKDILDDSD 1581
Chelonia_mydas    SLDEPFIQKDVELRIMPPVHENEHGNEAEPEQPEDTKDNQEKKAKEKPTETEKDILDDSD 1576
Homo_sapiens      SLDEPFIQKDVELRIMPPVQENDNGNETESEQPKESNENQEKAEKTIIDSEKDLLDDSD 1569
Pan_troglodytes   SLDEPFIQKDVELRIMPPVQENDNGNETESEQPKESNENQEKAEKTIIDSEKDLLDDSD 1603
Macaca_mulatta    SLDEPFIQKDVELRIMPPVQENDNGNETESEQPKESNENQEKAEKTIIDSEKDLLDDSD 1597
Callithrix_jacchus SLDEPFIQKDVELRIMPPVQENDNGNETESEQPKESNENQEKAEKTIIDSEKDLLDDSD 1596
Bos_taurus        SLDEPFIQKDVELRIMPPVQENDNGNETESEQPEESNENQEKAEKPTDSEKDLLDESDD 1636
Equus_caballus    SLDEPFIQKDVELRIMPAVQENDNGNETESEQPEESNENQEKETEKTPTDSEKDLLDDSD 1598
Pteropus_alecto   SLDEPFIQKDVELRIMPPVQENDNGNETESEQPEESNENQKKEAEKSADSEKDLLDDSD 1586
Mus_musculus      SLDEPFIQKDVELRIMPPVQENDNGNETESEQPEESNENQDKEVEK-PDSEKDLLDDSD 1567
Ornithorhynchus_anatinus SLDEPFIQKDVELRIMPPVQENDNGNETDPEQGPTEKQEKAEKPTDSEKDLLDDSD 1582
Xenopus_tropicalis SLDEPFIQKDVELKIMPPVLENDQNEAEPEK--ESTDNLNKKENKRSEQEKDMLDDT-D 1572
.....1630.....1640.....1650.....1660.....1670.....1680

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# CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /home/ceglab2/Desktop/ajinkya/pavo/MSDAd.Cps Feb 15 17:14:21 2022

Page 8 of 13

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***:***** *.* * ** .* : * *****:*****:..*.*.*.
Pavo_muticus      DDIEILEECIISAMPTKSSRKAKKPSQASAPKIPPPVARKPSQLPVYKLLPSQSRLOSQK 1641
Pavo_cristatus    DDIEILEECIISAMPTKSSRKAKKPSQASAPKIPPPVARKPSQLPVYKLLPSQSRLOSQK 1641
Gallus_gallus     DDIEILEECIISAMPTKSSRKAKKPSQASAPKIPPPVARKPSQLPVYKLLPSQSRLOSQK 1686
Anas_platyrhynchos DDIEILEECIISAMPTKSSRKAKKPSQASAPKIPPPVARKPSQLPVYKLLPSQSRLOSQK 1641
Chelonia_mydas    DDIEILEECIISAMPTKSSRKAKKPSQASAPKIPPPVARKPSQLPVYKLLPSQSRLOSQK 1636
Homo_sapiens      DDIEILEECIISAMPTKSSRKAKKPSQASAPKIPPPVARKPSQLPVYKLLPSQSRLOSQK 1628
Pan_troglodytes   DDIEILEECIISAMPTKSSRKAKKPSQASAPKIPPPVARKPSQLPVYKLLPSQSRLOSQK 1662
Macaca_mulatta    DDIEILEECIISAMPTKSSRKAKKPSQASAPKIPPPVARKPSQLPVYKLLPSQSRLOSQK 1656
Callithrix_jacchus DDIEILEECIISAMPTKSSRKAKKPSQASAPKIPPPVARKPSQLPVYKLLPSQSRLOSQK 1655
Bos_taurus        DDIEILEECIISAMPTKSSRKAKKPSQASAPKIPPPVARKPSQLPVYKLLPSQSRLOSQK 1695
Equus_caballus    DDIEILEECIISAMPTKSSRKAKKPSQASAPKIPPPVARKPSQLPVYKLLPSQSRLOSQK 1657
Pteropus_alecto   DDIEILEECIISAMPTKSSRKAKKPSQASAPKIPPPVARKPSQLPVYKLLPSQSRLOSQK 1645
Mus_musculus      DDIEILEECIISAMPTKSSRKAKKPSQASAPKIPPPVARKPSQLPVYKLLPSQSRLOSQK 1626
Ornithorhynchus_anatinus DDIDILEECIISAMPTKSSRKAKKPSQASAPKIPPPVARKPSQLPVYKLLPSQSRLOSQK 1641
Xenopus_tropicalis DDIDILEECIISAMPTKSSRKAKKPSQASAPKIPPPVARKPSQLPVYKLLPSQSRLOSQK 1632
.....1690.....1700.....1710.....1720.....1730.....1740

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**.*.***:*****:*****:..*.*.*.
Pavo_muticus      HVSFTPGDDVPRVYCVGTPINFSTATSLDLTIESPPNELANVDNVGTGAESGEFEKRD 1701
Pavo_cristatus    HVSFTPGDDVPRVYCVGTPINFSTATSLDLTIESPPNELANVDNVGTGAESGEFEKRD 1701
Gallus_gallus     HVSFTPGDDVPRVYCVGTPINFSTATSLDLTIESPPNELANVDNVGTGAESGEFEKRD 1746
Anas_platyrhynchos HVSFTPGDDVPRVYCVGTPINFSTATSLDLTIESPPNELANVDNVGTGAESGEFEKRD 1701
Chelonia_mydas    HVSFTPGDDVPRVYCVGTPINFSTATSLDLTIESPPNELANVDNVGTGAESGEFEKRD 1696
Homo_sapiens      HVSFTPGDDVPRVYCVGTPINFSTATSLDLTIESPPNELANVDNVGTGAESGEFEKRD 1688
Pan_troglodytes   HVSFTPGDDVPRVYCVGTPINFSTATSLDLTIESPPNELANVDNVGTGAESGEFEKRD 1722
Macaca_mulatta    HVSFTPGDDVPRVYCVGTPINFSTATSLDLTIESPPNELANVDNVGTGAESGEFEKRD 1716
Callithrix_jacchus HVSFTPGDDVPRVYCVGTPINFSTATSLDLTIESPPNELANVDNVGTGAESGEFEKRD 1715
Bos_taurus        HVSFTPGDDVPRVYCVGTPINFSTATSLDLTIESPPNELANVDNVGTGAESGEFEKRD 1755
Equus_caballus    HVSFTPGDDVPRVYCVGTPINFSTATSLDLTIESPPNELANVDNVGTGAESGEFEKRD 1717
Pteropus_alecto   HVSFTPGDDVPRVYCVGTPINFSTATSLDLTIESPPNELANVDNVGTGAESGEFEKRD 1705
Mus_musculus      HVSFTPGDDVPRVYCVGTPINFSTATSLDLTIESPPNELANVDNVGTGAESGEFEKRD 1686
Ornithorhynchus_anatinus HVSFTPGDDVPRVYCVGTPINFSTATSLDLTIESPPNELANVDNVGTGAESGEFEKRD 1701
Xenopus_tropicalis HVNFTHSDDMPRVYCVGTPINFSTATSLDLTIESPPNELANVDNVGTGAESGEFEKRD 1692
.....1750.....1760.....1770.....1780.....1790.....1800

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***** : : .* . * : : *****:*****:*****
Pavo_muticus      TIPTTEGRSTDDSQRAKSVITVSPGLDDDKTEEGDILAECINSAMPKGKSHKPFVRVKKIMD 1761
Pavo_cristatus    TIPTTEGRSTDDSQRAKSVITVSPGLDDDKTEEGDILAECINSAMPKGKSHKPFVRVKKIMD 1761
Gallus_gallus     TIPTTEGRSTDDSQRAKSVITVSPGLDDDKTEEGDILAECINSAMPKGKSHKPFVRVKKIMD 1806
Anas_platyrhynchos TIPTTEGRSTDDSQRAKSVITVSPGLDDDKTEEGDILAECINSAMPKGKSHKPFVRVKKIMD 1761
Chelonia_mydas    TIPTTEGRSTDDSQRAKSVITVSPGLDDDKTEEGDILAECINSAMPKGKSHKPFVRVKKIMD 1756
Homo_sapiens      TIPTTEGRSTDDSQRAKSVITVSPGLDDDKTEEGDILAECINSAMPKGKSHKPFVRVKKIMD 1748
Pan_troglodytes   TIPTTEGRSTDDSQRAKSVITVSPGLDDDKTEEGDILAECINSAMPKGKSHKPFVRVKKIMD 1782
Macaca_mulatta    TIPTTEGRSTDDSQRAKSVITVSPGLDDDKTEEGDILAECINSAMPKGKSHKPFVRVKKIMD 1776
Callithrix_jacchus TIPTTEGRSTDDSQRAKSVITVSPGLDDDKTEEGDILAECINSAMPKGKSHKPFVRVKKIMD 1775
Bos_taurus        TIPTTEGRSTDDSQRAKSVITVSPGLDDDKTEEGDILAECINSAMPKGKSHKPFVRVKKIMD 1815
Equus_caballus    TIPTTEGRSTDDSQRAKSVITVSPGLDDDKTEEGDILAECINSAMPKGKSHKPFVRVKKIMD 1777
Pteropus_alecto   TIPTTEGRSTDDSQRAKSVITVSPGLDDDKTEEGDILAECINSAMPKGKSHKPFVRVKKIMD 1765
Mus_musculus      TIPTTEGRSTDDSQRAKSVITVSPGLDDDKTEEGDILAECINSAMPKGKSHKPFVRVKKIMD 1746
Ornithorhynchus_anatinus TIPTTEGRSTDDSQRAKSVITVSPGLDDDKTEEGDILAECINSAMPKGKSHKPFVRVKKIMD 1761
Xenopus_tropicalis TIPTTEGRSTDDSQRAKSVITVSPGLDDDKTEEGDILAECINSAMPKGKSHKPFVRVKKIMD 1752
.....1810.....1820.....1830.....1840.....1850.....1860

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*:::*. . . : . * *****:*****:*****
Pavo_muticus      QIQQASTS---LNNKNQSEGEKKKPTSPVKPVPONSEYRVRKNTESKQSISNERSYPE 1818
Pavo_cristatus    QIQQASTS---LNNKNQSEGEKKKPTSPVKPVPONSEYRVRKNTESKQSISNERSYPE 1818
Gallus_gallus     QIQQASTS---LNNKNQSEGEKKKPTSPVKPVPONSEYRVRKNTESKQSISNERSYPE 1863
Anas_platyrhynchos QIQQASASS---LNNKNQSEGEKKKPTSPVKPVPONSEYRVRKNTESKQSISNERSYPE 1818
Chelonia_mydas    QIQQASASS---LNNKNQSEGEKKKPTSPVKPVPONSEYRVRKNTESKQSISNERSYPE 1815
Homo_sapiens      QVQQASASS---LNNKNQSEGEKKKPTSPVKPVPONSEYRVRKNTESKQSISNERSYPE 1807
Pan_troglodytes   QVQQASASS---LNNKNQSEGEKKKPTSPVKPVPONSEYRVRKNTESKQSISNERSYPE 1841
Macaca_mulatta    QVQQASASS---LNNKNQSEGEKKKPTSPVKPVPONSEYRVRKNTESKQSISNERSYPE 1835
Callithrix_jacchus QVQQASASS---LNNKNQSEGEKKKPTSPVKPVPONSEYRVRKNTESKQSISNERSYPE 1834
Bos_taurus        QVQQASASS---LNNKNQSEGEKKKPTSPVKPVPONSEYRVRKNTESKQSISNERSYPE 1874
Equus_caballus    QVQQASASS---LNNKNQSEGEKKKPTSPVKPVPONSEYRVRKNTESKQSISNERSYPE 1836
Pteropus_alecto   QVQQASASS---LNNKNQSEGEKKKPTSPVKPVPONSEYRVRKNTESKQSISNERSYPE 1824
Mus_musculus      QVQQASASS---LNNKNQSEGEKKKPTSPVKPVPONSEYRVRKNTESKQSISNERSYPE 1805
Ornithorhynchus_anatinus QVQQASASS---LNNKNQSEGEKKKPTSPVKPVPONSEYRVRKNTESKQSISNERSYPE 1820
Xenopus_tropicalis QVQQASASS---LNNKNQSEGEKKKPTSPVKPVPONSEYRVRKNTESKQSISNERSYPE 1811
.....1870.....1880.....1890.....1900.....1910.....1920

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## CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /home/ceglab2/Desktop/ajinkya/pavo/MSD/AdP.Cps Feb 15 17:14:21 2022

Page 9 of 13

	..:*	.. ::	*:.*:****:.*:*	..:*****	
Pavo_muticus	NRDAKKQNLKNN	SRDFNDKLP	NNNEERV	RGSF	FTFDS
Pavo_cristatus	NRDAKKQNLKNN	SRDFNDKLP	NNNEERV	RGSF	FTFDS
Gallus_gallus	NRDAKKQNLKNN	SRDFNDKLP	NNNEERV	RGSF	FTFDS
Anas_platyrhynchos	NRDPKKQNVKNN	ARDFNDKLP	NNNEERV	RGSF	FAFDS
Chelonia_mydas	NKDTKKQNFKN	NSRDFNDKLP	NNNEERV	RGSF	FAFDS
Homo_sapiens	NKDSKKQNLKNN	SKVFNDKLP	NNNEERV	RGSF	FAFDS
Pan_troglodytes	NKDSKKQNLKNN	SKDFNDKLP	NNNEERV	RGSF	FAFDS
Macaca_mulatta	NKDSKKQNLKNN	SKDFNDKLP	NNNEERV	RGSF	FAFDS
Callithrix_jacchus	NKDSKKQNLKNN	SKDLNDKLP	NNNEERV	RGSF	FAFDS
Bos_taurus	NKDSKKQHLKN	NSKDFNDKLP	NNNEERV	RGSF	FTFDS
Equus_caballus	NKDSKKQNLKNN	SKDFNDKLP	NNNEERV	RGSF	FSFDS
Pteropus_alecto	NNDSKKQNSKN	NSKDFNDKLP	NNNEERV	RGSF	FTFDS
Mus_musculus	NKDSKKPSLQT	NAKAFNEKLP	NNNEERV	RGSF	FALDS
Ornithorhynchus_anatinus	HKEAKKQNLKNN	SRDFNDKLP	NNNEERV	RGSF	YAFDS
Xenopus_tropicalis	--DPRKQNSK	NSDKANEKIP	NNNEERT	TKG-	FAFDS

	****:***:***** *	*:	:	:	*	:	:	*	.	*.*	*	
Pavo_muticus	DDDDVDLSREKAELRKGGKETKEIETKDCPNTEQPPSSQQPSNRTOVCQKHPTSR	SOYK	---	1935								
Pavo_cristatus	DDDDVDLSREKAELRKGGKETKEIETKDCPNTEQPPSSQQPSNRTOVCQKHPTSR	SOYK	---	1935								
Gallus_gallus	DDDDVDLSREKAELRKGGKEAKEVETKDCPNVEQPSGQQPSNRTOVCQKHPTSR	SQK	---	1980								
Anas_platyrhynchos	DDDDVDLSREKAELRKGGKEAKEIEAKDCANAEQASNOQSTNRTOVCQKHPTSR	SO	---	1935								
Chelonia_mydas	DDDDVDLSREKAELRKGGKETKETKASTDTEQTSNQQSASRTQG-QKHPTGRS	OPKTL		1934								
Homo_sapiens	DDDDVDLSREKAELRKAKENKSEAKVTSHTELTSNQQSANKTQAI	AKQPINRG	OPKPIL	1927								
Pan_troglodytes	DDDDVDLSREKAELRKAKENKSEAKVTSHTELTSNQQSANKTQAI	AKQPINRG	OPKPIL	1961								
Macaca_mulatta	DDDDVDLSREKAELRKAKENKSEAKVTSHTELTSNQQSASKTQAI	AKHPINRG	QPKPIL	1955								
Callithrix_jacchus	DDDDVDLSREKAELRKGENKSEAKVTSHTELTSNQQSANKTQAI	AKYVPNRG	OPKPIL	1954								
Bos_taurus	DDDDVDLSREKAELRKGENKSEAKVTNHTELTSNQQSASKTPAVTKQPINRG	SKPVL		1994								
Equus_caballus	DDDDVDLSREKAELRKGENKSEAKVTSHSELTSNQQSADKTQAVTKHPINRG	SKPML		1956								
Pteropus_alecto	DDDDVDLSREKAELRKEKENKSEAKVNSHAELTSSQQSANKTQAVPKHPISRG	SKTML		1944								
Mus_musculus	DDDDVDLSREKAELRKGGESKDSEAKVTCRPEPNSSQQAASKSQASIKHPANRA	SKPVL		1925								
Ornithorhynchus_anatinus	DDDDVDLSREKAELRKGGKETKEADANASSHPPEPSTN-----RTQICPKPPPSRG	OPKTS		1935								
Xenopus_tropicalis	DDDDIDLSEKAELRKEKGTKDIDRKGKYKNENPAINQIGKQEQVGPKSLEGRG	OPKALV		1928								
	.....1990.....2000.....2010.....2020.....2030.....2040											

	:*	.	*	:	**	.	*	***	:	*****	:	*****	*****	**	*	
Pavo_muticus	----	TFCQPNKDIPDRGAATDEKMONFAIENTPVCFSRNSSLSSSLSDIDQENNNNKEGEP	1991													
Pavo_cristatus	----	TFCQPNKDIPDRGAATDEKMONFAIENTPVCFSRNSSLSSSLSDIDQENNNNKEGEP	1991													
Gallus_gallus	----	TFCQP SKDIPDRGAATDEKMONFAIENTPVCFSRNSSLSSSLSDIDQENNNNKEGEP	2036													
Anas_platyrhynchos	----	SFCQSTKDIPDRGAATDEKMONFAIENTPVCFSRNSSLSSSLSDIDQENNNNKEGEP	1991													
Chelonia_mydas		QKQTAFPPQSKDIPDRGAAMDEKMONFAIENTPVCFSRNSSLSSSLSDIDQENNNNKESET	1994													
Homo_sapiens		QKQSTFFPQSSKDIPDRGAATDEKLONFAIENTPVCFSHNSSLSSSLSDIDQENNN-KENEP	1986													
Pan_troglodytes		QKQSTFFPQSSKDIPDRGAATDEKLONFAIENTPVCFSHNSSLSSSLSDIDQENNNNKENEP	2021													
Macaca_mulatta		QKQSTFFPQSSKDIPDRGAATDEKLHNF AIENTPVCFSHNSSLSSSLSDIDQENNNNKENEP	2015													
Callithrix_jacchus		QKQSTFFPQSSKDIPERGAATDEKLONFAIENTPVCFSHNSSLSSSLSDIDQENNN-KENEP	2013													
Bos_taurus		QKQSTFFPQSSKDIPDRGAATDEKLONFAIENTPVCFSRNSSLSSSLSDIDQENNNNKENEP	2054													
Equus_caballus		QKQSTFFPQSSKDIPDRGAATDEKLONFAIENTPVCFSRNSSLSSSLSDIDQENNNNKENEP	2016													
Pteropus_alecto		QKQSTFFPQSSKDIPDRGAATDEKLONFAIENTPVCFSRNSSLSSSLSDIDQENNNNKESEL	2004													
Mus_musculus		QKQPITFPQSSKDGPDRGAATDEKLONFAIENTPVCFSRNSSLSSSLSDIDQENNNNKESEP	1985													
Ornithorhynchus_anatinus		QKPAAFPQSSKDIPDRGAASDEKMONFAIENTPVCFSRNSSLSSSLSDIDQENNNKESEP	1995													
Xenopus_tropicalis		HKPTSF C PAAKGTDPRGGAKDEKMONFAIENTPVCFSRNSSLSSSLSDIDQENNN-KETEP	1987													
	.....	2050.....2060.....2070.....2080.....2090.....2100														

[illegible]

## CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /home/ceglab2/Desktop/ajinkya/pavo/MSD/Ad.Ps Feb 15 17:14:21 2022

Page 10 of 13

	*****.:* : * : ** .....*:*.*: *****::: *:*:*.:*****.*****	
Pavo_muticus	MPKKKKPSRIKSESEKNSNRNIGGMLAED--LTLDLREIQRPDSEHGFSPPDSENFWDKAI	2109
Pavo_cristatus	MPKKKKPSRIKSESEKNSNRNIGGMLAED--LTLDLREIQRPDSEHGFSPPDSENFWDKAI	2109
Gallus_gallus	MPKKKKPSRIKSESEKNSNRNIGGMLAED--LTLDLREIQRPDSEHGFSPPDSENFWDKAI	2154
Anas_platyrhynchos	MPKKKKTSRIKSESEKNSNRNMGGILAED--LTLDLREIQRPDSEHGFSPPDSENFWDKAI	2109
Chelonia_mydas	MPKKKKPSRVKSESEKNSRNMGGILAED--LTLDLRDIKRPDSEHGFSPPDSENFWDKAI	2112
Homo_sapiens	MPKKKKPSRLKGDNEKHSRPNMGGILGED--LTLDLKDIIQRPDSEHGSLSPDSENFWDKAI	2104
Pan_troglodytes	MPKKKKPSRLKGDHEKYSRPNMGGILAED--LTLDLKDIIQRPDSEHGSLSPDSENFWDKAI	2139
Macaca_mulatta	MPKKKKPSRLKGDNEKHSRPNMGGMLAED--LTLDLKDIIQRPDSEHGSLSPDSENFWDKAI	2133
Callithrix_jacchus	MPKKKKPSRLKGDSEKHSRPNMGGILAED--LTLDLKDIIQRPDSEHGSLSPDSENFWDKAI	2131
Bos_taurus	MPKKKKPSRLKPDNEKHSRPNMGGILAED--LTLDLKDIIQRPDSEHGSLSPDSENFWDKAI	2172
Equus_caballus	MPKKKKPSRFKGDNEKHSRPNMGGILAED--LTLDLKDIIQRPNSEHGSLSPDSENFWDKAI	2134
Pteropus_alecto	MPKKKKPSRLKGDNEKHSRPNMSGILAED--LTLDLKDIIQRPDSEHGSLSPDSENFWDKAI	2122
Mus_musculus	MPKKKKRPSRLKSESEKQSPRKVGGILAED--LTLDLKDIIQRPDSEHAFSPDSENFWDKAI	2103
Ornithorhynchus_anatinus	MPKKKKPSRLKGDNEKNSRNLVGGILAED--LTLDLKDIIQRPDSEHGFSPPDSENFWDKAI	2113
Xenopus_tropicalis	MPKKKKPSKAKNEGEKSSNSVGGILAEEPDLTLDLRDLQSPDSENAFSPDSENFWDKAI	2107
	.....2170.....2180.....2190.....2200.....2210.....2220	

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Pavo_muticus	QEGANSIVSSLHQ-AAAAASLRQAASSDSDSILSLKSGISLGSPFHLPDQEEKPFTSNK	2168
Pavo_cristatus	QEGANSIVSSLHQ-AAAAASLRQAASSDSDSILSLKSGISLGSPFHLPDQEEKPFTSNK	2168
Gallus_gallus	QEGANSIVSSLHQ-AAAAASLRQAASSDSDSILSLKSGISLGSPFHLPDQEEKPFTSNK	2213
Anas_platyrhynchos	QEGANSIVSSLHQ-AAAAASLRQAASSDSDSILSLKSGISLGSPFHLPDQEEKPFTSNK	2168
Chelonia_mydas	QEGANSIVSSLHQ-AAAAASLRQAASSDSDSILSLKSGISLGSPFHLPDQEEKPFTSNK	2171
Homo_sapiens	QEGANSIVSSLHQ-AAAACLRLQAASSDSDSILSLKSGISLGSPFHLPDQEEKPFTSNK	2163
Pan_troglodytes	QEGANSIVSSLHQ-AAAACLRLQAASSDSDSILSLKSGISLGSPFHLPDQEEKPFTSNK	2198
Macaca_mulatta	QEGANSIVSSLHQ-AAAACLRLQAASSDSDSILSLKSGISLGSPFHLPDQEEKPFTSNK	2192
Callithrix_jacchus	QEGANSIVSSLHQ-AAAACLRLQAASSDSDSILSLKSGISLGSPFHLPDQEEKPFTSNK	2190
Bos_taurus	QEGANSIVSSLHQ-AAAACLRLQAASSDSDSILSLKSGISLGSPFHLPDQEEKPFTSNK	2231
Equus caballus	QEGANSIVSSLHQ-AAAACLRLQAASSDSDSILSLKSGISLGSPFHLPDQEEKPFTSNK	2193
Pteropus_alecto	QEGANSIVSSLHQ-AAAACLRLQAASSDSDSILSLKSGISLGSPFHLPDQEDKPFTSNK	2181
Mus_musculus	QEGANSIVSSLHQAACAAACLRLQAASSDSDSILSLKSGISLGSPFHLPDQEEKPFTSNK	2163
Ornithorhynchus_anatinus	QEGANSIVSSLHQ-AAAACLRLQAASSDSDSILSLKSGISLGSPFHLPDQEEKPFTSNK	2172
Xenopus_tropicalis	QEGANSIVSRLLHQ-AAGGSLRQGSSDSDSILSLKSGISLGSPFHLTSDKEEKTITCNK .....2230.....2240.....2250.....2260.....2270.....2280	2166

	**::	
Pavo_muticus	GPRILKPGEKSTLESKKVSESCKGIKGGKRVIYSIITGKARSNSEVSSQLKQPQQTSPVS	2228
Pavo_cristatus	GPRILKPGEKSTLESKKVSESCKGIKGGKRVIYSIITGKARSNSEVSSQLKQPQQTSPVS	2228
Gallus_gallus	GPRILKPGEKSTLESKKVSESCKGIKGGKRVIYSIITGKARSNSEVSSQIKQPQQTSPVS	2273
Anas_platyrhynchos	GPRILKPGEKSTLESKKAEAKNGIKGGKKVYKSMTIGKARSNSEVSSQLKQPQQTSPVS	2228
Chelonia_mydas	GPRIIKPGEKSTLETKKVSENKGIKGGKKVYKSLITGKVRNSENSEISSOMKOPLQTNMPS	2231
Homo_sapiens	GPRILKPGEKSTLETKKIESENKGIKGGKKVYKSLITGKVRNSENSEISSOMKOPLQTNMPS	2223
Pan_troglodytes	GPRILKPGEKSTLETKKIESENKGIKGGKKVYKSLITGKVRNSENSEISSOMKOPLQTNMPS	2258
Macaca_mulatta	GPRILKPGEKSTLETKKIESENKGIKGGKKVYKSLITGKVRNSENSEISSOMKOPLQTNMPS	2252
Callithrix_jacchus	GPRILKPGEKSTLETKKIESENKGIKGGKKVYKSLITGKVRNSENSEISSOMKOPLQTNMPS	2250
Bos_taurus	GPRILKPGEKSTLETKKIESENKGIKGGKKVYKSLITGKVRNSENSEISSOMKOPLQTNMPS	2291
Equus_caballus	GPRILKPGEKSTLETKKIESENKGIKGGKKVYKSLITGKVRNSENSEISSOMKOPLQTNMPS	2253
Pteropus_alecto	GPRILKPGEKSTLEAKKLESENKGIKGGKKVYKSLITGKVRNSENSEISSOMKOPLQTNMPS	2241
Mus_musculus	GPRILKPGEKSTLEAKKIESENKGIKGGKKVYKSLITGKIRNSENSEISSOMKOPLPNTMPS	2223
Ornithorhynchus_anatinus	GPRILKPGEKSTLESKKVSENKGIKGGKKVYKSLITGKVRNSENSELSSOLKOPLPNTMPS	2232
Xenopus_tropicalis	GPKIVKPSDKSALENKKTEDEPKGIKGGKKVYKSLITGKSRSSSDFSHCKOSVQTNMPS	2226
	.....2290.....2300.....2310.....2320.....2330.....2340	

	*****:* **.***.*:***.*.*****:***:*.*.*	
Pavo_muticus	ISRGRITMIHIIPGVRNSSSSSTSPVSKKGPPFKNTNSKSPSEGOSSASSPRGVKS SVKPEPA	2288
Pavo_cristatus	ISRGRITMIHIIPGVRNSSSSSTSPVSKKGPPFKNTNSKSPSEGOSSASSPRGVKS SVKPEPA	2288
Gallus_gallus	ISRGRITMIHIIPGVRNSSSSSTSPVSKKGPPFKNTNSKSPSEGOSSASSPRGVKS SVKPEPA	2333
Anas_platyrhynchos	ISRGRITMIHIIPGVRNSSSSSTSPVSKKGAPLKNNTNSKSPSEGOSSASSPRGVKS SVKPEPA	2288
Chelonia_mydas	ISRGRITMIHIIPGVRNSSSSSTSPVSKKGPPPLKNTASKSPNEGQSSSTSSPRGAKSVKSEPS	2291
Homo_sapiens	ISRGRITMIHIIPGVRNSSSSSTSPVSKKGPPPLKTPASKSPSEGOATATSPRGAKPSVKSELS	2283
Pan_troglodytes	ISRGRITMIHIIPGVRNSSSSSTSPVSKKGPPPLKTPASKSPSEGOATATSPRGAKPSVKSELS	2318
Macaca_mulatta	ISRGRITMIHIIPGVRNSSSSSTSPVSKKGPPPLKTPASKSPSEGOATATSPRGAKPSVKSELS	2312
Callithrix_jacchus	ISRGRITMIHIIPGVRNSSSSSTSPVSKKGPPHKTTPASKSPSEGOAATSPRGAKPSVKSELS	2310
Bos_taurus	ISRGRITMIHIIPGVRNSSSSSTSPVSKKGPPPLKTPASKSPSEGOATATSPRGAKPSVKSELS	2351
Equus_caballus	ISRGRITMIHIIPGVRNSSSSSTSPVSKKGPPPLKTPASKSPSEGOATATSPRGAKPSVKSELS	2313
Pteropus_alecto	FSRGRITMIHIIPGVRNSSSSSTSPVSKKGPPPLKTPASKSPSECOTATSPRGAKPSVKSELS	2301
Mus_musculus	ISRGRITMIHIIPGLRNSSSSSTSPVSKKGPPPLKTPASKSPSEGPGATTSPRGTKPAGKSELS	2283
Ornithorhynchus_anatinus	ISRGRITMIHIIPGVRNSSSSSTSPVAKKAPPLKAPASKSPNEGQATATSPRGAKPTIKSEAS	2292
Xenopus_tropicalis	ISRGRITMIHIIPGVRASSPSTSPVSKKGPFVKNAKSPKNENQSLNSPKGSKP-LKSEF	2285
	.....2350.....2360.....2370.....2380.....2390.....2400	

# CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /home/ceglab2/Desktop/ajinkya/pavo/MSDAd.Cps Feb 15 17:14:21 2022

Page 11 of 13

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      ** *      .*:.*. *****..*** .* *****:*****.*****.*
Pavo_muticus      PVTRQLSGLNQGGSSKGPSRSRSGSRDSTPSRPPQQQPLSRPLQSPGRNSISPGRNGISPPSK 2348
Pavo_cristatus    PVTRQLSGLNQGGSSKGPSRSRSGSRDSTPSRPPQQQPLSRPLQSPGRNSISPGRNGISPPSK 2348
Gallus_gallus     PVTRQLSGLNQGGSSKGPSRSRSGSRDSTPSRPPQQQPLSRPLQSPGRNSISPGRNGISPPNK 2393
Anas_platyrhynchos PVTRQLSGLNQGGSSKGPSRSRSGSRDSTPSRPPQQQPLSRPLQSPGRNSISPGRNGISPPNK 2348
Chelonia_mydas    PITRQPS--QGGSSKGPSRSRSGSRDSTPSRPPQQQPLSRPLQSPGRSSISPGRNGISPPNK 2349
Homo_sapiens      PVARQTS--QIGGSSKAPSRSGSRDSTPSRPAQQPLSRPIQSPGRNSISPGRNGISPPNK 2341
Pan_troglodytes   PVARQTS--QIGGSSKAPSRSGSRDSTPSRPAQQPLSRPIQSPGRNSISPGRNGISPPNK 2376
Macaca_mulatta    PVARQTS--QIGGSSKAPSRSGSRDSTPSRPAQQPLSRPIQSPGRNSISPGRNGISPPNK 2370
Callithrix_jacchus PVARQTS--QIGGSSKAPSRSGSRDSTPSRPAQQPLSRPIQSPGRNSISPGRNGISPPNK 2368
Bos_taurus        PVTRQAS--QTAGSNKGPSRSRSGSRDSTPSRPAQQPLSRPMQSPGRNSISPGRNGISPPNK 2409
Equus_caballus    PVTRQTS--QIPAGSNKGPSRSRSGSRDSTPSRPAQQPLSRPMQSPGRNSISPGRNGISPPNK 2371
Pteropus_alecto   PVTRQTS--QQAGSNKGPSRSRSGSRDSTPSRPPVQQPLSRPIQSPGRNSISPGRNGISPPNK 2359
Mus_musculus      PITRQTS--QISGSNKGSSRSRSGSRDSTPSRPTQQPLSRPMQSPGRNSISPGRNGISPPNK 2341
Ornithorhynchus_anatinus PVNRQPS--QAGGSSKGPSRSRSGSRDSTPSRPPQQQPLSRPMQSPGRSSISPGRNGISPPNK 2350
Xenopus_tropicalis YGSRQSS--TSGGSSKGNRSRSGSRDSTPSRPPSSQQLSRPLQSPGRNSISPGRNGISPPNK 2343
      .....2410.....2420.....2430.....2440.....2450.....2460

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:*****:*****:*** **:* :*.*. *.*****
Pavo_muticus      LSQLPRTSSPSTASTKSSSGRMSYTSPPGRMSQQNLTKQTALTKNKNTSSIPRSESASKGL 2408
Pavo_cristatus    LSQLPRTSSPSTASTKSSSGRMSYTSPPGRMSQQNLTKQTALTKNKNTSSIPRSESASKGL 2408
Gallus_gallus     LSQLPRTSSPSTASTKSSSGRMSYTSPPGRMSQQNLTKQTALTKNKNTSSIPRSESASKGL 2453
Anas_platyrhynchos LSQLPRTSSPSTASTKSSSGRMSYTSPPGRMSQQNLTKQTALPKSSSSIPRSESASKGL 2408
Chelonia_mydas    LSQLPRTSSPSTASTKSSSGRMSYTSPPGRMSQQNLAKQTGLPKSASGIPRSESASKGL 2409
Homo_sapiens      LSQLPRTSSPSTASTKSSSGKMSYTSPPGRMSQQNLTKQTGLSKNASSIPRSESASKGL 2401
Pan_troglodytes   LSQLPRTSSPSTASTKSSSGKMSYTSPPGRMSQQNLTKQTGLSKNASSIPRSESASKGL 2436
Macaca_mulatta    LSQLPRTSSPSTASTKSSSGKMSYTSPPGRMSQQNLTKQTGLSKNASSIPRSESASKGL 2430
Callithrix_jacchus LSQLPRTSSPSTASTKSSSGKMSYTSPPGRMSQQNLTKQTGLSKNASSIPRSESASKGL 2428
Bos_taurus        LSQLPRTSSPSTASTKSSSGKMSYTSPPGRMSQQNLTKQTGLSKNGSGIPRSESASKGL 2469
Equus_caballus    LSQLPRTSSPSTASTKSSSGKMSYTSPPGRMSQQNLTKQTGLSKNGSSIPRSESASKGL 2431
Pteropus_alecto   LSQLPRTSSPSTASTKSSSGKMSYTSPPGRMSQQNLTKQTGLSKNGSSIPRSESASKGL 2419
Mus_musculus      LSQLPRTSSPSTASTKSSSGKMSYTSPPGRQLSQNLTKQASLSKNASSIPRSESASKGL 2401
Ornithorhynchus_anatinus LSQLPRTSSPSTASTKSSSGRMAYTSPPGRMSQQNLAKPTGLSKNPSSIPRSESASKGL 2410
Xenopus_tropicalis FSQLPRTSSPSTASTKSSSGRMSYTSPPGRQLSQPNLSKQSGLPKTPSSIPRSESASKGL 2403
      .....2470.....2480.....2490.....2500.....2510.....2520

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** . .****:*****:***** *****
Pavo_muticus      NQILGTGASNKKTDLSRMSSAKSSGESDRSERPVLVRQSTFIKEAPSPTLRRKLEESAS 2468
Pavo_cristatus    NQILGTGASNKKTDLSRMSSAKSSGESDRSERPVLVRQSTFIKEAPSPTLRRKLEESAS 2468
Gallus_gallus     NQILGSGASNKKTDLSRMSSAKSSGESDRSERPVLVRQSTFIKEAPSPTLRRKLEESAS 2513
Anas_platyrhynchos NQILSSGGSNKKTDLSRMSSSTKSSGESDRSERPVLVRQSTFIKEAPSPTLRRKLEESAS 2468
Chelonia_mydas    NQILSSGGSNKKVELSRMSSTKSSGESDRSERPVLVRQSTFIKEAPSPTLRRKLEESAS 2469
Homo_sapiens      NQMNGNGANKKVELSRMSSTKSSGESDRSERPVLVRQSTFIKEAPSPTLRRKLEESAS 2461
Pan_troglodytes   NQMNGNGANKKVELSRMSSTKSSGESDRSERPVLVRQSTFIKEAPSPTLRRKLEESAS 2496
Macaca_mulatta    NQVNGNGANKKVELSRMSSTKSSGESDRSERPVLVRQSTFIKEAPSPTLRRKLEESAS 2490
Callithrix_jacchus NQMNGNGANKKVELSRMSSTKSSGESDRSERPVLVRQSTFIKEAPSPTLRRKLEESAS 2488
Bos_taurus        NQMSNSNGSNKKVELSRMSSTKSSGESDRSERPVLVRQSTFIKEAPSPTLRRKLEESAS 2529
Equus_caballus    NQMNSNGANKKVELSRMSSTKSSGESDRSERPVLVRQSTFIKEAPSPTLRRKLEESAS 2491
Pteropus_alecto   NQMNSNGSNKKVELSRMSSTKSSGESDRSERPILVRQSTFIKEAPSPTLRRKLEESAS 2479
Mus_musculus      NQMSNGNGSNKKVELSRMSSTKSSGESDRSERPALVRQSTFIKEAPSPTLRRKLEESAS 2461
Ornithorhynchus_anatinus NQAAGGSGPNKKVELSRMSSTKSSGESDRSERPVLVRQSTFIKEAPSPTLRRKLEESAS 2470
Xenopus_tropicalis NQNVN--TGPNNKKVELSRMSSTKSSGESDRSERPALVRQSTFIKEAPSPTLRRKLEESAS 2462
      .....2530.....2540.....2550.....2560.....2570.....2580

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Pavo_muticus      FESLSPS--RPDSPTRSQLQTPVLSPLPDMSLSAHSTAQTSQWKRKLPPNLSPSVEY--DGR 2526
Pavo_cristatus    FESLSPS--RPDSPTRSQLQTPVLSPLPDMSLSAHSTAQTSQWKRKLPPNLSPSVEY--DGR 2526
Gallus_gallus     FESLSPS--RPDSPTRSQLQTPVLSPLPDMSLSTHSTAQTSQWKRKLPPNLSPSVEY--DGR 2571
Anas_platyrhynchos FESLSPS--RPDSPTRSQLQTPVLSPLPDMSLSSHSTAQTSQWKRKLPPNLSPSVEY--DGR 2526
Chelonia_mydas    FESLSPS--RPDSPTRSQIQTTPVLSPLPDMSLSSHSTVQASQWKRKLPPNLSPSVEYNDGR 2528
Homo_sapiens      FESLSPSSRPASPTRSQATPVLSPSLPDMSLSTHSSVQAGGWRKLPPNLSPTIEYNDGR 2521
Pan_troglodytes   FESLSPSSRPASPTRSQATPVLSPSLPDMSLSTHSSVQAGGWRKLPPNLSPTIEYNDGR 2556
Macaca_mulatta    FESLSPSSRPASPTRSQATPVLSPSLPDMSLSTHSSVQAGGWRKLPPNLSPTIEYNDGR 2550
Callithrix_jacchus FESLSPSSRPASPTRSQATPVLSPSLPDMSLSTHSSVQPGGWRKLPPNLSPTIEYNDGR 2548
Bos_taurus        FESLSPSSRPDSPTRSQATPVLSPSLPDMSLSTHSSLQSGGWRKLPPNLSPTIEYNDGR 2589
Equus_caballus    FESLSPSSRPDSPTRSQATPILSPSLPDMSLSMHSSVQAGGWRKLPPNLSPTVEYNDGR 2551
Pteropus_alecto   FESLSPSSRPDSPTRSQATPVLSPSLPDMSLSTHSSVQAGGWRKLPPNLSPTVEYNDGR 2539
Mus_musculus      FESLSPSSRPDSPTRSQATPVLSPSLPDMSLSTHPSVQAGGWRKLPPNLSPTIEYNDGR 2521
Ornithorhynchus_anatinus FESLSPSSRPDSPTRSQATPVLSPSLPDLPTPLSTHPSVQAGGWRRLPPNLSNPGVDYSEGR 2530
Xenopus_tropicalis FESLSSSRADSPTRSQATPALSPSLPDMSLSTHS--IQAGGWRKMPPNLPAAEHGDSR 2521
      .....2590.....2600.....2610.....2620.....2630.....2640

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## CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /home/ceglab2/Desktop/ajinkya/pavo/MSD/Ad.Ps Feb 15 17:14:21 2022

Page 12 of 13

	:****:*****:.*:*****	
Pavo_muticus	PAKRHDIARSHSESPSRLPINRSGTWKREHSKHSSSLPRVSTWRRTGSSSSILSASSESS	2586
Pavo_cristatus	PAKRHDIARSHSESPSRLPINRSGTWKREHSKHSSSLPRVSTWRRTGSSSSILSASSESS	2586
Gallus_gallus	PAKRHDIARSHSESPSRLPINRSGTWKREHSKHSSSLPRVSTWRRTGSSSSILSASSESS	2631
Anas_platyrhynchos	PAKRHDIARSHSESPSRLPVNRSGTWKREHSKHSSSLPRVSTWRRTGSSSSILSASSESS	2586
Chelonia_mydas	PAKRHDIARSHSESPSRLPINRSGTWKREHSKHSSSLPRVSTWRRTGSSSSILSASSESS	2588
Homo_sapiens	PAKRHDIARSHSESPSRLPINRSGTWKREHSKHSSSLPRVSTWRRTGSSSSILSASSESS	2581
Pan_troglodytes	PAKRHDIARSHSESPSRLPINRSGTWKREHSKHSSSLPRVSTWRRTGSSSSILSASSESS	2616
Macaca_mulatta	PAKRHDIARSHSESPSRLPINRSGTWKREHSKHSSSLPRVSTWRRTGSSSSILSASSESS	2610
Callithrix_jacchus	PAKRHDIARSHSESPSRLPINRSGTWKREHSKHSSSLPRVSTWRRTGSSSSILSASSESS	2608
Bos_taurus	PVKRHDIARSHSESPSRLPINRSGTWKREHSKHSSSLPRVSTWRRTGSSSSILSASSESS	2649
Equus_caballus	PAKRHDIARSHSESPSRLPINRSGTWKREHSKHSSSLPRVSTWRRTGSSSSILSASSESS	2611
Pteropus_alecto	PAKRHDIARSHSESPSRLPINRSGTWKREHSKHSSSLPRVSTWRRTGSSSSILSASSESS	2599
Mus_musculus	PTKRHDIARSHSESPSRLPINRAGTWKREHSKHSSSLPRVSTWRRTGSSSSILSASSESS	2581
Ornithorhynchus_anatinus	PAKRHDIARSHSESPSRLPINRSGTWKREHSKHSSSLPRVSTWRRTGSSSSILSASSESS	2590
Xenopus_tropicalis	--RRHDISRSHSESPSRLPITRSGTWKREHSKHSSSLPRVSTWRRTGSSSSILSASSESS	2579
	.....2650.....2660.....2670.....2680.....2690.....2700	

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Pavo_muticus	EKAKSEDEKQHGSLSGQKQSKESQAPAKGTWRKIKENEIPQIMNDPOHSSSS-PTSSSD	2645
Pavo_cristatus	EKAKSEDEKQHGSLSGQKQSKESQAPAKGTWRKIKENEIPQIMNDPOHSSSS-PTSSSD	2645
Gallus_gallus	EKAKSEDEKQHGSLSGQKQSKESQAPAKGTWRKIKENEIPQIMNDPOHPSSS-ATSSSD	2690
Anas_platyrhynchos	EKAKSEDEKQHGSVSGHKQNKESQAPAKGTWRKIKENEIPQIMNDPOHSSSG-ATNSSD	2645
Chelonia_mydas	EKAKSEDEKQHGSFSGHITKESQVPAKGTWRKIKENEISQIMSNPSHNSSSDATNGAD	2648
Homo_sapiens	EKAKSEDEK-HVNSISGTKQSKENQVSAKGTWRKIKENEFSPTNSTSQTVSSG-ATNGAE	2639
Pan_troglodytes	EKAKSEDEK-HVNSISGTKQSKANQVSAKGTWRKIKENEISPTNSTSQTVSSG-ATNGAE	2674
Macaca_mulatta	EKAKSEDEK-HVNSISGTKQSKENQVSAKGTWRKIKENEISPTNSTSQTVSSG-ATNGAE	2668
Callithrix_jacchus	EKAKSEDEK-HVNSISGTKQSKENQVSAKGTWRKIKENEISPTNSTSQTISSG-ATNGAE	2666
Bos_taurus	EKAKSEDEK-QVNSISGSKQTKENQVSTKGTWRKIKESEISPTNSTSQTTSAG-ANGAE	2707
Equus_caballus	EKAKSEDER-HVNSISGTKQTKENQVSTKGTWRKIKESEISPTNSTSQTTSAG-AVNGAE	2669
Pteropus_alecto	EKAKSEDEK-HVNSISGTKQTKENQVSTKGTWRKIKESEISPVNSASQTISSG-AANGAE	2657
Mus_musculus	EKAKSEDER-HVSSMPAPRMKENQVPIKGTWRKIKESDISPTGMAQSASSG-AASGAE	2639
Ornithorhynchus_anatinus	EKAKSEDEK-QVSAAPAGPKPAKENQAPAKGTWRKIKESMAPAGNTQAVSSG-APNGAD	2648
Xenopus_tropicalis	EKAKSEDEKQVCSFGLGPKS--ECSSAKGTWRKIKESILETPNSGNSNTIAESSCSLE	2637
	.....2710.....2720.....2730.....2740.....2750.....2760	

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Pavo_muticus	SKTLIIYQMAPAVSKTEDVWVRIEDCPINNPRSGRSPGTGNTPPVIDSVSEKGVNGKDSKE	2705
Pavo_cristatus	SKTLIIYQMAPAVSKTEDVWVRIEDCPINNPRSGRSPGTGNTPPVIDSVSEKGVNGKDSKE	2705
Gallus_gallus	SKTLIIYQMAPAVSKTEDVWVRIEDCPINNPRSGRSPGTGNTPPVIDSVSEKGVNGKDSKE	2750
Anas_platyrhynchos	SKTLIIYQMAPAVSKTEDVWVRIEDCPINNPRSGRSPGTGNTPPVIDSVSEKGGVNGKDSKE	2705
Chelonia_mydas	SKTLIIYQMAPAVSKTEDVWVRIEDCPINNPRSGRSPGTGNTPPVIDSVLEKGANGKDSKD	2708
Homo_sapiens	SKTLIIYQMAPAVSKTEDVWVRIEDCPINNPRSGRSPGTGNTPPVIDSVSEKANPNIKDSKD	2699
Pan_troglodytes	SKTLIIYQMAPAVSKTEDVWVRIEDCPINNPRSGRSPGTGNTPPVIDSVSEKGNPNIKDSKD	2734
Macaca_mulatta	SKTLIIYQMAPAVSKTEDVWVRIEDCPINNPRSGRSPGTGNTPPVIDSVSEKGNPN-KDSKD	2727
Callithrix_jacchus	SKTLIIYQMAPAVSKTEdiwvriEDCPINNPRSGRSPGTGNTPPVIDSVSEKGNPNIKDSKD	2726
Bos_taurus	SKTLIIYQMAPAVSKTEDVWVRIEDCPINNPRSGRSPGTGNTPPVIDTVSEKGNPNPKDSKD	2767
Equus caballus	SKTLIIYQMAPAVSKTEDVWVRIEDCPINNPRSGRSPGTGNTPPVIDSVSEKGNSHAKDSKD	2729
Pteropus_alecto	SKTLIIYQMAPAVSKTEDVWVRIEDCPINNPRSGRSPGTGNTPPVIDSVSEKGNPNNAKDSKD	2717
Mus_musculus	SKPLIIYQMAPPVSKTEDVWVRIEDCPINNPRSGRSPGTGNTPPVIDSVSEKGSSSIIDSKD	2699
Ornithorhynchus_anatinus	SKTLVYQMAPAVSKTEDVWVRIEDCPINNPRSGRSPGTGNTPPVIDSVSEKGSSTGKEAKE	2708
Xenopus_tropicalis	SKTLVYQMAPAVSKTEDVWVRIEDCPINNPRSGRSPGTGNSPFPVIDNVLDQGQKE-EAVKD	2696
	.....2770.....2780.....2790.....2800.....2810.....2820	

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Pavo_muticus	I	Q	E	K	N	P	G	N	S	V	P	V	R	T	I	G	L	N	R	L	N	S	F	F	O	M	D	S	P	D	K	K	G	N	E	T	K	P	L	Q	T	N	-	P	V	P	A	P	E	N	N	E	S	T	V	S	E	2764	
Pavo_cristatus	I	Q	E	K	N	P	G	N	S	V	P	V	R	T	I	G	L	N	R	L	N	S	F	F	O	M	D	S	P	D	K	K	G	N	E	T	K	P	L	Q	T	N	-	P	V	P	A	P	E	N	N	E	S	T	V	S	E	2764	
Gallus_gallus	I	Q	E	K	N	P	G	N	S	V	P	V	R	T	I	G	L	N	R	L	N	S	F	F	O	M	D	S	P	D	K	K	G	N	E	T	K	P	L	Q	T	N	-	P	V	P	A	P	E	N	N	E	S	T	V	S	E	2809	
Anas_platyrhynchos	I	Q	E	K	N	P	G	N	S	V	P	V	R	T	I	G	L	N	R	L	N	S	F	F	O	I	D	S	P	D	K	K	G	N	E	T	K	P	L	Q	T	N	-	P	V	P	A	P	E	N	N	E	S	T	V	S	E	2764	
Chelonia_mydas	I	Q	G	K	N	A	G	N	G	N	V	P	V	R	T	M	G	L	N	R	L	N	S	F	I	O	I	D	S	P	D	K	K	G	T	E	T	K	P	V	L	S	N	-	P	V	P	A	P	E	T	N	E	S	I	N	E	2767	
Homo_sapiens	N	Q	A	K	N	V	G	N	S	V	P	M	R	T	V	G	L	N	R	L	N	S	F	I	Q	V	D	A	P	D	Q	K	G	T	E	I	K	P	G	Q	N	N	-	P	V	P	V	S	E	T	N	E	S	S	I	V	E	2758	
Pan_troglodytes	N	Q	A	K	N	V	G	N	S	V	P	M	R	T	V	G	L	N	R	L	N	S	F	I	Q	V	D	A	P	D	Q	K	G	T	E	I	K	P	G	Q	N	N	-	P	V	P	V	S	E	T	N	E	S	S	I	V	E	2793	
Macaca_mulatta	N	Q	A	K	N	V	G	N	S	V	P	M	R	T	V	G	L	N	R	L	N	S	F	I	Q	V	D	A	P	D	Q	K	G	T	E	T	K	P	G	Q	N	N	-	P	V	P	V	S	E	T	N	E	S	S	I	V	E	2786	
Callithrix_jacchus	N	Q	A	K	N	V	G	N	S	V	P	M	R	T	V	G	L	N	R	L	N	S	F	I	Q	V	D	A	P	D	Q	K	G	T	E	T	K	P	G	Q	N	N	-	P	V	P	A	S	E	T	N	E	S	S	I	V	E	2785	
Bos_taurus	N	Q	G	K	N	V	S	N	G	S	A	P	T	R	T	M	G	L	N	R	L	N	S	F	I	Q	V	D	P	D	Q	K	G	T	E	T	K	P	G	H	S	N	N	-	P	V	P	A	S	E	T	N	E	S	S	I	A	E	2827
Equus_caballus	N	Q	G	K	N	V	G	N	A	S	A	P	G	R	I	M	G	L	N	R	L	N	S	F	I	Q	V	D	A	P	D	Q	K	G	T	E	A	K	P	G	Q	S	N	-	P	V	P	A	S	E	T	N	E	S	S	I	A	E	2788
Pteropus_alecto	N	Q	G	K	N	V	G	N	S	G	P	V	R	T	M	G	L	N	R	L	N	S	F	I	Q	V	D	A	P	D	Q	K	G	T	E	T	K	P	G	Q	S	N	-	S	V	P	A	S	E	T	N	E	S	S	I	T	E	2776	
Mus_musculus	T	H	G	K	S	V	G	S	G	S	-	P	V	Q	T	V	G	L	E	T	R	L	N	S	F	V	Q	V	E	A	P																												

## CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /home/ceglab2/Desktop/ajinkya/pavo/MSD/Ad.C.ps Feb 15 17:14:21 2022

Page 13 of 13

	****.*.*.****.*.**:*****:***** ***:...:..:*****..*****	
Pavo_muticus	RTPFSSSSSSKHSSPIGAVAARVTPFNYNPSRRKSSVDNSSARPSQIPTPVNNSTKKRDS	2824
Pavo_cristatus	RTPFSSSSSSKHSSPIGAVAARVTPFNYNPSRRKSSVDNSSARPSQIPTPVNNSTKKRDS	2824
Gallus_gallus	RTPFSSSSSSKHNSPIGAVAARVTPFNYNPSRRKSSVDNSSARPSQIPTPVNNSTKKRDS	2869
Anas_platyrhynchos	RTPFSSSSSSKHSSPIGAVAARVTPFNYNPSRRKSSVDNSSARPSQIPTPVNNSTKKRDS	2824
Chelonia_mydas	RTPFSSSSSSKHSSPSGAVAARVTPFNYNPSPRKSSADNSSARPSQIPTPVNNSTKKRDS	2827
Homo_sapiens	RTPFSSSSSSKHSSPSGTVAARVTPFNYNPSPRKSSADSTSARPSQIPTPVNNNTKKRDS	2818
Pan_troglodytes	RTPFSSSSSSKHSSPSGTVAARVTPFNYNPSPRKSSADSTSARPSQIPTPVNNNTKKRDS	2853
Macaca_mulatta	RTPFSSSSSSKHSSPSGTVAARVTPFNYNPSPRKSSADSTSARPSQIPTPVNNNTKKRDS	2846
Callithrix_jacchus	RTPFSSSSSSKHSSPSGTVAARVTPFNYNPSPRKSSADSTSARPSQIPTPVNN-TKKRDS	2844
Bos_taurus	RTPFSSSSSSKHSSPSGTVAARVSPFNYNPSPRKSSDTGTSARPSQIPTPVSNNTKKRDS	2887
Equus_caballus	RTPFSSSSSSKHSSPSGTVAARVTPFNYNPSPRKSSADSTSARPSQIPTPVNNNTKKRDS	2848
Pteropus_alecto	RTPFGSSGSSKHSSPSGTVAARVTPFNYNPSPRKSSVDSTSARPSQIPTPVNNNTKKRDS	2836
Mus_musculus	RTPFSSSSSSKHSSPSGTVAARVTPFNYNPSPRKSSADSTSARPSQIPTPVSTNTKKRDS	2817
Ornithorhynchus_anatinus	RTPFSSSSSSKHSSPSGAVAARVTPFNYNPSPRKSSADSSARPSQIPTPVNNSTKKRDS	2827
Xenopus_tropicalis	RTPFSSSSSSKHSSPSGTVAARVTPFNYNPSPRKSTAESSTSRPSQIPTPVNTSTKKRDS	2808
	.....2890.....2900.....2910.....2920.....2930.....2940	

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Pavo_muticus	KSENTDSSGTQSPKRHSGSYLVTSV	2849
Pavo_cristatus	KSENTDSSGTQSPKRHSGSYLVTSV	2849
Gallus_gallus	KSENTDSSGTQSPKRHSGSYLVTSV	2894
Anas_platyrhynchos	KSENTDSSGTQSPKRHSGSYLVTSV	2849
Chelonia_mydas	KTENTDSSGTQSPKRHSGSYLVTSV	2852
Homo_sapiens	KTDSTESSGTQSPKRHSGSYLVTSV	2843
Pan_troglodytes	KTDSTESSGTQSPKRHSGSYLVTSV	2878
Macaca_mulatta	KTDSTESSGTQSPKRHSGSYLVTSV	2871
Callithrix_jacchus	KTDSTDSSGTQSPKRHSGSYLVTSV	2869
Bos_taurus	KPDSTEPSGTQSPKRHSGSYLVTSV	2912
Equus_caballus	KTDSTESSGAQSPKRHSGSYLVTSV	2873
Pteropus_alecto	KTDNTIESSGTQSPKRHSGSYLVTSV	2861
Mus_musculus	KTDSTESSGAQSPKRHSGSYLVTSV	2842
Ornithorhynchus_anatinus	KTENPEGGGTQSPKRHSGSYLVTSV	2852
Xenopus_tropicalis	KTETTDSSGSQSPKRHSGSYLVTSV	2833
	.....2950.....2960.....	