

## CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /home/ceglab2/Desktop/ajinkya/pavo/MSDA-MGRN-1 Feb 15 15:33:30 2022

Page 1 of 4

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Pavo_muticus	M	G	S	L	L	S	R	R	I	A	G	V	E	D	I	D	I	Q	A	N	S	A	Y	R	P	P	K	S	G	N	Y	F	A	S	H	F	F	M	G	G	E	K	F	D	T	P	H	P	E	G	Y	L	F	G	E	N	M	D	L	
Pavo_cristatus	M	G	S	L	L	S	R	R	I	A	G	V	E	D	I	D	I	Q	A	N	S	A	Y	R	P	P	K	S	G	N	Y	F	A	S	H	F	F	M	G	G	E	K	F	D	T	P	H	P	E	G	Y	L	F	G	E	N	M	D	L	
Gallus_gallus	M	G	S	L	L	S	R	R	I	A	G	V	E	D	I	D	I	Q	A	N	S	A	Y	R	P	P	K	S	G	N	Y	F	A	S	H	F	F	M	G	G	E	K	F	D	T	P	H	P	E	G	Y	L	F	G	E	N	M	D	L	
Anas_platyrhynchos	M	G	S	L	L	S	R	R	I	A	G	V	E	D	I	D	I	Q	A	N	S	A	Y	R	P	P	K	S	G	N	Y	F	A	S	H	F	F	M	G	G	E	K	F	D	T	P	H	P	E	G	Y	L	F	G	E	N	M	D	L	
Chelonia_mydas	M	G	S	L	L	S	R	R	I	A	G	V	E	D	I	D	I	Q	A	N	S	A	Y	R	P	P	K	S	G	N	Y	F	A	S	H	F	F	M	G	G	E	K	F	D	T	P	H	P	E	G	Y	L	F	G	E	N	M	D	L	
Rhinatrema_bivittatum	M	G	S	I	L	S	R	R	I	A	G	V	E	D	I	D	I	Q	A	N	S	A	Y	R	P	P	K	S	G	N	Y	F	A	S	H	F	F	M	G	G	E	K	F	D	T	P	H	P	E	G	Y	L	F	G	E	N	M	D	L	
Homo_sapiens	M	G	S	I	L	S	R	R	I	A	G	V	E	D	I	D	I	Q	A	N	S	A	Y	R	P	P	K	S	G	N	Y	F	A	S	H	F	F	M	G	G	E	K	F	D	T	P	H	P	E	G	Y	L	F	G	E	N	M	D	L	
Pan_troglodytes	M	G	S	I	L	S	R	R	I	A	G	V	E	D	I	D	I	Q	A	N	S	A	Y	R	P	P	K	S	G	N	Y	F	A	S	H	F	F	M	G	G	E	K	F	D	T	P	H	P	E	G	Y	L	F	G	E	N	M	D	L	
Callithrix_jacchus	M	G	S	I	L	S	R	R	I	A	G	V	E	D	I	D	I	Q	A	N	S	A	Y	R	P	P	K	S	G	N	Y	F	A	S	H	F	F	M	G	G	E	K	F	D	T	P	H	P	E	G	Y	L	F	G	E	N	M	D	L	
Heterocephalus_glaber	M	G	S	I	L	S	R	R	I	A	G	V	E	D	I	D	I	Q	A	N	S	A	Y	R	P	P	K	S	G	N	Y	F	A	S	H	F	F	M	G	G	E	K	F	D	T	P	H	P	E	G	Y	L	F	G	E	N	M	D	L	
Bos_taurus	M	G	S	I	L	S	R	R	I	A	G	V	E	D	I	D	I	Q	A	N	S	A	Y	R	P	P	K	S	G	N	Y	F	A	S	H	F	F	M	G	G	E	K	F	D	T	P	H	P	E	G	Y	L	F	G	E	N	M	D	L	
Pteropus_alecto	M	G	S	I	L	S	R	R	I	A	G	V	E	D	I	D																																												

	****.*****:*****:*** * . . :*.:	
Pavo_muticus	NFLGNRPVQFPYVTPAPHEPVKTLRSLVNIRKDSLRLVRYKDDVDSPTTEENGKQKVLVYSL	120
Pavo_cristatus	NFLGNRPVQFPYVTPAPHEPVKTLRSLVNIRKDSLRLVRYKDDVDSPTTEENGKQKVLVYSL	120
Gallus_gallus	NFLGNRPVQFPYVTPAPHEPVKTLRSLVNIRKDSLRLVRYKDDVDSPTTEENGKQKVLVYSL	120
Anas_platyrhynchos	NFLGNRPVQFPYVTPAPHEPVKTLRSLVNIRKDSLRLVRYKDDVDSPTTEENGKQKVLVYSL	120
Chelonia_mydas	NFLGNRPVQFPYVTPAPHEPVKTLRSLVNIRKDSLRLVRYKDDVDSPTTEENGKQKVLVYSL	120
Rhinatrema_bivittatum	NFLGNRPVQFPYVTPAPHEPVKTLRSLVNIRKDSLRLVRYKDNTDSPTEDSAKPRVLYSP	120
Homo_sapiens	NFLGSRPVQFPYVTPAPHEPVKTLRSLVNIRKDSLRLVRYKDDADSPTEGDGKPRVLYSL	120
Pan_troglodytes	NFLGSRPVQFPYVTPAPHEPVKTLRSLVNIRKDSLRLVRYKDDADSPTEGDGKPRVLYSL	120
Callithrix_jacchus	NFLGSRPVQFPYVTPAPHEPVKTLRSLVNIRKDSLRLVRYKDDADSPTEGDGKPRVLYSL	120
Heterocephalus_glaber	NFLGSRPVQFPYVTPAPHEPVKTLRSLVNIRKDSLRLVRYKDDADSPTEGDGKPRVLYSL	120
Bos_taurus	NFLGNRPVQFPYVTPAPHEPVKTLRSLVNIRKDSLRLVRYKDGADSPTEDEKPRVLYSL	120
Pteropus_alecto	NFLGNRPVQFPYVTPAPHEPVKTLRSLVNIRKDSLRLVRYKDGADSPTEDEKPRVLYSL	120
Equus_caballus	NFLGNRPVQFPYVTPAPHEPVKTLRSLVNIRKDSLRLVRYKDGADSPTEDEKPRVLYSL	120
Mus_musculus	NFLGSRPVQFPYVTPAPHEPVKTLRSLVNIRKDSLRLVRYKEDADSPTEDEKPRVLYSL	120
Ornithorhynchus_anatinus	NFLGNRPVQFPYVTPAPHEPVKTLRSLVNIRKDSLRLVRYKDDADSPTEENGKARVMYSL	120
Xenopus_tropicalis	NFLGNRPVQFPYLTPAPHEPVKTLRSLVNIRKDSLRLVRYKDGADSPLEEGGTPRVLYGL	120
	.....70.....80.....90.....100.....110.....120	

	*****:.* ** :.* *.** :.:*****:*****:.***.******	
Pavo_muticus	EFTFDADARVAITIIYCOATEEFVGGMAVYSTKNPSLQSETVHYKRGVSQQFSLPSFKIDF	180
Pavo_cristatus	EFTFDADARVAITIIYCOATEEFVGGMAVYSTKNPSLQSETVHYKRGVSQQFSLPSFKIDF	180
Gallus_gallus	EFTFDADARVAITIIYCOATEEFVGGMAVYSTKNPSLQSETVHYKRGVSQQFSLPSFKIDF	180
Anas_platyrhynchos	EFTFDADARVAITIIYCOATEEFVGGMAVYSTKNPSLQSETVHYKRGVSQQFSLPSFKIDF	180
Chelonia_mydas	EFTFDADARVAITIIYCOATEEFISGMVYSTKNPSLQSETVHYKRGVSQQFSLPSFKIDF	180
Rhinatrema_bivittatum	EFTFDADARVAITISQASEEFISGVAVYSTKNPSLQSETVHYKRGVNQQFSLPSFKIDF	180
Homo_sapiens	EFTFDADARVAITIIYCOASEEFLNGRAVYSPKSPSLQSETVHYKRGVSQQFSLPSFKIDF	180
Pan_troglodytes	EFTFDADARVAITIIYCOASEEFLNGRAVYSPKSPSLQSETVHYKRGVSQQFSLPSFKIDF	180
Callithrix_jacchus	EFTFDADARVAITIIYCOASEEFLNGRAVYSPKGPSLQSETVHYKRGVSQQFSLPSFKIDF	180
Heterocephalus_glaber	EFTFDADARVAITIIYQAVEEFLNGMAVYSPKSPALQSETIHYKRGVSHFSLPSFKIDF	180
Bos_taurus	EFTFDADARVAITIVYQAVEEFLNGTAAYSPPKSPALQSETVHYKRGVSQQFSLPSFKIDF	180
Pteropus_alecto	EFTFDADARVAITIIYQAAEEFLNGMAVYSPKSPALQSETVHYKRGVSQQFSLPSFKIDF	180
Equus_caballus	EFTFDADARVAITIIYQAVEEFLNGTATYSPKSPALQSETVHYKRGVSQQFSLASFKIDF	180
Mus_musculus	EFTFDADARVAITIIYQAVEELVNGVAVYSCKNPSLQSETVHYKRGVSQQFSLPSFKIDF	180
Ornithorhynchus_anatinus	EFTFDADARVAITIIYQAMEEFMSGMAVYSTKNPSLQSETVHYKRGVSQQFSLPSFKIDF	180
Xenopus_tropicalis	EFTFDADARVAITVYQASEEFGGVAVYSTPSPALQSQTVYYKRGLSQHFSLTFSFKIDF	180
	.....130.....140.....150.....160.....170.....180	

## CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /home/ceglab2/Desktop/ajinkya/pavo/MSDA-MGRN1 Feb 15 15:33:30 2022

Page 2 of 4

	*::***:*****:*.:.*:**:* **	*	:	*****:	
Pavo_muticus	SDWKDDELNFDDLDRGVFPVIRAVVDEG-----DVVVEVTGHAHVLLAAFEKHV	229			
Pavo_cristatus	SDWKDDELNFDDLDRGVFPVIRAVVDEG-----DVVVEVTGHAHVLLAAFEKHV	229			
Gallus_gallus	SDWKDDELNFDDLDRGVFPVIRAVVDEG-----DVVVEVTGHAHVLLAAFEKHV	229			
Anas_platyrhynchos	SDWKDDELNFDDLDRGVFPVIRAVVDEG-----DVVVEVTGHAHVLLAAFEKHV	229			
Chelonia_mydas	SDWKDDELNFDDLDRGVFPVVIQAVVDEGDAARRCLLSVQNLVVEVTGHAHVLLAAFEKHV	240			
Rhinatrema_bivittatum	SEWKDDELNFDDLKGVFPVVIQAVVDEG-----DEITGHAHVLLAAFEKHV	226			
Homo_sapiens	SEWKDDELNFDDLDRGVFPVVIQAVVDEGD-----VVEVTGHAHVLLAAFEKHM	228			
Pan_troglodytes	SEWKDDELNFDDLDRGVFPVVIQAVVDEGDA-----VVEVTGHAHVLLAAFEKHM	229			
Callithrix_jacchus	SEWKDDELNFDDLDRGVFPVVIQAVVDEGDA-----VVEVTGHAHVLLAAFEKHM	229			
Heterocephalus_glaber	SEWKDDELNFDDLGRIFPVIQAVVDEGD-----VVEVTGHAHVLLAAFEKHV	228			
Bos_taurus	SEWKDDELNFDDLDRGVFPVVIQAVVDEGD-----VVEVTGHAHVLLAAFEKHV	228			
Pteropus_alecto	SEWKDDELNFDDLDRGVFPVVIQAVVDEGD-----VVEVTGHAHVLLAAFEKHV	228			
Equus_caballus	SEWKDDELNFDDLDRGVFPVVIQAVVDEGD-----VVEVAGHAHVLLAAFEKHV	228			
Mus_musculus	SEWKDDELNFDDLDRGVFPVVIQAVVDEGD-----VVEVTGHAHVLLAAFEKHV	228			
Ornithorhynchus_anatinus	SEWKDDELNFDDLGRVFPVVIQAVVDEGD-----VMEVTGHAHVLLAAFEKHV	228			
Xenopus_tropicalis	SDWKDEELNFDLKGIVPLVIQAVVAEGG-----EGSAHVVLLAAFEKHV	226			
	.....190.....200.....210.....220.....230.....240				

	***:*****:***:*****.*****	
Pavo_muticus	DGSYSVKPLKQKQIVDRVSYLLQEIYGIENKNNQETKPSDDENS DNSNECVVCLSDLRDT	289
Pavo_cristatus	DGSYSVKPLKQKQIVDRVSYLLQEIYGIENKNNQETKPSDDENS DNSNECVVCLSDLRDT	289
Gallus_gallus	DGSFSVKPLKQKQIVDRVSYLLQEIYGIENKNNQETKPSDDENS DNSNECVVCLSDLRDT	289
Anas_platyrhynchos	DGSYSVKPLKQKQIVDRVSYLLQEIYGIENKNNQETKPSDDENS DNSNECVVCLSDLRDT	289
Chelonia_mydas	DGSFSVKPLKQKQIVDRVSYLLQEIYGIENKNNQETKPSDDENS DNSNECVVCLSDLRDT	300
Rhinatrema_bivittatum	DGSFSVKPLKQKQIVDRVSYLLQEIYGIENKNNQETKPADDENS DNSNECVVCLSDLRDT	286
Homo_sapiens	DGSFSVKPLKQKQIVDRVSYLLQEIYGIENKNNQETKPSDDENS DNSNECVVCLSDLRDT	288
Pan_troglodytes	DGSFSVKPLKQKQIVDRVSYLLQEIYGIENKNNQETKPSDDENS DNSNECVVCLSDLRDT	289
Callithrix_jacchus	DGSFSVKPLKQKQIVDRVSYLLQEIYGIENKNNQETKPSDDENS DNSNECVVCLSDLRDT	289
Heterocephalus_glaber	DGSFSVKPLKQKQIVDRVSYLLQEIYGIENKNNQETKPSDDENS DNSSECVVCLSDLRDT	288
Bos_taurus	DGSFSVKPLKQKQIVDRVSYLLQEIYGIENKNNQETKPSDEENS DNSNECVVCLSDLRDT	288
Pteropus_alecto	DGSFSVKPLKQKQIVDRVSYLLQEIYGIENKNNQETKPSDEENS DNSNECVVCLSDLRDT	288
Equus_caballus	DGSFSVKPLKQKQIVDRVSYLLQEIYGIENKNNQETKPSDEENS DNSNECVVCLSDLRDT	288
Mus_musculus	DGSFSVKPLKQKQIVDRVSYLLQEIYGIENKNNQETKPSDDENS DNSSECVVCLSDLRDT	288
Ornithorhynchus_anatinus	DGSFSVKPLKQKQIVDRVSYLLQEIYGIENKNNQETKPSDDENS DNSNECVVCLSDLRDT	288
Xenopus_tropicalis	DGSFSVKPLKQKQIVDRVSYLLQEIYGIENKNNQDTKQSDENS DNSNECVVCLSDLRDT	286
	.....250.....260.....270.....280.....290.....300	

	*****.*****.*****:***.:*****:	
Pavo_muticus	LILPCRHLCLCNSCADTLRYQANNCPICRLPFRALLQIRAVRKKPGALSPVSFSPVLAQS	349
Pavo_cristatus	LILPCRHLCLCNSCADTLRYQANNCPICRLPFRALLQIRAVRKKPGALSPVSFSPVLAQS	349
Gallus_gallus	LILPCRHLCLCNSCADTLRYQANNCPICRLPFRALLQIRAVRKKPGALSPVSFSPVLAQS	349
Anas_platyrhynchos	LILPCRHLCLCNSCADTLRYQANNCPICRLPFRALLQIRAVRKKPGALSPVSFSPVLAQS	349
Chelonia_mydas	LILPCRHLCLCNSCADTLRYQANNCPICRLPFRALLQIRAVRKKPGALSPVSFSPVLAQT	360
Rhinatrema_bivittatum	LILPCRHLCLCNSCADTLRYQANNCPICRLPFRALLQIRAVRKKPGTLSHVSFSPVLAQT	346
Homo_sapiens	LILPCRHLCLCTS CADTLRYQANNCPICRLPFRALLQIRAVRKKPGALSPVSFSPVLAQS	348
Pan_troglodytes	LILPCRHLCLCTS CADTLRYQANNCPICRLPFRALLQIRAVRKKPGALSPVSFSPVLAQS	349
Callithrix_jacchus	LILPCRHLCLCTS CADTLRYQANNCPICRLPFRALLQIRAVRKKPGALSPVSFSPVLAQS	349
Heterocephalus_glaber	LILPCRHLCLCTS CADTLRYQANNCPICRLPFRALLQIRAVRKKPGAVSPIISFSPVLAQS	348
Bos_taurus	LILPCRHLCLCNSCADTLRYQASNCPIICRLPFRALLQIRAVRKKPGALSPISFSPVLAQS	348
Pteropus_alecto	LILPCRHLCLCNSCADTLRYQASNCPIICRLPFRALLQIRAVRKKPGALSPVSFSPVLAQS	348
Equus_caballus	LILPCRHLCLCNSCADTLRYQASNCPIICRLPFRALLQIRAVRKKPGALSPVSFSPVLAQS	348
Mus_musculus	LILPCRHLCLCTS CADTLRYQANNCPICRLPFRALLQIRAVRKKPGALSPISFSPVLAQS	348
Ornithorhynchus_anatinus	LILPCRHLCLCNSCADTLRYQANNCPICRLPFRALLQIRAVRKKPGALSPVSFSPVLAQS	348
Xenopus_tropicalis	LILPCRHLCLCNSCADTLRYQANNCPICRLPFRALLQIRAVRKKPGPLPPIISFSPVLAQS	346
	.....310.....320.....330.....340.....350.....360	

# CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /home/ceglab2/Desktop/ajinkya/pavo/MSD/MSD\_MGRN1.fasta Feb 15 15:33:30 2022

Page 3 of 4

```

::*: :                               .:::*****
Pavo_muticus      VDHDEHSC-----LFKPPKVNTVTLPSRKPKRKTSSDNIPPGEYEPISLLEALNGL 399
Pavo_cristatus    VDHDEHSC-----LFKPPKVNTVTLPSRKPKRKTSSDNIPPGEYEPISLLEALNGL 399
Gallus_gallus     VDHDEHSC-----LFKPPKVNTVTLPSRKPKRKTSSDNIPPGEYEPISLLEALNGL 399
Anas_platyrhynchos VDHDEHSC-----LIKPLKVNTVSLPSRKPRRDTSSDNIPPGEYEPISLLEALNGL 399
Chelonia_mydas    MDHDEHS-----SSDNIPPGEYEPISLLEALNGL 388
Rhinatrema_bivittatum MDHDEHS-----NSENIPPGEYEPISLLEALNGL 374
Homo_sapiens      LEHDEHS-----CPFKKSKPHASLASKKPKRETNSDSVPPGEYEPISLLEALNGL 398
Pan_troglodytes   LEHDEHS-----CPFKKSKPHASLASKKPKRETNSDSIPPGEYEPISLLEALNGL 399
Callithrix_jacchus LEHDEHS-----CPFKKSKPHASLTSKKPKRETSSDSVPPGEYEPISLLEALNGL 399
Heterocephalus_glaber MDHDEHS-----CPFKKSKLHPASLASKKPKRETSSDSIPPGEYEPISLLEALNGL 398
Bos_taurus        MDHDEHSERFPRSTRAHCPFKKSKSHPASLASKKPKGETSADSIPPGEYEPISLLEALNGL 408
Pteropus_allecto  MDHDEHS-----CPFKKSKSHPASLASKKPKRETSSDSIPPGEYEPISLLEALNGL 398
Equus_caballus    MDHDEHS-----CPFKKSKSHPASLASKKPKRETSSDSIPPGEYEPISLLEALNGL 398
Mus_musculus      VDHDEHS-----SSDSIPPGEYEPISLLEALNGL 376
Ornithorhynchus_anatinus MDHDEHS-----CPFKKSKSNPVSLASKKPKRETSSDNIPPGEYEPISLLEALNGL 398
Xenopus_tropicalis LDHDDST-----GADNLPPGEYEPISLLEALNGL 374
.....370.....380.....390.....400.....410.....420

```

```

*: .*: *          **:: *: :          :. : : * .**
Pavo_muticus      RSVSPSIP---SAPLYDEINYSGMVDGMPPANRPLVGM DRAVESHQKGRS-KSPDST 454
Pavo_cristatus    RSVSPSIP---SAPLYDEINYSGMVDGMPPANRPLVGM DRAVESHQKGRS-KSPDST 454
Gallus_gallus     RSVSPSIP---SAPLYDEINYSGMVDGMPPANRPHVGM DRAVESHQKGRS-KSPDST 454
Anas_platyrhynchos RSVSPSIP---SAPLYDEISYSGVVDGMPPASRPLVGM DRAVESHQKGRS-KSPDST 454
Chelonia_mydas    RSISPSIP---SAPLYEEISYTGVDGLPPAGRPLAGIDRAMESGPQKSKRS-KSPDSV 443
Rhinatrema_bivittatum RSISPTIP---SAPLYDDTTYSAIGD-----SRQSVGMDRGTESTHQNKRKRS-KSPDST 424
Homo_sapiens      RAVSPAIP---SAPLYEEITYSGISDGLSQASCPLAIDHILDSSRQKGRPQSKAPDST 454
Pan_troglodytes   RAVSPAIP---SAPLYEEITYSGISDGLSQASCPLAIDHILDSSRQKGRPQSKAPDST 455
Callithrix_jacchus RAVSPAIP---SAPLYEEITYSGVSDGLSQASCPLATIDHILDSSRQKGRPQSKVPDST 455
Heterocephalus_glaber RAVSPAIP---SAPLYEEITYSGVSDGLSQASCPLAGIDQVLETSHQ-SRQRSKSPDST 453
Bos_taurus        RAVPPAVPPAVPTAPLYEEITYSGVSDGLSQASCPLAGIDRMVLESSLQKGRPNKRSKSPDST 468
Pteropus_allecto  RAVSPAIP---SAPLYEEITYSGVSDGLSQASCPLAGLDRIMESSHQKAKPRSKSPDST 454
Equus_caballus    RATSPAIP---SAPLYEEITYSGVSDGLSQASCPLAGIDRIMDSSHQKGRSKSPDST 454
Mus_musculus      RAVSPAIP---SAPLYEEITYSGISDGLSQASCPLAGLDRIMESGLQKGTQSKSPDST 432
Ornithorhynchus_anatinus RSISPAIP---SAPLYEEITYSGISEGLSQAGRPLAGIDRAVENGHQKSKQS-KSPDST 453
Xenopus_tropicalis RSPPPSAP---LYEEIPYS---EGLPARVPP-----ESTHHKAKHI-KSTDSTG 415
.....430.....440.....450.....460.....470.....480

```

```

* *** *****:          :          .          * . .          :
Pavo_muticus      LRSPSSPIHEEDEEKLSEDSQ-PALGGGELVLRETSSPESVAGEEMEDTSSLQKSG-- 511
Pavo_cristatus    LRSPSSPIHEEDEEKLSEDSQ-PALGGGELVLRETSSPESVAGEEMEDSSSLQKSG-- 511
Gallus_gallus     LRSPSSPIHEEDEEKLSEDSQ-PALGGGELVVRETSSPESVAGEEMEDSSSLQKSG-- 511
Anas_platyrhynchos LRSPSSPIHEEDEEKLSEDSQ-PALGGSELVLRETSSPESVAGEEIEEALSLQKSG-- 511
Chelonia_mydas    LRSPSSPIHEEDEEKLSEDSQ-PALSGAELVLRKNSSPGSIVTEEMEGISSLQKSG-- 500
Rhinatrema_bivittatum LRSPSSPIHEEDEEKLLEDITLQSPGSGIQLNLSETSFPEGTISENPQDDTSLRED-- 481
Homo_sapiens      LRSPSSPIHEEDEEKLSEVDAP-PPLGGAELALRESSSPESFITEEVDESSSPQKQ--- 510
Pan_troglodytes   LRSPSSPIHEEDEEKLSEVDAP-PPLGGAELALRESSSPESFITEEVDESSSPKQK--- 511
Callithrix_jacchus LRSPSSPIHEEDEEKLSEVDAP-PLLGGAELALQESSSPESFITEEVDESSPKQK--- 510
Heterocephalus_glaber LLSPSSPIHEEDEEKLSEDLVP-PPPGAELALGESSSPESFITEEVDESSPKQK--- 508
Bos_taurus        LRSPSSPIHEEDEEKLSEDLVP-PPPGAELALGESSSPESFITEEVDESSPKQK--- 516
Pteropus_allecto  LRSPSSPIHEEDEEKLSEVDAP-PLPSGAGLVL---SSSPESFITEEVDESSPKQK--- 508
Equus_caballus    LRSPSSPIHEEDEEKLSEVDAP-PPPSGTGLAL---SSSPESFITEEVDESSPKQK--- 510
Mus_musculus      LRSPSFPIHEEDEEKLSEDSQ-LPPSGVELVLFRESSSPESFITEEVDESSPKQK--- 487
Ornithorhynchus_anatinus LRSPSSPIHEEDEEKLSEDSQ-LPPSGVELVLFRESSSPESFITEEVDESSPKQK--- 509
Xenopus_tropicalis LRSPSSPIHEEDEEKLSEDSQ-LPPSGVELVLFRESSSPESFITEEVDESSPKQK--- 468
.....490.....500.....510.....520.....530.....540

```

## CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /home/ceglab2/Desktop/ajinkya/pavo/MSDA-MGRN1 Feb 15 15:33:30 2022

Page 4 of 4

Species	Sequence	Accession
Pavo_muticus	-----CPPSVE	517
Pavo_cristatus	-----CPPSVE	517
Gallus_gallus	-----CPPSVE	517
Anas_platyrhynchos	-----CPPSVE	517
Chelonia_mydas	-----RLPSME	506
Rhinatrema_bivittatum	-----CISESE	487
Homo_sapiens	-----TRAASIE	517
Pan_troglodytes	-----TRAASIE	518
Callithrix_jacchus	-----TRAPSIE	517
Heterocephalus_glaber	-----SQVASIE	515
Bos_taurus	-----SRVPSIE	523
Pteropus_alecto	-----SRVPSIE	515
Equus_caballus	TLRGGVSSPALLAVSQSAAGCSPGNHAQWSLHNFPEDDPQPLPLLPA <span style="background-color: yellow;">SPSGIGSRVPSIE</span>	570
Mus_musculus	-----SRVPSID	494
Ornithorhynchus_anatinus	-----SQPPSLE	516
Xenopus_tropicalis	-----RIQSP <span style="background-color: yellow;">PP</span>	474

	.. :	..	
<i>Pavo muticus</i>	DVLQDGGCGEHRSLTQSDTDPFVDVYLPGSSDFTQTTLPGRGASPTQPLLFEQTRLHLED	577	
<i>Pavo cristatus</i>	DVLQDGGCGEHRSLTQSDTDPFVDVYLPGSSDFTQTTLPGRGASPTQPLLFEQTRLHLED	577	
<i>Gallus gallus</i>	DVLQDGGCGEHRSLTQSDTDPFVDVYLPGSSDFTQTPPGRGASPTQPLLFEQTRLHLED	577	
<i>Anas platyrhynchos</i>	DVLQDGGCGEHRSLTQSETDPFVDVYLPGSSDFAQALPGRG---PAQPLLLEPTRLHLED	574	
<i>Chelonia mydas</i>	DILPESSCSEHRSLTRSESDPPVDVYLPGSSD-SKITLP SHGANSPTQPLLFDDQFQLCPED	565	
<i>Rhinatrema bivittatum</i>	DIIQECSS-EHQILTKTERERPLDVLCPGALDSKSLTSYGTNTSIHPLLCDSTNIHRED	546	
<i>Homo sapiens</i>	NVLQDSSP-EHCG---RG--PPADIYLPGRPTSMETAHGLATTSPTWPLGGPSDPDSAA	571	
<i>Pan troglodytes</i>	NVLQDSSP-EHCG---RG--PPADIYLPGRPTSMETAHGLATTSPTWPLGGPSDPDSAA	572	
<i>Callithrix jacchus</i>	NVLQDSSP-EHCG---RG--PPADIYLPGWPTSMEMAHS LGTTSPTWPPLGGPSDPDSTA	571	
<i>Heterocephalus glaber</i>	EVLQDGSP-EHQAYASG--PPADICLPGWPTSMESPHSLSTAGPPWPPLGGSSDPDGTS	572	
<i>Bos taurus</i>	NVLQDGSP-EPCGRSQPG--APADVYLPGWSTSMETPRSLHIAGHPQPPLGGPSDPDRAA	580	
<i>Pteropus alecto</i>	NVLQDGRP-ESCGRSQP-----ADIYLP-----ARGPDCSV	546	
<i>Equus caballus</i>	NVLQDGSP-EPCGRGQPG--PPADIYLPGWSTSMEMPCGLRTASPPWPPLGGLSPEPGTT	627	
<i>Mus musculus</i>	DVLQDGSP-QHHGCSQPV--PPADIYLP-----ALGPESCSV	528	
<i>Ornithorhynchus anatinus</i>	DVLQDSSS-DPRS LPKPAGDPFADVYLPGSSASMETFRSHGRSGSPLPPLSAPGLGLEEA	575	
<i>Xenopus tropicalis</i>	EVHKEVSD-----ALELKEEGTQEG-----TALGPDACSI	504	
	.....610.....620.....630.....640.....650.....660		

Species	Sequence	Position
Pavo_muticus	EHRLS-----	582
Pavo_cristatus	EHRLS-----	582
Gallus_gallus	EHRLS-----	582
Anas_platyrhynchos	EHGPERL-----	581
Chelonia_mydas	ARSLSFRPGLRRSOLRPKPHAQALLSPRELGASHAQOQGPOMTL	608
Rhinatrema_bivittatum	EQNFS-----	551
Homo_sapiens	ELTPL-----	576
Pan_troglodytes	ELTPL-----	577
Callithrix_jacchus	ELTSL-----	576
Heterocephalus_glaber	DLTPL-----	577
Bos_taurus	ELTPL-----	585
Pteropus_alecto	GIEE-----	550
Equus_caballus	ELTPL-----	632
Mus_musculus	GIEE-----	532
Ornithorhynchus_anatinus	ELTPL-----	580
Xenopus_tropicalis	GIDE-----	508