

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /home/ceglab2/Desktop/ajinkya/pavo/MSD/PdO/PdO2.pptx

Page 1 of 6

Species	Sequence	Position
Xenopus_tropicalis	MSRTRSQNGG-IG---	12
Rhinatrema_bivittatum	MQRSRGEAGGPIGAL-	15
Homo_sapiens	MARGSALPRRPLL---	13
Pan_troglodytes	MARGSALPRRPLL---	13
Macaca_mulatta	MARGSALPRRPLL---	13
Callithrix_jacchus	MARGAALPRRALL---	13
Heterocephalus_glaber	MAQGSGLPPR-----	10
Mus_musculus	MARGWVRPSRVPL---	13
Bos_taurus	MARGSALRWLCVP---	13
Equus_caballus	MARGSALPLLCVP---	13
Pteropus_alecto	MASVTERESKVLTTGGP	16
Gallus_gallus	MVPAA-----ALRL	9
Anas_platyrhynchos	MVPAAGPAGRRGAAGRI	17
Pavo_cristatus		
Pavo_muticus		
Chelonia_mydas	MVRTGAARGAPAQRGAASSL	21
Sarcophilus_harrisii	MNSNKTALHTTTVTSAAKSRSKLKTQGTPLCDWSEGGDAPAAAGAPGSAELGRIPAKSSL	60
Latimeria_chalumnae		

Species	Sequence	Position
Xenopus_tropicalis	-----CAPLGFIVAAAILLALQAS-----GEMEIP	36
Rhinatrema_bivittatum	-----LRALLLLLLLAGPRPVLHAA-----GEMELP	40
Homo_sapiens	-----CIPAVWAAAAALLLSVSRTS-----GEVEVL	38
Pan_troglodytes	-----CIPAVWAAAAALLLSVSRTS-----GEVEVL	38
Macaca_mulatta	-----CIPAVWAGAAALLLSVSRAS-----GEVEVP	38
Callithrix_jacchus	-----CFPAVCAAAAGLLLSVSRTS-----GEVEVP	38
Heterocephalus_glaber	-----CAPTVWAAVALLLSSPQTS-----GEVEVP	35
Mus_musculus	-----CARAVWTAAALLLWTPWTA-----GEVEDS	38
Bos_taurus	-----AVWAVAALLLCVSRAS-----GQAEVP	35
Equus_caballus	-----AVWAAAAALLLSVPRTS-----GEVEVP	35
Pteropus_alecto	VH-----LPSSVLRPFRFVLSVMYTCPGQAEVP	44
Gallus_gallus	LA-----LLVAAVLLRLRAA-----GEMEIP	30
Anas_platyrhynchos	LT-----LLAAAAILRLRAA-----GEMEIP	38
Pavo_cristatus	-----	
Pavo_muticus	-----	
Chelonia_mydas	LA-----LLAASSLLLLLYAA-----GEMEIP	42
Sarcophilus_harrisii	VAPGROPEQGEPLHSMARAGEAQGFQKLLPOLAALYAMAFVAFPPPLQMPGAS-----GEMEIP	119
Latimeria_chalumnae	-----DEYHTLPSG-----MVH	12

<i>Xenopus tropicalis</i>	DLNDPLGQMDSHDRLGATPRGYFLTFLFEPVNNITIVQGQAATLHCKVSGNPLPNVKWLKN	96
<i>Rhinatrema bivittatum</i>	DSRDPLGQADGHDRLLPPTQGYFLTFFVEPVNNITIVQGQTATLHCRVEGNPLPNIRWLKN	100
<i>Homo sapiens</i>	DPNDPLGPLDGGQDGIPTLKG YFLNFLEPVNNITIVQGQTAILHCKVAGNPPPNVRWLKN	98
<i>Pan troglodytes</i>	DPNDPLGPLDGGQDGIPTLKG YFLNFLEPVNNITIVQGQTAILHCKVAGNPPPNVRWLKN	98
<i>Macaca mulatta</i>	DPNDPLGPLDGGQDGIPTLKG YFLNFLEPVNNITIVQGQTAILHCKVAGNPPPNVRWLKN	98
<i>Callithrix jacchus</i>	DLNDPLGPLDGGQDSPIPTLKG YFLNFLEPVNNITIVQGQTAILHCKVAGNPPPNVRWLKN	98
<i>Heterocephalus glaber</i>	DPSPDLGHLDDGQEGPIPTLKG YFLNFLEPVNNITIVQGQTAVLHCKVAGNPPPNVRWLKN	95
<i>Mus musculus</i>	EAIDTLGQPDGPDSPPLTLKG YFLNFLEPVNNITIVQGQTAILHCKVAGNPPPNVRWLKN	98
<i>Bos taurus</i>	DSSDPLGQLDGHDSVPPTLKG YFLNFLEPVNNITIVQGQTAILHCKVAGNPPPSVRWLKN	95
<i>Equus caballus</i>	DPNDPLGQLDGHDSPIPTLKG YFLNFLEPVNNITIVQGQTAILHCKVAGNPPPSVRWLKN	95
<i>Pteropus alecto</i>	DPSSDLGQVDGHDSPIPTLKG YFLNFLEPVNNITIVQGQTAILHCKVAGNPPPSVRWLKN	104
<i>Gallus gallus</i>	DSNDPLGHVGELEPPIPTPKGYFLTFLFEPVNNITIVQGQTAILHCKVAGNPSPNVRWLKN	90
<i>Anas platyrhynchos</i>	DSNDPLGHVDGLERPIPTPKGYFLTFLFEPVNNITIVQGQTAILHCKVAGNPSPNVRWLKN	98
<i>Pavo cristatus</i>	-----	
<i>Pavo muticus</i>	-----	
<i>Chelonia mydas</i>	DSNDPLSQVDGHDRIPTPKGYFLTFLFEPVNNITIVQGQTAILHCKVAGNPSPNVRWLKN	102
<i>Sarcophilus harrisii</i>	DTNDPLSQLDGPDSSIPTPRGYFLNFLEPVNNITIVQGQTAILYCKVEGNPPPNIRWLKN	179
<i>Latimeria chalumnae</i>	KDKFFMGNQFGSTGHRASCEFFLTFLFEPVNNITIVQGMATLHCKVAGNPAPTIIKWLN	72
	.....130.....140.....150.....160.....170.....180	

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /home/ceglab2/Desktop/ajinkya/pavo/MSD/MSD_R0121p Feb 15 15:25:27 2022

Page 2 of 6

Xenopus_tropicalis	DAPVVQEPKRITIRKTDYGSRLRIQDLDTDTGYYQCVATNGIKTITATGVLFVRLG--P	154
Rhinatrema_bivittatum	DAPVVQEPKRITIRKTDYGSRLRIQDLDTDTGYYQCVATNGIKTITATGVLFVRLG--P	158
Homo_sapiens	DAPVVQEPRIIRKTEYGSRLRIQDLDTDTGYYQCVATNGMKTITATGVLFVRLG--P	156
Pan_troglodytes	DAPVVQEPRIIRKTEYGSRLRIQDLDTDTGYYQCVATNGMKTITATGVLFVRLG--P	156
Macaca_mulatta	DAPVVQEPRIIRKTEYGSRLRIQDLDTDTGYYQCVATNGMKTITATGVLFVRLG--P	156
Callithrix_jacchus	DAPVVQEPRIIRKTEYGSRLRIQDLDTDTGYYQCVATNGMKTITATGVLFVRLG--P	156
Heterocephalus_glaber	DAPVVQEPRIIRKTEYGSRLRIQDLDTDTGYYQCVATNGVKTITATGVLYVRLG--P	153
Mus_musculus	DAPVVQEPRIIRKTEYGSRLRIQDLDTDTGYYQCVATNGVKTITATGVLYVRLG--P	156
Bos_taurus	DAPVVQEPRIIRKTEYGSRLRIQDLDTDTGYYQCVATNGVKTITATGVLFVRLG--P	153
Equus_caballus	DAPVVQEPRIIRKTEYGSRLRIQDLDTDTGYYQCVATNGVKTITATGVLFVRLG--P	153
Pteropus_alecto	DAPVVQEPRIIRKTEYGSRLRIQDLDTDTGYYQCVATNGVKTITATGVLFVRLG--P	162
Gallus_gallus	DAPVVQEPRIIRKTDYGSRLRIQDLDTDTGYYQCVASNGMKTITATGVLFVRLG--P	148
Anas_platyrhynchos	DAPVVQEPRIIRKTDYGSRLRIQDLDTDTGYYQCVASNGMKTITATGVLFVRLG--P	156
Pavo_cristatus	-----	
Pavo_muticus	-----	
Chelonia_mydas	DAPVVQEPRIIRKTDYGSRLRIQDLDTDTGYYQCVATNGMKTITATGVLFVRLG--P	160
Sarcophilus_harrisii	DAPVVQEPRIIRKTDYGSRLRIQDLDTDTGYYQCVATNGMKTITATGVLFVRLG--P	237
Latimeria_chalumnae	DAPVVQEPRIIRKTDYGSRLRIQDLDTDTGYYQCVASNSIKTITGTGLLLVKLDQTP	132
	.....190.....200.....210.....220.....230.....240	

	..* : :***** :***** :***** :***** :***** :*****	
Xenopus_tropicalis	THSPNPNFQDDYHKGDFCQPYRGIACARFIGNRTIYVDSLQMOGEIENRITAAFTMIGTS	214
Rhinatrema_bivittatum	THSPNPNFQDDYHKGDFCQPYRGIACARFIGNRTIYVDSLQMOGEIENRITAAFTMIGTS	218
Homo_sapiens	THSPNPNFQDDYHKGDFCQPYRGIACARFIGNRTIYVDSLQMOGEIENRITAAFTMIGTS	216
Pan_troglodytes	THSPNPNFQDDYHKGDFCQPYRGIACARFIGNRTIYVDSLQMOGEIENRITAAFTMIGTS	216
Macaca_mulatta	THSPNPNFQDDYHKGDFCQPYRGIACARFIGNRTIYVDSLQMOGEIENRITAAFTMIGTS	216
Callithrix_jacchus	THSPNPNFQDDYHKGDFCQPYRGIACARFIGNRTIYVDSLQMOGEIENRITAAFTMIGTS	216
Heterocephalus_glaber	THSPNPNFQDDYHKGDFCQPYRGIACARFIGNRTIYVDSLQMOGEIENRITAAFTMIGTS	213
Mus_musculus	THSPNPNFQDDYHKGDFCQPYRGIACARFIGNRTIYVDSLQMOGEIENRITAAFTMIGTS	216
Bos_taurus	THSPNPNFQDDYHKGDFCQPYRGIACARFIGNRTIYVDSLQMOGEIENRITAAFTMIGTS	213
Equus_caballus	THSPNPNFQDDYHKGDFCQPYRGIACARFIGNRTIYVDSLQMOGEIENRITAAFTMIGTS	213
Pteropus_alecto	THSPNPNFQDDYHKGDFCQPYRGIACARFIGNRTIYVDSLQMOGEIENRITAAFTMIGTS	222
Gallus_gallus	THSPNPNFQDDYHKGDFCQPYRGIACARFIGNRTIYVDSLQMOGEIENRITAAFTMIGTS	208
Anas_platyrhynchos	THSPNPNFQDDYHKGDFCQPYRGIACARFIGNRTIYVDSLQMOGEIENRITAAFTMIGTS	216
Pavo_cristatus	-----REDYHKGDFCQPYRGIACARFIGNRTIYVDSLQMOGEIENRITAAFTMIGTS	52
Pavo_muticus	-----REDYHKGDFCQPYRGIACARFIGNRTIYVDSLQMOGEIENRITAAFTMIGTS	52
Chelonia_mydas	THSPNPNFQDDYHKGDFCQPYRGIACARFIGNRTIYVDSLQMOGEIENRITAAFTMIGTS	220
Sarcophilus_harrisii	THSPNPNFQDDYHKGDFCQPYRGIACARFIGNRTIYVDSLQMOGEIENRITAAFTMIGTS	297
Latimeria_chalumnae	THSPKVFPEKD-HEDGFCQPYRGAACARFIGNRTIYVENLQMOGETENQITEFAMKYSLK	191
	.....250.....260.....270.....280.....290.....300	

	. . * ** : . * : * : : . * . : . : * . : . * . :	
Xenopus_tropicalis	THLSQCSQFAIPSFCHVFVPLCDD--QTSKPRELCRDECEVLENDLCRQEYNIARSNPL	272
Rhinatrema_bivittatum	THLSQCSQFAIPSFCHVFVPLCEESSRTPKPRELCRDECEVLENDLCRQEYNIARSNPL	278
Homo_sapiens	THLSQCSQFAIPSFCHVFVPLCDARSRTPKPRELCRDECEVLESIDLQREYTIARSNPL	276
Pan_troglodytes	THLSQCSQFAIPSFCHVFVPLCDARSRAPKPRELCRDECEVLESIDLQREYTIARSNPL	276
Macaca_mulatta	THLSQCSQFAIPSFCHVFVPLCDARSRAPKPRELCRDECEVLESIDLQREYTIARSNPL	276
Callithrix_jacchus	THLSQCSQFAIPSFCHVFVPLCDARSRAPKPRELCRDECEVLESIDLQREYTIARSNPL	276
Heterocephalus_glaber	THLSQCSQFAIPSFCHVFVPLCDARSRAPKPRELCRDECEVLESIDLQREYTIARSNPL	273
Mus_musculus	THLSQCSQFAIPSFCHVFVPLCDARSRAPKPRELCRDECEVLENDLCRQEYTIARSNPL	276
Bos_taurus	THLSQCSQFAIPSFCHVFVPLCDARSRAPKPRELCRDECEVLESIDLQREYTIARSNPL	273
Equus_caballus	THLSQCSQFAIPSFCHVFVPLCDARSRAPKPRELCRDECEVLESIDLQREYTIARSNPL	273
Pteropus_alecto	THLSQCSQFAIPSFCHVFVPLCDARSRAPKPRELCRDECEVLESIDLQREYTIARSNPL	282
Gallus_gallus	THLSQCSQFAIPSFCHVFVPLCDARSRTPKPRELCRDECEVLENDLCRQEYNIARSNPL	268
Anas_platyrhynchos	THLSQCSQFAIPSFCHVFVPLCDARSRTPKPRELCRDECEVLENDLCRQEYNIARSNPL	276
Pavo_cristatus	THLSQCSQFAIPSFCHVFVPLCDARSRTPKPRELCRDECEVLENDLCRQEYNIARSNPL	112
Pavo_muticus	THLSQCSQFAIPSFCHVFVPLCDARSRTPKPRELCRDECEVLENDLCRQEYNIARSNPL	112
Chelonia_mydas	THLSQCSQFAIPSFCHVFVPLCDARSRTPKPRELCRDECEVLENDLCRQEYNIARSNPL	280
Sarcophilus_harrisii	THLSQCSQFAIPSFCHVFVPLCDARSRTPKPRELCRDECEVLENDLCRQEYNIARSNPL	357
Latimeria_chalumnae	VCTKIQVYQFTSASSLGAGY-WCVRTSYGNSQHEHGAHESICGRSFCFSFGSYHFSKI	250
	.....310.....320.....330.....340.....350.....360	

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /home/ceglab2/Desktop/ajinkya/pavo/MSD/P40/P2p Feb 15 15:25:27 2022

Page 3 of 6

	::: * :	:	*	:::****:* :***	*:***	
<i>Xenopus_tropicalis</i>	ILMQHLPLNCEELPLPES	PEAAN	CMRIGIPVEKLNRYQ	QCYNGTGT	DYRGSVIVTKSGHQ	332
<i>Rhinatrema_bivittatum</i>	ILMQLOLPNCEELPLPER	PEASS	CMRIGIPAEKLNRYHQ	CYNGSGSDYRGTVS	SSTTKSGHQ	338
<i>Homo_sapiens</i>	ILMRLQLPKCEALPMPES	SPDAAN	CMRIGIPAERLGRYHQ	CYNGSGMDYRGTA	STTKSGHQ	336
<i>Pan_troglodytes</i>	ILMRLQLPKCEALPMPES	SPDAAN	CMRIGIPAERLGRYHQ	CYNGSGMDYRGTA	STTKSGHQ	336
<i>Macaca_mulatta</i>	ILMRLQLPKCEALPMPES	SPDAAN	CMRIGIPAERLGRYHQ	CYNGSGTDYRGTA	STTKSGHQ	336
<i>Callithrix_jacchus</i>	ILMRLQLPKCEALPMPES	SPDAAN	CMRIGIPAERLGRYHQ	CYNGSGTDYRGTA	STTKSGHQ	336
<i>Heterocephalus_glaber</i>	LLMRLQLPKCEVLPMPES	SPDAAN	CMRIGIPVERLGRYHQ	CYNGSGSDYRGTA	STTRSGHQ	333
<i>Mus_musculus</i>	ILMRLQLPKCEALPMPES	SPDAAN	CMRIGIPAERLGRYHQ	CYNGSGADYRGMA	STTKSGHQ	336
<i>Bos_taurus</i>	ILMRLQLPKCEALPMPES	SPDAAN	CMRIGIPAERLGRYHQ	CYNGSGTDYRGTA	STTKSGHQ	333
<i>Equus_caballus</i>	ILMRLQLPKCEALPMPES	SPAAAN	CMRIGIPAERLGRYHQ	CYNGSGTDYRGTA	STTKSGHQ	333
<i>Pteropus_alecto</i>	ILMRLQLPKCEALPMPES	SPDAAN	CMRIGIPAERLGRYHQ	CYNGSGTDYRGTA	STTKSGHQ	342
<i>Gallus_gallus</i>	ILMQLOLPKCEDLPRPD	TLEAAN	CIRIGIPVERLSRYHQ	CYNGSGADYRGTVS	VITKSGHI	328
<i>Anas_platyrhynchos</i>	ILMQLOLPKCEDLPRPD	TLEAAN	CIRIGIPVERLSRYHQ	CYNGSGADYRGTVS	VITKSGHT	336
<i>Pavo_cristatus</i>	ILMQLOLPKCEDLPRPD	TLEAAN	CIRIGIPVERLSRYHQ	CYNGSGADYRGTVS	ITKSGHI	172
<i>Pavo_muticus</i>	ILMQLOLPKCEDLPRPD	TLEAAN	CIRIGIPVERLSRHQ	CYNGSGADYRGTVS	ITKSGHI	172
<i>Chelonia_mydas</i>	ILMQLOLPKCEDLPLPD	TLEAAN	CIRIGIPVERLNRHQ	CYNGSGADYRGTI	SVTKSGHN	340
<i>Sarcophilus_harrisii</i>	ILMQLOLPKCEDLPLPES	AAEAAAN	CMRIGIPVERLN	QFHQCYNGSGSNYRG	TISTTQSGHQ	417
<i>Latimeria_chalumnae</i>	VMVLLGVEVDYSIDPPTD	-----	-----	HHCYNGSGADYRGTVS	VITKSGHS	291
	.....370.....380.....390.....400.....410.....420					

	** * : **.* *: :.***:*****.* :.***** *: :.***:***:.* * .	
Xenopus_tropicalis	CQPWSNQVPHSHSLSSADHPEIGGGHAYCRNPGGQMEGPWCFTLNKHVRMELCDIPACRT	392
Rhinatrema_bivittatum	CQPWSSQFPHSHHLTSAEFPEIGGGHAYCRNPGSQSEGPWCFTQNKNVRMELCEVPACST	398
Homo_sapiens	CQPWALQHPHSHHLSSTDFPELGGGHAYCRNPGGQMEGPWCFTQNKNVRMELCDVPSCSP	396
Pan_troglodytes	CQPWALQHPHSHHLSSTDFPELGGGHAYCRNPGGQMEGPWCFTQNKNVRMELCDVPSCSP	396
Macaca_mulatta	CQPWALQHPHSHHLSSTDFPELGGGHAYCRNPGGQMEGPWCFTQNKNVRMELCDVPSCSP	396
Callithrix_jacchus	CQPWALQHPHSHRLSSTDFPELGGGHAYCRNPGGQMEGPWCFTQNKNVRMELCDVPSCSP	396
Heterocephalus_glaber	CQPWALQHPHSHQLSSSDFPELGGGHAYCRNPGGQMEGPWCFTQNKNVRMELCDVPSCSP	393
Mus_musculus	CQPWALQHPHSHRLSSTEFPELGGGHAYCRNPGGQMEGPWCFTQNKNVRLVELCDVPSCSP	396
Bos_taurus	CQPWALQHPHSHHLTSTDFPELGGGHAYCRNPGGQMEGPWCFTQNKNVRMELCDVPSCSP	393
Equus_caballus	CQPWALQHPHSHHLTSADFPELGGGHAYCRNPGGQMEGPWCFTQNKNVRMELCDVPSCSP	393
Pteropus_alecto	CQPWALQHPHSHHLTSAFPELGGGHAYCRNPGGQMEGPWCFTQNKNVRMELCDVPSCSP	402
Gallus_gallus	CQHWDSSPHNHDLTSTQFPELGGGHAYCRNPGGQMDGPWCFTKNKNVRMELCDIPSCSP	388
Anas_platyrhynchos	CQLWDSQSPHNHDLTSAQFPELGGGHAYCRNPGGQMDGPWCFTKNKNVRMELCDIPSCSP	396
Pavo_cristatus	CQHWDSSPHNHDLTSTQFPELGGGHAYCRNPGGQMDGPWCFTKNKNVRMELCDIPSCSP	232
Pavo_muticus	CQHWDSSPHNHDLTSTQFPELGGGHAYCRNPGGQMDGPWCFTKNKNVRMELCDIPSCSP	232
Chelonia_mydas	CQHWNSSPHNHDLTSTQFPELGGGHAYCRNPGSQMDGPWCFTQNKNVRMELCEVPSCSP	400
Sarcophilus_harrisii	CQAWNVOYPHSHHLSMSDFPEIAGGHAYCRNPGGQMEGPWCFTQNKNVRMELCDIPSCSP	477
Latimeria_chalumnae	CQPWNSRFPHSHHLTSLFPELRGGHAYCRNPGGQMEAPWCFTQENNVRLCNIPVCNP	351
	.....430.....440.....450.....460.....470.....480	

	.. :.* *****:***:*****:*****:	* **	****:***:*
<i>Xenopus_tropicalis</i>	RDNTKMEILYILVPSIAIPLVIACFFFLVCMCRNKQKASASTPQRRQLMASPSQDMEMPL		452
<i>Rhinatrema_bivittatum</i>	RDKTKMEILYILVPSIAIPLVIACLFFLVCMCRNKQKTASTPQRRQLMASPSQDMEMPL		458
<i>Homo_sapiens</i>	RDSSKMGILYILVPSIAIPLVIACLFFLVCMCRNKQKASASTPQRRQLMASPSQDMEMPL		456
<i>Pan_troglodytes</i>	RDSSKMGILYILVPSIAIPLVIACLFFLVCMCRNKQKASASTPQRRQLMASPSQDMEMPL		456
<i>Macaca_mulatta</i>	RDSSKMGILYILVPSIAIPLVIACLFFLVCMCRNKQKASASTPQRRQLMASPSQDMEMPL		456
<i>Callithrix_jacchus</i>	RDSSKMGILYILVPSIAIPLVIACLFFLVCMCRNKQKASASMPQRRQLMASPSQDMEMPL		456
<i>Heterocephalus_glaber</i>	RDSSKMGILYILVPSIAIPLVIACLFFLVCMCRNKQKASGSVPQRRQLMASPSQDMEMPL		453
<i>Mus_musculus</i>	RDGSKMGILYILVPSIAIPLVIACLFFLVCMCRNKQKASASTPQRRQLMASPSQDMEMPL		456
<i>Bos_taurus</i>	QDSSRMGILYILVPSIAIPLVIACLFFLVCMCRNKQKASASTPQRRQLMASPSQDVEMPL		453
<i>Equus_caballus</i>	QDGSRMGILYILVPSIAIPLVIACLFFLVCMCRNKQKASASTPQRRQLMASPSQDVEMPL		453
<i>Pteropus_alecto</i>	QDGSRMGILYILVPSIAIPLVIACLFFLVCMCRNKQKALASTPPRRQLTASPSQDVEMPL		462
<i>Gallus_gallus</i>	RDNSKMGILYILVPSIAIPLIIACLFFLVCMCRNKQKASATTPQRRQLMASPSQDMEMPL		448
<i>Anas_platyrhynchos</i>	RDNSKMGILYILVPSIAIPLVIACLFFLVCMCRNKQKASAATPQRRQLMASPSQDMEMPL		456
<i>Pavo_cristatus</i>	RDNSKMGILYILVPSIAIPLVIACLFFLVCMCRNKQKASATTPQRRQLMASPSQDMEMPL		292
<i>Pavo_muticus</i>	RDNSKMGILYILVPSIAIPLVIACLFFLVCMCRNKQKASATTPQRRQLMASPSQDMEMPL		292
<i>Chelonia_mydas</i>	RDNSKMGILYILVPSIAIPLVIACLFFLVCMCRNKQKASAATPQRRQLMASPSQDMEMPL		460
<i>Sarcophilus_harrisii</i>	QDNSKMGILYILVPSIAIPLIIACLFFLVCMCRNKQKASGITPQRRQLMASPSQDMEMPL		537
<i>Latimeria_chalumnae</i>	RENSKMEILYILVPSIAIPLVIACLFFLVCMCRNKHKASTAIPQRRQMVSPSEDMEMPL		411
	.....490.....500.....510.....520.....530.....540		

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /home/ceglab2/Desktop/ajinkya/pavo/MSD/P40/P2p Feb 15 15:25:27 2022

Page 4 of 6

	:.*** *.*:.*.:**::**:*:**:***** ***** .. *. * **.:*****.:	
Xenopus_tropicalis	MNQHKQ QPKVKEINLSTVRFMEELGEDRFGKVYKGHLFGTTPGEQTQTVAIAIKTLKDKVEV	512
Rhinatrema_bivittatum	MNQHKP QAKLREINLSTVRFMEELGEDRFGKVYKGHLFGTAPGEQTQAIAIAIKTLKDKVEV	518
Homo_sapiens	INQHK- QAKLKEISLSAVRFMEELGEDRFGKVYKGHLFGPAPGEQTQAVAIAIKTLKDKAEG	515
Pan_troglodytes	INQHK- QAKLKEISLSAVRFMEELGEDRFGKVYKGHLFGPAPGEQTQAVAIAIKTLKDKAEG	515
Macaca_mulatta	INQHK- QAKLKEISLSAVRFMEELGEDRFGKVYKGHLFGPAPGEQTQAVAIAIKTLKDKAEG	515
Callithrix_jacchus	INQHK- QAKLKEISLSAVRFMEELGEDRFGKVYKGHLFGPAPGEQTQAVAIAIKTLKDADG	515
Heterocephalus_glaber	ISQHK- QAKLKEISLSAVRFMEELGEDRFGKVYKGHLFGPGPSEQTQAVAIAIKTLKDKAEG	512
Mus_musculus	ISQHK- QAKLKEISLSTVRFMEELGEDRFGKVYKGHLFGPAPGEPTQAVAIAIKTLKDKAEG	515
Bos_taurus	INQHK- QAKLKEISLSTVRFMEELGEGRFGKVYKGHLFGPAPGEQTQAVAIAIKTLKDKAEG	512
Equus_caballus	IGQHKQ QAKLKEISLSTVRFMEELGEDRFGKVYKGHLFGTTPGEQTQAVAIAIKTLKDKAEG	513
Pteropus_alecto	IGQHK- QAKLKEISLSTVRFMEELGEDRFGKVYKGHLFGPAPGEPTQAVAIAIKTLKDKAEG	521
Gallus_gallus	INQHK- QTKLKEINLSTVRFMEELGEERFGKVYKGHLFGTAPGEQTQAVAIAIKTLKDKAEL	507
Anas_platyrhynchos	INQHK- QAKLKEINLSTVRFMEELGEERFGKVYKGHLFGTAPGEQTQAVAIAIKTLKDKAEL	515
Pavo_cristatus	INQHK- QAKLKEINLSTVRFMEELGEERFGKVYKGHLFGTAPGEQTQAVAIAIKTLKDKAEL	351
Pavo_muticus	INQHK- QAKLKEINLSTVRFMEELGEERFGKVYKGHLFGTAPGEQTQAVAIAIKTLKDKAEL	351
Chelonia_mydas	INQHK- QTKLKEINLSTVRFMEELGEERFGKVYKGHLFGTTPGEQTQAIAIAIKTLKDKAEL	519
Sarcophilus_harrisii	INQHK- QAKLKEINLSTIRFMEELGEDRFGKVYKGHLFGTTPGEQTQTVAIAIKTLKDKAEL	596
Latimeria_chalumnae	INQHK- QAKLKEVNLSAVRLFEELEDGRFGKVYKGHLYSAAPGEQTQOVAIAIKTLKDKVEV	470
	.....550.....560.....570.....580.....590.....600	

	*****::**::*:*****:****:* :*:**::*:**.* *****	
Xenopus_tropicalis	ALREEFKHEAMMRSLQHPNIVCLIGTVTKEQPMVMVFSYSPLSDLHEFLVMRSPHSDVG	572
Rhinatrema_bivittatum	ALREEFKHEAMMRSLQHPNIVCLLGIVTKEQPMCMIFGYSAHSDLHEFLVMRSPHSDVG	578
Homo_sapiens	PLREEFRHEAMLRARLQHPNVVCLLGVVTKDQPLSMIFS YCSHGD LHEFLVMRSPHSDVG	575
Pan_troglodytes	PLREEFRHEAMLRARLQHPNIVCLLGVVTKDQPLSMIFS YCSHGD LHEFLVMRSPHSDVG	575
Macaca_mulatta	PLREEFRHEAMLRARLQHPNIVCLLGVVTKDQPLSMIFS YCSHSDLHEFLVMRSPHSDVG	575
Callithrix_jacchus	PLREEFRHEAMLRARLQHPNIVCLLGVVTKDQPLSMIFS YCSHGD LHEFLVMRSPHSDVG	575
Heterocephalus_glaber	PLREEFRHEAMLRARLQHPNIVCLLGVVTKDQPLSMIFS YCSHSDLHEFLVMRSPHSDVG	572
Mus_musculus	PLREEFRQEAMLRARLQHPNIVCLLGVVTKDQPLSMIFS YCSHGD LHEFLVMRSPHSDVG	575
Bos_taurus	PLREEFRHEALLRARLQHPNIVCLLGVVTKDQPLSMIFS YCPHGD LHEFLVMRSPHSDVG	572
Equus_caballus	PLREEFRHEAMLRARLQHPNIVCLLGVVTKDQPLSMIFS YCSHGD LHEFLVMRSPHSDVG	573
Pteropus_alecto	PLREEFRHEAMLRARLQHPNIVCLLGVVTKDQPLSMIFS YCSHGD LHEFLVMRSPHSDVG	581
Gallus_gallus	SLREEFKHEAMMRSLQHPNIVCLLGVVTKDQPLSMIFS YCSHSDLHEFLVMRSPHSDVG	567
Anas_platyrhynchos	ALREEFKHEAMMRSLQHPNIVCLLGVVTKDQPLSMIFS YCSHSDLHEFLVMRSPHSDVG	575
Pavo_cristatus	SLREEFKHEAMMRSLQHPNIVCLLGVVTKDQPLSMIFS YCSHSDLHEFLVMRSPHSDVG	411
Pavo_muticus	SLREEFKHEAMMRSLQHPNIVCLLGVVTKDQPLSMIFS YCSHSDLHEFLVMRSPHSDVG	411
Chelonia_mydas	ALREEFKHEAMMRSLQHPNIVCLLGVVTKDQPLSMIFS YCSHSDLHEFLVMRSPHSDVG	579
Sarcophilus_harrisii	SLREEFKHEAMIRSLQHPNIVCLLGVVTKDQPLSMIFS YCSHSDLHEFLVMRSPHSDVG	656
Latimeria_chalumnae	PLREEFRHEAMMRSLQHPNIVCLLGVVTKDQPLSMIFS YTPHGD LHEFLVMRSPHSDVG	530
	.....610.....620.....630.....640.....650.....660	

	*:***:***:** .** : .*:***:**.***:*****:** ** *:***:*****	
<i>Xenopus_tropicalis</i>	STDDDKTVKSTLEPTDFLHIVTQIAAGMEFLSSHVVHKDLAARNVLVFDKLSVKISDLG	632
<i>Rhinatrema_bivittatum</i>	STDDDKTVKSALEPSDFLHIVTQIAAGMEFLSSHVVHKDLATRNVLVFDKLNMKISDLG	638
<i>Homo_sapiens</i>	STDDDRTVKSALEPPDFVHLVAQIAAGMEYLSHHVVHKDLATRNVLVYDKLNVKISDLG	635
<i>Pan_troglodytes</i>	STDDDRTVKSALEPPDFVHLVAQIAAGMEYLSHHVVHKDLATRNVLVYDKLNVKISDLG	635
<i>Macaca_mulatta</i>	STDDDRTVKSALEPPDFVHLVAQIAAGMEYLSHHVVHKDLATRNVLVYDKLNVKISDLG	635
<i>Callithrix_jacchus</i>	SADDDRIVKSALESPDFVLLVAQIAAGMEYLSHHVVHKDLATRNVLVYDKLTVKISDLG	635
<i>Heterocephalus_glaber</i>	STDDDRTVKSALEPPDFVHVAQIAAGMEYLSHHVVHKDLATRNVLVYDKLTVKISDLG	632
<i>Mus_musculus</i>	STDDDRTVKSALEPPDFVHVVAQIAAGMEFLSSHVVHKDLATRNVLVYDKLNVKISDLG	635
<i>Bos_taurus</i>	STDDDRTVKSALEPPDFVHVVAQIAAGMEYLSHHVVHKDLATRNVLVYDKLTVKISDLG	632
<i>Equus_caballus</i>	STDDDRTVKSALEPPDFVHVVAQIASGMEYLSHHVVHKDLATRNVLVYDKLNVKISDLG	633
<i>Pteropus_alecto</i>	STDDDRTVKSALEPADFFHVVAQIASGMEYLSHHVVHKDLATRNVLVYDKLSVKISDLG	641
<i>Gallus_gallus</i>	STDDDKTVKSTLEPADFFHIVTQIAAGMEYLSHHVVHKDLATRNILVFDKLNVKISDLG	627
<i>Anas_platyrhynchos</i>	STDDDKTVKSTLEPADFFHIVTQIAAGMEYLSHHVVHKDLATRNILVFDKLNVKISDLG	635
<i>Pavo_cristatus</i>	STDDDKTVKSTLEPADFFHIVTQIAAGMEYLSHHVVHKDLATRNILVFDKLNVKISDLG	471
<i>Pavo_muticus</i>	STDDDKTVKSTLEPADFFHIVTQIAAGMEYLSHHVVHKDLATRNILVFDKLNVKISDLG	471
<i>Chelonia_mydas</i>	STDDDKTVKSALEPADFFHIVTQVAGMEYLSHHIVHKDLATRNILVFDKLNVKISDLG	639
<i>Sarcophilus_harrisii</i>	STDDDKTVKSTLEPADFFHIIVQVAGMEYLSHHVIHKDLATRNILVFDKLNVKISDLG	716
<i>Latimeria_chalumnae</i>	STDDDKTVKSTLELADFLHILTQIAAGMEYLSHHIVHKDLATRNVLVCDKLNMKISDLG	590
	.....670.....680.....690.....700.....710.....720	

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /home/ceglab2/Desktop/ajinkya/pavo/MSD/P40/P2p Feb 15 15:25:27 2022

Page 5 of 6

	*****:***:** * . :*****:***: :** * *****:***:*****	
Xenopus_tropicalis	LFREVYAADYYKLMGNSMLPIRWMSPEAITYGKCSVDSDIWSYGVLLWEIFSYGLQPYCG	692
Rhinatrema_bivittatum	LFREVYSADYYKLMGNLLPIRWMSPEAIMYGKFSIDSDIWSYGVVLWEIFSYGLQPYCG	698
Homo_sapiens	LFREVYAADYYKLLGNSLLPIRWMAPEAIMYGKFSIDSDIWSYGVVLWEVFSYGLQPYCG	695
Pan_troglodytes	LFREVYAADYYKLLGNSLLPIRWMAPEAIMYGKFSIDSDIWSYGVVLWEVFSYGLQPYCG	695
Macaca_mulatta	LFREVYAADYYKLLGNSLLPIRWMAPEAIMYGKFSIDSDIWSYGVVLWEVFSYGLQPYCG	695
Callithrix_jacchus	LFREVYAADYYKLLGNSLLPIRWMAPEAITYGKFSIDSDIWSYGVVLWEVFSYGLQPYCG	695
Heterocephalus_glaber	LFREVYSADYYKLMGNSLLPIRWMSPEAIVYGKFSIDSDIWSYGVVLWEVFSYGLQPYCG	692
Mus_musculus	LFREVYSADYYKLMGNSLLPIRWMSPEAVMYGKFSIDSDIWSYGVVLWEVFSYGLQPYCG	695
Bos_taurus	LFREVYSADYYKLTGNALLPIRWMSPEAIMYGKFSVDSDIWSYGVVLWEVFSYGLQPYCG	692
Equus_caballus	LFREVYSADYYKLMGSALLPIRWMSPEAIMYGKFSVDSDIWSYGVVLWEVFSYGLQPYCG	693
Pteropus_alecto	LFREVYSADYYKLMGSALLPIRWMSPEAIMYGKFSVDSDIWSYGVVLWEVFSYGLQPYCG	701
Gallus_gallus	LFREVYAADYYKLMGNSLLPIRWMSPEAIMFGKFSIDSDIWSYGVVLWEVFSYGLQPYCG	687
Anas_platyrhynchos	LFREVYAADYYKLMGNSLLPIRWMSPEAIMYGKFSIDSDIWSYGVVLWEVFSYGLQPYCG	695
Pavo_cristatus	LFREVYAADYYKLMGNSLLPIRWMSPEAIMYGKFSIDSDIWSYGVVLWEVFSYGLQPYCG	531
Pavo_muticus	LFREVYAADYYKLMGNSLLPIRWMSPEAIMYGKFSIDSDIWSYGVVLWEVFSYGLQPYCG	531
Chelonia_mydas	LFREVYSADYFKLMGNSLLPIRWMSPEAIMYGKFSVDSDIWSYGVVLWEIFSYGLQPYCG	699
Sarcophilus_harrisii	LFREVYSADYYKLIGNSLLPIRWMSPEAIMYGKFSIDSDIWSYGVVLWEIFSYGLQPYCG	776
Latimeria_chalumnae	IFREVYSADYYKLMGTSLLPIRWMAPEAIMYGKFSIDSDIWSYGVVWEIFSYGLQPYCG	650
	.....730.....740.....750.....760.....770.....780	

	*****:** : .*:* ***** ::: **::** *** ** *:::*.::*:* .:* *	
Xenopus_tropicalis	YSNQDVIEMVRNRQVLLCPDDCPAWIYITLMLECWSEFPARRPRFKDIHTRLRTWENMSNY	752
Rhinatrema_bivittatum	YSNQDVIEMIRNRQVLP CPDDCPAWIYALMLECWNEFPARRLRFKDLHSRLRTWENISNY	758
Homo_sapiens	YSNQDVVEMIRNRQVLP CPDDCPAWVYALMIECWNEFP SRRPRFKDIHSRLRAWGNLSNY	755
Pan_troglodytes	YSNQDVVEMIRNRQVLP CPDDCPAWVYALMIECWNEFP SRRPRFKDIHSRLRAWGNLSNY	755
Macaca_mulatta	YSNQDVVEMIRNRQVLP CPDDCPAWVYALMIECWNEFP SRRPRFKDIHSRLRAWGNLSNY	755
Callithrix_jacchus	YSNQDVVEMIRNRQVLP CPDDCPAWVYALMIECWNEFP SRRPRFKDIHSRLRAWGNLSNY	755
Heterocephalus_glaber	YSNQDVVEMIRSQVLP CPDDCPAWVYALMIECWNEFP SRRPRFKDIHSRLRAWGNLSNY	752
Mus_musculus	YSNQDVVEMIRSQVLP CPDDCPAWVYALMIECWNEFP SRRPRFKDIHSRLRSWGNLSNY	755
Bos_taurus	HSNQDVVEMVRSQVLP CPDDCPAWVYALMIECWHEFP SRRPRFKDIHSRLRAWGNLSTY	752
Equus_caballus	HSNQDVVEMVRSQVLP CPDDCPAWVYALMIECWNEFP SRRPRFKDIHSRLRAWGNLSTY	753
Pteropus_alecto	HSNQDVVEMVRSQVLP CPDDCPAWVYALMIECWNEFP SRRPRFKDIHSRLRAWGNLSAY	761
Gallus_gallus	YSNQDVIEMIRNRQVLP CPDDCPTWVYITLMLECWNEFPNRRPRFKDIHNRLRTWGNLSNY	747
Anas_platyrhynchos	YSNQDVIEMIRNRQVLP CPDDCPTWIYITLMLECWNEFPNRRPRFKDIHNRLRTWGNLSNY	755
Pavo_cristatus	YSNQDVIEMIRNRQVLP CPDDCPTWIYITLMLECWNEFPNRRPRFKDIHNRLRTWGNLSNY	591
Pavo_muticus	YSNQDVIEMIRNRQVLP CPDDCPTWIYITLMLECWNEFPNRRPRFKDIHNRLRTWGNLSNY	591
Chelonia_mydas	YSNQDVIEMIRNRQVLP CPDDCPTWIYITLMLECWNEFPNRRPRFKDIHNRLRTWGNISNY	759
Sarcophilus_harrisii	YSNQDVIEMIRNRQILP CPDDCPAWVYITLMECWNEFPNRRPRFKDIHNRLRTWGNLSNY	836
Latimeria_chalumnae	FSNQDVIEMI PNQVLP CPDDCPGFLHLLMLDCWNEFPARRPRFKEIHTLRLTWESISNY	710
	.....790.....800.....810.....820.....830.....840	

	*****:*****:*** ** . * . * ***: :***:***:..	
Xenopus_tropicalis	NSSAQTSGASNTTQTSSLSTS PVS NVSNARYVGPKPKTQPFQOPQFLPMKGQIRMPVPPP	812
Rhinatrema_bivittatum	NSSAQTSGASNTTQTSSLSTS PVS NVSNTRYVGPKQKAQPFQOPQFIQMKGQIRMPVPPP	818
Homo_sapiens	NSSAQTSGASNTTQTSSLSTS PVS NVSNARYVGPKQKAPFPQOPQFIPMKGQIRMPVPPP	815
Pan_troglodytes	NSSAQTSGASNTTQTSSLSTS PVS NVSNARYVGPKQKAPFPQOPQFIPMKGQIRMPVPPP	815
Macaca_mulatta	NSSAQTSGASNTTQTSSLSTS PVS NVSNARYMGPKQKAPFPQOPQFIPMKGQIRMPVPPP	815
Callithrix_jacchus	NSSAQTSGASNTTQTSSLSTS PVS NVSNARYVGPKQKAPFPQOPQFMPMKGQIRMPVPPP	815
Heterocephalus_glaber	NSSAQTSGASNTTQTSSLSTS PVS NVSNARYVGPKQKAQPFQOPQFIPMKGQIRMPVPPP	812
Mus_musculus	NSSAQTSGASNTTQTSSLSTS PVS NVSNARYMAPKQKAQPFQOPQFIPMKGQIRPLVPPA	815
Bos_taurus	NSSAQTSGASNATQTSSLSTS PVS NVSNARYGGPKQKAQPFQOPQFIPMKGQIRMPVPPP	812
Equus_caballus	NSSAQTSGASNATQTSSLSTS PVS NVSNARYGGPKQKAQPFQOPQFIPMKGQIRMPVPPP	813
Pteropus_aleto	NSSAQTSGASNATQTSSLSTS PVS NVSNTRYGGPKPAQPFQOPQLIPMKGQIRPLVPPP	821
Gallus_gallus	NSSAQTSGASNTTQTSSLSTS PVS NVSNARYIGPKQKTPAFQOPQFIQMKGQMRMPVPPP	807
Anas_platyrhynchos	NSSAQTSGASNTTQTSSLSTS PVS NVSNARYIGPKQKTPAFQOPQFIQMKGQMRMPVPPP	815
Pavo_cristatus	NSSAQTSGASNTTQTSSLSTS PVS NVSNARYIGPKQKTPAFQOPQFIPMKGQMRMPVPPP	651
Pavo_muticus	NSSAQTSGASNTTQTSSLSTS PVS NVSNARYIGPKQKTPAFQOPQFIPMKGQMRMPVPPP	651
Chelonia_mydas	NSSAQTSGASNTTQTSSLSTS PVS NISNARYVGPKQKTQAFQOPQFIQMKGQIRMPVPPP	819
Sarcophilus_harrisii	NSSAQTSGASNTTQTSSLSTS PVS NVSNARYIGTKQKTSFSQOPQFIPVKGQIRMPVPTP	896
Latimeria_chalumnae	NSSAQTSGASNTTQTSSLSTS PVS NVSNARYMGPKQKQPFQOPQFIQIKGQIRMPVPPP	770
	.....850.....860.....870.....880.....890.....900	

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /home/ceglab2/Desktop/ajinkya/pavo/MSD/P40/P2p Feb 15 15:25:27 2022

Page 6 of 6

	:** :.**	**.:***:***.* :*.*:**..*****:*****	
Xenopus_tropicalis	QLYIPVNGYQMAAY-----FYPVQIPMQMAPQMPPQIIPKPGSHHSGSGSTSTGYVT	866	
Rhinatrema_bivittatum	QLYIPVNGYQPMPAYGAYLPNFYPVQIPMQMAPQMPPQMIIPKPGSHHSGSGSTSTGYVT	878	
Homo_sapiens	QLYVPVNGYQVPAYGAYLPNFYPVQIPMQMAPQVPPQMVPKPSHHHSGSGSTSTGYVT	875	
Pan_troglodytes	QLYIPVNGYQVPAYGAYLPNFYPVQIPMQMAPQVPPQMVPKPSHHHSGSGSTSTGYVT	875	
Macaca_mulatta	QLYIPVNGYQVPAYGAYLPNFYPVQIPMQMAPQVPPQMVPKPSHHHSGSGSTSTGYVT	875	
Callithrix_jacchus	QLYIPVNGYQVPAYGAYLPNFYPVQIPMQMAPQVPPQMLPKPSHHHSGSGSSTSTGYVT	875	
Heterocephalus_glaber	QLYIPVNGYQVPAYGAYLPNFYPVQIPMQMAPQVPPQMVPKPSHHHSGSGSTSTGYVT	872	
Mus_musculus	QLYIPVNGYQVPAYGAYLPNFYPVQIPMQMAPQVPPQMVPKPSHHHSGSGSTSTGYVT	875	
Bos_taurus	QLYIPVNGYQVPAYGAYLPNFYPVQIPMQMAPQVPAQMVPKPGSHHSGSGSTSTGYVT	872	
Equus_caballus	QLYIPVNGYQVPAYGAYLPNFYPVQIPMQMAPQVPAQMVPKPGSHHSGSGSTSTGYVT	873	
Pteropus_alecto	QLYIPVNGYQVPAYGAYLPNFYPVQIPMQMAPQVPAQLVPKPSHHHSGSGSTSTGYVT	881	
Gallus_gallus	QLYIPVNGYQMPAYGAYLPNFYSVQIPMQMAPQMPPQIIPKPGSHHSGSGSTSTGYVT	867	
Anas_platyrhynchos	QLYIPVNGYQMPAYGAYLPNFYPVQIPMQMAPQMPPQIIPKPGSHHSGSGSTSTGYVT	875	
Pavo_cristatus	QLYIPVNGYQMPAYGAYLPNFYSVQIPMQMAPQMPPQIIPKPGSHHSGSGSTSTGYVT	711	
Pavo_muticus	QLYIPVNGYQMPAYGAYLPNFYSVQIPMQMAPQMPPQIIPKPGSHHSGSGSTSTGYVT	711	
Chelonia_mydas	QLYIPVNGYQMPAYGAYLPNFYPVQIPMQMAPQMPPQMIIPKPGSHHSGSGSTSTGYVT	879	
Sarcophilus_harrisii	QLYIPVNGYQMPAYGTYLPNFYPVQIPMQMAPQMPSQMIIPKPGSHHSGSGSTSTGYVT	956	
Latimeria_chalumnae	QLYIPVNGYQMPAYGAYLPNFYPLQIPLQMPQOLIPKAGSHHSGSGSTSTGYVT	830	
	.....910.....920.....930.....940.....950.....960	

	***** *:::..***:* : :	:: :	:***** ** :						
Xenopus_tropicalis	TAPSNN	SMADRVALLADGADEAQLLAEDMS	PNPVO	--EEEG-	SVPETELLGDNDT	SHL	921		
Rhinatrema_bivittatum	TAPSNTS	SVADRAALLSEG	MEDAHIMAEDVSR	STLQ	--EEEGG	TVPETELLGDNDT	SHV	934	
Homo_sapiens	TAPSNTS	SMADRAALLSEG	ADDTQNAPEDGAQ	STVQ	EAE	EEEEEEGSVPETELLGDCDT	LQV	934	
Pan_troglodytes	TAPSNTS	SMADRAALLSEG	ADDTQNAPEDGAQ	SPVQ	EAE	EEEEEEGSVPETELLGDCDT	LQV	934	
Macaca_mulatta	TAPSNTS	SVADRAALLSEG	TEDAQNPEDGAQ	SPVQ	EAE	EEEE--GSVPETELLGDCDT	LQV	933	
Callithrix_jacchus	TAPSNTS	SMADRAALLSEG	TKDSQNAPEDGTQ	IPVQ	EAE	EEEEKECSVPETELLGDSDT	LQV	934	
Heterocephalus_glaber	TAPSNTS	SVADRAALLAEG	TEDTQNI	PEDMAQSPVQ	EAE	EEQEEGSVPETELLGDNDT	LQV	931	
Mus_musculus	TAPSNTS	SVADRAALLSEG	TEDAQNIAEDVAQ	SPVQ	EAE	EEEEEEGSVPETELLGDNDT	LQV	934	
Bos_taurus	TAPSNTS	SVADRAALLSEG	TEDAQNVPEDMAQ	SPVQ	EAE	EEEEEDGSVPETELLGDNDT	LQM	931	
Equus_caballus	TAPSNTS	SVADRAALLSEG	TEDTQNPEDVAQ	SPVQ	EAE	EEEEEDGSVPETELLGDNDT	LQM	932	
Pteropus_alecto	TAPSNTS	SVADRAALLSEG	TEDTQNPEDAAQ	SPVQ	EAE	EEEEEDGSVPETELLGDNDT	LQM	940	
Gallus_gallus	TAPSNAS	SVADRAALLSEG	DDTNNGAEDIAQ	NPVQ	-E	EEEEEEGSVPETELLGDNDT	LQM	925	
Anas_platyrhynchos	TAPSNAS	SVADRAALLSEG	DDTHNGAEDIAQ	NPVQ	-E	EEEEEEGSVPETELLGDNDT	LQM	933	
Pavo_cristatus	TAPSNAS	SVADRAALLSEG	DDTNNGAEDIVQ	NPVQ	-E	EEEEEEESVPETELLGDNDT	LQM	769	
Pavo_muticus	TAPSNAS	SVADRAALLSEG	DDTNNGAEDIVQ	NPVQ	-E	EEEEEEESVPETELLGDNDT	LQM	769	
Chelonia_mydas	TAPSNAS	SVADRAALLSEG	DDTHNGAEDIAQ	KPVQ	-E	EEEEEEGSVPETELLGDNDT	LQM	937	
Sarcophilus_harrisii	TAPSNTS	SVADRAALLSEG	NDNALNTVEDVAQ	NPVQ	-EE	--EGSVPETELLGDNDTHLQI	1013		
Latimeria_chalumnae	TAPSNAS	VT	EKAALLAEGT	EDG-NIAGASQNP	PPL	E---	DEESVPETELLGDNDT	TQP	883
	.....970.....980.....990.....1000.....1010.....1020							

	* :	**	
Xenopus_tropicalis	DETD	IQSEA	930
Rhinatrema_bivittatum	DEAE	IQSEA	943
Homo_sapiens	DEAQ	VQLEA	943
Pan_troglodytes	DEAQ	VQLEA	943
Macaca_mulatta	DEAQ	VQLEA	942
Callithrix_jacchus	DEAQ	VQLEA	943
Heterocephalus_glaber	DEAL	VQLEA	940
Mus_musculus	TEAAH	VQLEA	944
Bos_taurus	SEAE	VQLEA	940
Equus_caballus	DEAE	VQLEA	941
Pteropus_alecto	DEAE	VQLEA	949
Gallus_gallus	DEAE	IQSEA	934
Anas_platyrhynchos	DEAE	IQSEA	942
Pavo_cristatus	DEAE	IQSEA	778
Pavo_muticus	DEAE	IQSEA	778
Chelonia_mydas	DEAE	IQSEA	946
Sarcophilus_harrisii	DEAE	TPSEA	1022
Latimeria_chalumnae	DEAE	NOSEA	892
	.....	1030	