

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/CCPD10pep Tue Feb 1 11:36:31 2022

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		**	*	*	:	.	:	*		.	:	*
Pavo_muticus	-----	MK	MEDY	EAFCKKHLSRIQEEATKGNSPTVLDRNVSL	37							
Pavo_cristatus	-----	MK	MEDY	EAFCKKHLSRIQEEATKGNSPTVLDRNVSL	37							
Gallus_gallus	-----	MK	MEDY	ETFCCKHLSRIQEEATKGNSSTSLDRNVSL	37							
Chelonia_mydas	-----	MEDY	EEFCEKHLARIOGESIQRETS-SSAQKNISL	34								
Mus_musculus	-----	MEEY	EEFCEKALGRAQEASLTSGSFLPAQAESVSL	35								
Rattus_norvegicus	-----	MEEY	EKFCEKALARAEASLSTD SFLPAQAESVSL	35								
Homo_sapiens	-----	MEEY	EKFCEKSLARIOEASLSTESFLPAQSESISL	35								
Pan_troglodytes	-----	MEEY	EKFCEKSLARIOEASLSTESFLPAQSESISL	35								
Macaca_mulatta	MPAPPGGPSVWNLKSEEL	EECD	CGKMEEY	EKFCEKSLARIOEASLSTESFLPTQSESISL	60							
Callithrix_jacchus	-----	MMCD	CRKMEYE	KFCESLAGIOEASISTESFLPAQSESISL	42							
Bos_taurus	-----	MEEY	EKFCEKSLSRIOEASLSTESFLPVQSESISL	35								
Equus_caballus	-----	MEDY	EKFCE	SLARVQEAALLPESFLPVQSESVSL	35							
Canis_lupus_familiaris	-----	MEEY	EKFCE	NLSLARIOASLSTESFLPVQSESISL	35							
Rhinatrema_bivittatum	-----	MEDY	EEFCKKQLVRIOGETMQ-ETLSPASHKVS	34								
Xenopus_tropicalis	-----	MEPY	EEFYKKQFARIOGEDMLSAMDITQR-VSV	34								
	1.....10.....20.....30.....40.....50.....60											

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Pavo_muticus	IQFHGVPLVSPLLSFEKRKEIQYRQKADLETWRONSHKRALLNRVOEILENIONRKVS	97
Pavo_cristatus	IQFHGVPLVSPLLSFEKRKEIQYRQKADLETWRONSHKRALLNRVOEILENIONRKVS	97
Gallus_gallus	IQFHGVPLVSPLLSFEKRKEIQYRQKADLETWRONSHKRALLNRVOEILENIONRKVS	97
Chelonia_mydas	IQFYGIVPLVSPLLSLEKKEMHDKQKADIVEIWKQSRKRALLNRVOEILENVQVRKVS	94
Mus_musculus	IRFHGVAVLSPLLTIEKRKKIQEEKOKALDVQSRKQANRKKALLTRVOEILENVQVRKAP	95
Rattus_norvegicus	IRFHGVAVLSPLLTIEKRKEIQEEKOKALDVQTRKQANRKKALLTRVOEILENVQVRKAP	95
Homo_sapiens	IRFHGVAILSPLLNIEKRKEMQEEKOKALDVEARKQVNRKKALLTRVOEILDNVQVRKAP	95
Pan_troglodytes	IRFHGVAILSPLLNIEKRKEMQEEKOKALDVEARKQVNRKKALLTRVOEILDNVQVRKAP	95
Macaca_mulatta	IRFHGVAILSPLLNVEKRREMQUEEKOKALDVEARKQVNRKKTLLTRVOEILDNVQVRKAP	120
Callithrix_jacchus	IRFHGAAILSPLLNIEKRKEMQEEKOKALDVEARKQVNRKKALLTRVOEILDNVQVRKAP	102
Bos_taurus	IRFHGVAVLSPLLNIEKRKEMQEEKOKALDVEARROVNRKKALLSRVOEILENVQVRKAP	95
Equus_caballus	IRFRGLAVLSPLLNIEKRKEMQEEKOKALDVEARKQVNRKKALLTRVOEILENVQVRKAP	95
Canis_lupus_familiaris	IRFHGVAVLSPLLNIEKRKEMQEEKOKALDVETRKHVNRKKALLTRVOEILENVQVRKAP	95
Rhinatrema_bivittatum	IQFHGVAVLSPLLTLERRKEMQYRQKATALDESRLNTKKRTLLTRVOEILETVQVRKMP	94
Xenopus_tropicalis	IKFHGVAVLSPLLTAEKMOEQYRHRATILNEKKQNKCKTLLTRVOEILESVQVKKGP	94
70.....80.....90.....100.....110.....120	

Pavo_muticus	GVS	D	M	S	T	W	D	A	E	N	C	P	D	S	K	A	L	P	D	L	A	A	L	S	D	A	-	L	P	C	S	P	E	R	H	R	P	G	O	L	E	K	S	Q	E	L	L	P	S	D	S	M	Q				
Pavo_cristatus	GVS	D	M	S	T	W	D	A	E	N	C	P	D	S	K	A	L	P	D	L	A	A	L	S	D	A	-	L	P	C	S	P	E	R	H	R	P	G	O	L	E	K	S	Q	E	L	L	P	S	D	S	M	Q				
Gallus_gallus	GKS	D	V	N	T	W	D	A	E	N	C	P	D	S	K	A	L	T	D	L	A	A	V	S	D	A	-	L	P	C	S	P	E	R	H	C	S	V	O	L	E	K	S	Q	E	L	L	P	P	S	D	S	M	Q			
Chelonia_mydas	GMS	D	L	D	W	E	P	E	S	G	H	S	N	S	E	K	A	S	D	G	F	T	M	L	S	N	I	-	L	S	S	I	T	C	S	G	T	I	D	L	E	K	T	L	E	I	V	P	--	A	I	Q					
Mus_musculus	NAS	D	F	D	Q	W	A	T	E	T	I	Y	S	N	P	E	V	T	D	L	N	V	P	R	V	P	N	S	--	L	P	S	P	T	E	H	C	T	S	V	K	L	E	K	I	T	G	L	L	P	V	N	N	E	D	Q	
Rattus_norvegicus	NAS	D	F	D	Q	W	A	T	E	T	I	A	S	N	S	E	V	T	G	L	S	V	P	V	T	V	P	S	D	--	L	L	S	P	T	E	H	C	T	S	G	K	L	G	K	T	T	G	L	L	P	V	N	N	E	D	Q
Homo_sapiens	NAS	D	F	D	Q	W	E	M	E	T	V	Y	S	N	S	E	V	R	N	L	N	V	P	A	T	F	P	N	S	--	F	P	S	H	T	E	H	S	T	A	A	K	L	D	K	I	A	G	I	L	P	L	D	N	E	D	Q
Pan_troglodytes	NAS	D	F	D	Q	W	E	M	E	T	V	Y	S	N	S	E	V	R	N	L	N	V	P	A	T	F	P	N	S	--	F	P	S	H	T	E	H	S	T	A	A	K	L	D	K	I	A	G	I	L	P	L	D	N	E	D	Q
Macaca_mulatta	NAS	D	F	D	Q	W	E	M	E	T	V	Y	S	N	S	E	V	R	N	L	N	V	P	A	T	F	P	N	S	--	F	P	S	H	T	E	H	S	T	A	A	K	L	D	K	I	A	G	I	L	P	L	D	N	E	D	Q
Callithrix_jacchus	NAS	D	F	D	Q	W	E	M	E	T	V	Y	S	N	S	E	V	R	N	L	N	V	P	A	T	F	P	N	S	--	F	P	S	H	T	E	H	S	T	S	V	N	L	D	N	I	A	G	I	L	P	L	D	N	E	D	Q
Bos_taurus	DAS	D	F	H	Q	W	E	T	E	T	V	Y	S	N	S	E	V	R	N	L	N	V	P	A	T	L	P	N	I	--	L	P	S	P	T	E	H	S	T	L	A	E	F	E	K	I	T	G	I	L	P	L	N	N	E	D	R
Equus caballus	NAS	D	F	D	Q	W	E	T	E	T	V	Y	S	N	S	E	V	R	N	L	N	V	S	A	T	F	P	N	I	--	L	P	S	P	T	E	H	S	T	L	A	K	F	E	K	M	T	G	I	L	P	L	N	N	E	D	Q
Canis_lupus_familiaris	KAS	D	F	D	P	W	E	T	E	T	V	Y	S	D	S	E	V	R	N	L	N	V	P	A	T	F	P	N	I	--	L	P	S	P	T	E	H	S	T	L	G	K	F	E	K	I	T	G	I	L	P	L	N	N	E	D	Q
Rhinatrema_bivittatum	PV	S	D	L	D	Q	V	S	K	A	S	-	E	Q	N	S	E	K	A	M	G	F	I	L	L	P	N	F	I	S	-	M	P	V	L	T	E	Q	C	R																	

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Pavo_muticus      VTSNAIEVGKPAEENVPSKESENR----FSRDVPCPRAASPDVSVQSKLVSPALQKQEGQG 212
Pavo_cristatus    VTSNAIEVGKPAEENVPSKESENR----FSRDVPCPRAASPDVSVQSKLVSPALQKQEGQG 212
Gallus_gallus     VTSNATEVGKPAEENVPSKESGSH----FSRDVPCPRAASPDVSVQSKLVSPALQKQEGQG 212
Chelonia_mydas    ITSSRIDSVRGTEEHIPPEQSESN----LSENIACPKVTSPDKTONMTTNAHVNOEHTE 206
Mus_musculus      QTPKRVGLPGDSEVSGSLRQCESP-ESRQAEDEGALRLSSASPQETIISD--VLGKEEOD 210
Rattus_norvegicus QSPERMGLPKDSEVFGSLKQCESP-GSRWAENGAPRLSSASSQETVISDDPLLAKEEQE 212
Homo_sapiens      CKTDGIDLARDSEGFNSPKQCDSS-NISHVENEAFPKTSSATPQETLISDGPFSVNEQOD 212
Pan_troglodytes   CKTNIGIDLARDSEGFNSPKQCDSS-NISHVENEAFPKTSSATPQETLISDGLFSVNEQOD 212
Macaca_mulatta    CKTNIGIDLARDSEGFNSPKQCDSS-NISHVENEAFPKTSSATPQETLISDGLFSVNEQOD 237
Callithrix_jacchus CKTNIGIDLARDSEGFNSLKQCDNS-NISHVESEAFPKTSSATPQETLISDGLFSINESOD 219
Bos_taurus        FKSNNRIDLARDSEELSILKQCDSS-NISQAENEASLKTSSATAQETLISDVLFPNTNEEQD 212
Equus_caballus    FKSNGIDLARDSEFTSLKPKCDSS-GISHTENEASLKTS-AAPQETPTSDGLFPANGAOD 211
Canis_lupus_familiaris FKSNGVDLTRDSE-FNSLKHCDSSDIISVENETSVKTPSTTPQETLTPNGLFPTNEEQD 212
Rhinatrema_bivittatum FKSIGTNSIKDTNECVSPKQSESPKISHSEKSFHTQTAASTTQDMLSPNVDSNTKELD 213
Xenopus_tropicalis --SNKVEAIPVKKNSLPIKRISP-----AVDQSKDLSSEMSST-----PPQSEWD 196
      .....190.....200.....210.....220.....230.....240

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      .      .      .      .      .      .      .      .      .      .
Pavo_muticus      VAS-SDKDVQDPYAVSLQNLMMKKSREYIEKEQTRRSKSSSKKSMNESHSDKENDAVKTS 271
Pavo_cristatus    VAS-SDKDVQDPYAVSLQNLMMKKSREYIEKEQTRRSKSSSKKSMNESHSDKENDAVKTS 271
Gallus_gallus     VPS-SDKEVQDPYAVSLQNLMMKKSREYIEKEQSRSSKSSSKKSMNESHSDKENDAVKTS 271
Chelonia_mydas    VPP-DGEEVDPYVVSLLQNLMMKKSREYIEREQTRRSLSNSKRSINESLSDKENDAVKTN 265
Mus_musculus      PSC-LAEVTPDPYIMSLQNLMMKKSKEYVERELSSRLRNLSLKRVSNETHSDRENDAAKAS 269
Rattus_norvegicus PSC-LAEVTPDPYIISLQNLMMKKSKEYVEREQSSWSLSLRSLSLKSVMHETHSDKENDAAKAS 271
Homo_sapiens      LPL-LAEVIPDPYVMSLQNLMMKKSKEYIEREQSRRLRGSINRIVNESHLDKEHDAVEVA 271
Pan_troglodytes   LPL-LAEVIPDPYVMSLQNLMMKKSKEYIEREQSRRLRGSINRIVNESHLDKEHDAVKVA 271
Macaca_mulatta    LPL-LAEVTPDPYVMSLQNLMMKKSKEYIEREQSRRLKGSMMRIVNESHLDKENDAVKVA 296
Callithrix_jacchus PLL-LAEVTPDPYVMSLQNLMMKKSKEYIEREQSRRLRGSMTMRIVNESHSEKENDAVEVA 278
Bos_taurus        PSL-LEEVTDPDPYIMSLQNLMMKKSKEYIEREQSRRLRSVKSRSVNESHSKENDAVKVT 271
Equus_caballus    PLL-LEEVTDPDPYIMSLQNLMMKKSKEYIEREQSIRSLRSSAKRSVNESQSDKENGAVKVS 270
Canis_lupus_familiaris PSL-SEEVTPDPYIMSLQNLMMKKSKEYIEREQSRRLRSVKSRSVYESHSKENDAEAVKGT 271
Rhinatrema_bivittatum EPLPLAAEEVDPYLMSLQNLMMKKSREYIEREHSRRS---SSRKTCTNGIHSNOQHETFKIS 270
Xenopus_tropicalis TAS-SSREAPDPYKMSLQNLMMKKSREYIEKEQSRRLKNPSKGSVSESNKENDTIKIS 255
      .....250.....260.....270.....280.....290.....300

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Pavo_muticus      DSVKERTK--LTGRSSTALPLDKPCLNKSNTHTSQASTHTSNTSMSTLSSFSKVDIPMRV 329
Pavo_cristatus    DSVKERTK--LTGRSSTALPLDKPCLNKSNTHTSQASTHTSNTSMSTLSSFSKVDIPMRV 329
Gallus_gallus     DPVKERVK--LTGRSSTALPLDKPCLNKSNAHIQASTHTSNTSMSTLSSFSKVDIPMRV 329
Chelonia_mydas    LSGKERAR--FTGRNCTPLTLDKPSLNKSNILLOGASQVNSTSTSAIPNFSKVDIPNRA 323
Mus_musculus      DCVKEKAPPMPVGRHCGSAIPDKPSLNKSNVLLQGAS-QASSMGITAGLASFSKIDLPAGA 328
Rattus_norvegicus DCVKEKAPPMPVGRHCGSAIPDKPSLNKSNVLLQGAS-QASSLGTSVLASFLKTDLPVGT 330
Homo_sapiens      DCVKEKGQ--LTGKHCVSVIPDKPSLNKSNVLLQGASTQASSMSMPVLASFSKVDIPIRT 329
Pan_troglodytes   DCVKEKAQ--LTGKHCVSVIPDKPSLNKSNVLLQGASTQASSMSMPVLASFSKADIPIRT 329
Macaca_mulatta    DCVKEKAQ--LTGKHCVSVIPDKPSLNKSNVLLQGASTQASSMSMPVLASFSKVDIPVRT 354
Callithrix_jacchus DVFKEKAP--LTGKHCVSVIPDKPSLNKSNVLLQGASAHASSMSTPVLASFSKVDIPVRT 336
Bos_taurus        DNGKEKSP--LIGKHCVSVIPDKPSLNKSNVLLQGASTQASSMNTSVLGNFSKVDISIRT 329
Equus_caballus    DCIKEKAQ--LIGRHCGSVVPDKPSLNKSNVLLQGASAPVGSRNASASGSFSKVDIPIRT 328
Canis_lupus_familiaris DSGREKVQ--LAGRHCVSVIPDKPSLNKSNVLLQGASTQASSGVNMSVLGFSFSKVDIPVRT 329
Rhinatrema_bivittatum DSIKEKAKFMSRSRSCSPVMLDKPSLNKSNILLOGASQVNSTSTSAIPNFSKVDIPMRS 330
Xenopus_tropicalis NSLKEKAKVLRNRSRSCSPVMLDKPMLNKSNTLLQAASSQCQLHFKSLSTLSNVLDPLIS 315
      .....310.....320.....330.....340.....350.....360

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Pavo_muticus	GTPPLVDS	SDSDEEFKNT	STIDRDSSIVRSLTGSYTKLP	SPEPSMSPKMHRRRRPRLSMGH	389																
Pavo_cristatus	GTPPLVDS	SDSDEEFKNT	STIDRDSSIVRSLTGSYTKLP	SPEPSMSPKMHRRRRPRLSMGH	389																
Gallus_gallus	GTPPLVDS	SDSDEEFKNT	STIDRDSSIVRSLTGSYTKLP	SPEPSMSPKMHRRRRPRLSMGH	389																
Chelonia_mydas	GTPPVLDSD	SDEEFKNT	STFDNDSSIIVRSLTGSYAKLP	SPEPSMSPKMHRRRRPRLSSMGH	383																
Mus_musculus	APPAAPDAGSD	--FTVIPTFVTEN--	KVKSLKGPIYAKLP	SPEPSMSPTMHRRHRSASACQ	385																
Rattus_norvegicus	GPPTVPDAESD	--FKVIPTFVTEN--	KVKSLIGPIYAKLP	SPEPSMSPTMHRRHRSASSACQ	387																
Homo_sapiens	GHPTVLESNSD	--FKVIPTFVTENNVIKSLTGSYAKLP	SPEPSMSPKMHRRRSRRTSSACH	387																	
Pan_troglodytes	GHPTVLESNSD	--FKVIPTFVTENNVIKSLTGSYAKLP	SPEPSMSPKMHRRRSRRTSSACH	387																	
Macaca_mulatta	GHOSTVLESNSD	--FKVIPTFVTENNVIKSLTGSYAKLP	SPEPSMSPKMHRRRSRRTSSACH	412																	
Callithrix_jacchus	GHOSTVLESNSD	--FKVIPTFVTENNVIKSLTGSYAKLP	SPEPSMSPKMHRRRSRRTSSACH	394																	
Bos_taurus	GHTITVLETDN	--FOGIPTFVTENNVIKSLTGSYAKIP	SPEPSLSPKMHRRRSRPSSACH	387																	
Equus caballus	-----DPDPD	--FKLVPSFVTENNVLKSLTGSYAKLP	SPEPSLSPKMHRRRSRPSSACH	380																	
Canis_lupus_familiaris	GHCTVLDLSD	--FKVIPTFVPENHVIKSLTGSYAKLP	SPEPSLSPKMHRRRSRPSSACH	387																	
Rhinatrema_bivittatum	GTPTALESSEDEELKNVSALDYESSIVKSLTGSYAKLP	SPEPSLSPKMHRRRRPRLSMGH	390																		
Xenopus_tropicalis	GSSSVVESESDEELKGSSFADCESNILKSLTGSYAKLP	SPEPSLSPKMHRRRRPRLSAGN	375																		
370.....380.....390.....400.....410.....420																				

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Pavo_muticus	IVINNPVNAYELSPKGKGRAMDLIMODIADKNNVSESVPKFMMDFSMCLPSRVPGVIRSS		449
Pavo_cristatus	IVINNPVNAYELSPKGKGRAMDLIMODIADKNNVSESVPKFMMDFSMCLPSRVPGVIRSS		449
Gallus_gallus	IVINNPVNAYELSPKGKGRAMDLIMODIADKNNVSESVPKFMMDFSMCLPSRVPGVLRSS		449
Chelonia_mydas	IVINNPVNAYELSPINKGRAIDLIIQDATDQTNASEPVPKFTADFAAVCSKAHVNTNS		443
Mus_musculus	ILINNPVNACELSPKGKEEAVDRITAPAAAEITNESETVPKSPDTLTGVCSSNVN-ATKIT		444
Rattus_norvegicus	ILINNPVNACELSPKGKEEAVDRITAPAAAEITNESEIVPKPPTDLTGVGSSKVS-ATKVM		445
Homo_sapiens	ILINNPINACELSPKGKEQAMDLIIQDTIDENTNVPEIMPKLPITDLAGVCSSKVY-VGKNT		446
Pan_troglodytes	ILINNPINACELSPKGKEQAVDLIVQDTIDENTNVPEIMPKLPITDLVGVCSSKVY-VGKNT		446
Macaca_mulatta	ILINNPINACELSPKGKEQAMDLIVQDTIDEKTNVPEILPKLPIDLAGVCSSKVY-VGKNT		471
Callithrix_jacchus	ILINNPINACELSPKGKEQAMDLIVHDITDEKTNVPIPKLPIDFASVCSSMAY-VGKNT		453
Bos_taurus	ILINNPINASELSPKGKEQAVELVVQETIDEKTNVPETVPKLP-----VCSSKVY-VSKNT		441
Equus_caballus	ILINNPINACELSPKGREQAVDLVVDHITDEKTNVPETVPKLPVDLAGVCPISKVY-ASKNT		439
Canis_lupus_familiaris	ILINNPVNACELSPKGKEQTVDLVVQAIDDEETNIPESVPKLPADLAGVCSSKVC-VTKNT		446
Rhinatrema_bivittatum	IVINNPVNAYELSPKEKERAADLIIQDAADDMTVSESVPKPFAMNETGTLSSKGHNVNKN		450
Xenopus_tropicalis	IVITNPVNAYDLSPKENGKAMEFFLPKIAEKLISLSDPVPKHGDYNAALLSIKRHSILNTQN		435
430.....440.....450.....460.....470.....480		

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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      .      :      .      .      :      *****: ***: * *: *
Pavo_muticus      EPFSINQSAVTQKLLAVNETKASSLQENTKS--PVELNKSVDVESPSPLLMQSKSVROOM 561
Pavo_cristatus    EPFSINQSAVTQKLLAVNETKASSLQENTKS--PVELNKSVDVESPSPLLMQSKSVROOM 561
Gallus_gallus     EPFSINQSAVTQKLLAVNETKASSLQENTKS--PVELNKSVDVESPSPLLMQSKSMHOOM 561
Chelonia_mydas    ESYAVSQSMVTQKLVITMNGIKPDSLLENTKSN--SPVELNKSVDVENPSPLLIQSONKHOOM 553
Mus_musculus      ELQPSSQCVSSQTLEDVCELKASALLAKNSCNLQOMELNKSVDVKHPSPLLTQTQTTSROOM 563
Rattus_norvegicus ELQPTSQCVSSQTLEDACGLKAASVLAKNSCNVQOMELNKSVDVKRPSPLLMQTONSROOM 564
Homo_sapiens      EPYASSQCIASPNFGTVSGLKPASMLEKN-CSLQTELNKSVDVKNPSPLLMQNONTROOM 564
Pan_troglodytes   EPYASSQCIASPNFGTVSGLKPASVLEKN-CSLQTELNKSVDVKNPSPLLMQNONTROOM 564
Macaca_mulatta    EPYASSQCIASPNFGTVSGLKPANMLEKN-CSLQTELNKSVDVKNPSPLLMQNONMROOM 589
Callithrix_jacchus EPYASSQCIASQNSGTVSGLKPASISEKN-CSLQOMELNKSVDVKNPSPLLMQNONTROOM 571
Bos_taurus        EPYATRECVLSQNFQSVSGVKSINVLEKNSCNLQOMELNKSVDVKNPSPLLMQNONTROOM 559
Equus_caballus    EPYATSQCIPASQNFQSTSGLKSASALGKN-CNLQOMELNKSVDVKNPSPLLMQNONTROOL 557
Canis_lupus_familiaris EPYATSQCIVTQNFQSTSGLKSANVLEKNTCNLQOMELNKSVDVKNPSPLLMQNONTROOM 565
Rhinatrema_bivittatum EPYATSQFLETQNLITQNGISSNGLTENVKHCSPVELNKSVDVETPSPIILMQNSVKQOOM 565
Xenopus_tropicalis HDIDLPTMIQHGIKTNCILTCSPDMIKHS---SPVELNKSVDVETPSPIILQSGSGOAT 549
.....550.....560.....570.....580.....590.....600

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      : **      :      : ..      : : : : : : *      *      : :      : :
Pavo_muticus      DTPSVPPANEQFLLENSFE-KVKRRLLDLDIDNCQKDNNPC-AVTVGMEERERQWLQEQKYP 619
Pavo_cristatus    DTPSVPPANEQFLLENSFE-KVKRRLLDLDIDNCQKDNNPC-AVTVGMEERQERQWLQEQKYP 619
Gallus_gallus     DTPSIPPANEQFLLENSFE-KVKRRLLDLDIDDCQKDNNPC-VVTVGMEERQERQWLQEQKYP 619
Chelonia_mydas    DTPNVSSGNEQFVENGFE-KVKRRLLDLDIDSSQKNNPY-VLTDGTEEQEKWRLQDRRCF 611
Mus_musculus      DTPPVFRGNEQFVDNSFE-KVKRRLLDLDVDSLOKENCY-IITAGVAEQERDRLLERRYP 621
Rattus_norvegicus DTPPVPRGNEQFVDNSFE-KVKRRLLDLDVDSLOKENCY-IITAGSAEQERERPPERRYP 622
Homo_sapiens      DTPMVSCGNEQFLDNSFE-KVKRRLLDLDIDGLOKENCY-VITSGITEQERQHLPEKRYF 622
Pan_troglodytes   DTPMVSCGNEQFLDNSFE-KVKRRLLDLDIDGLOKENCY-VITSGITEQERQHLPEKRYF 622
Macaca_mulatta    DTPMVSCGNEQFLDNSFE-KVKRRLLDLDIDGVQKENCY-VITSGITEQERQHLPEKRYF 647
Callithrix_jacchus DTPTVSHGNEPFLDNSFE-KVKRRLLDLDIDDLQKENCY-VITSGITEQERQHLLEKRYT 629
Bos_taurus        DTPTVSCGKEQFLDNSFE-KVKRRLLDLDIDNLQKENCY-VVTGIAEQERQHLPEKRYF 617
Equus_caballus    DTPTVSCGNEQFLHNSFE-KVKRRLLDLDVDSLOKENCY-VITAGIAEQEKQHLPEKRYF 615
Canis_lupus_familiaris DTPTVSCGNEPFLDNSFE-KVKRRLLDLDIDSLQKENCY-VLTGVAEQEQOYLPEKRYF 623
Rhinatrema_bivittatum DTPNVSCSGQQSLESSEFNKVKRKLDDLDNAHKEKNPFVLTIGKTELEKR-LQEQORCH 624
Xenopus_tropicalis ETPLGFCLEPFLFNQPDIIKRRLELDLDT-----TPPASGEQKRWLHKQRNR 598
.....610.....620.....630.....640.....650.....660

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      ..      *      .      : . * : : *****: *****: ***: *****: *****: :
Pavo_muticus      MTSVYITKNAAPDSSMAK-EEILKTKMLAFEEMRKRLLEEQAQQLSILIAEQEREQEKLO 678
Pavo_cristatus    MTSVYITKNAAPDSSMAK-EEILKTKMLAFEEMRKRLLEEQAQQLSILIAEQEREQEKLO 678
Gallus_gallus     VTSVYITKNAASDSSMAK-EEILKTKMLAFEEMRKRLLEEQAQQLSILIAEQEREQEKLO 678
Chelonia_mydas    IGSVYCINKNETSGSSTNE-EEILKNKLLAFEEMRKRLLEEQAQQLSVLIAEQEREQEKLO 670
Mus_musculus      KGFVHINKNKMLETSPKEGQELLKSKMLAFEEMRKRLLEEQAQQLSILIAEQEREQEQLO 681
Rattus_norvegicus KGSVYGNKNKMLETSPKEGQELLKSKMLAFEEMRKRLLEEQAQQLSILIAEQEREQEQLO 682
Homo_sapiens      KGSVFNKNKMLGTSSKSEEEILLKSKMLAFEEMRKRLLEEQAQQLSILIAEQEREQERLO 682
Pan_troglodytes   KGSVFNKNKMLGTSSKSEEEILLKSKMLAFEEMRKRLLEEQAQQLSILIAEQEREQERLO 682
Macaca_mulatta    KGSVFINKNKILGTSSKSEEEILLKSKMLAFEEMRKRLLEEQAQQLSILIAEQEREQERLO 707
Callithrix_jacchus KGPVFINKNKMLETSSKSEEEILLKSKMLAFEEMRKRLLEEQAQQLSILIAEQEREQERLO 689
Bos_taurus        KGSVYI-KNKMLESSSKEGEEILLKSKILAFEEMRKRLLEEQAQQLSILIAEQEREQERLO 676
Equus_caballus    KGSVYINKNKMISSSKEGEEILLKSKIFAFEEMRKRLLEEQAQQLSILIAEQEREQERLO 675
Canis_lupus_familiaris KGSVYINKNKMLESSSKEGEEILLKSKMLAFEEMRKRLLEEQAQQLSILIAEQEREQERLO 683
Rhinatrema_bivittatum PGSAYIKKNEISIHSTMK-EEILTRKMLALEEMRKRLLEEQAQQLSILIAEQEREQEKLO 683
Xenopus_tropicalis SGSLQMTSTDLSKGLGD---HFKKKMLDFEEMRKRLLEEQAQQLSILIAEQEREQEKLO 655
.....670.....680.....690.....700.....710.....720

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:      : : * : *      : :
Pavo_muticus      K-----ELEEQR--KGKKI-ATTEIEISKVNINSRMELEWRK--SESGVVESVQSQLETI 729
Pavo_cristatus    K-----ELEEQR--KGKKI-ATTEIEISKVNINSRMELEWRK--SESGVVESVQSQLETI 729
Gallus_gallus     K-----ELEEQR--KGKKI-ATTEIEISKVNINSRMELEWRK--SESGLVESVQSQLETI 729
Chelonia_mydas    KTFNLQEIIEEQERRFKGKKS-ATADIEIPKMTISSGMELEWRKISESGLLETMLTQVETI 729
Mus_musculus      K-----EIEEQEKMLKEKA---VTIDVS---DLNSA--LEWRQRDTSALLETMLSQVDSL 728
Rattus_norvegicus K-----EIEEQEKMLKEKA---VTIDVS---GLNSALELEWRKRSDPAFLETMLSQVDSL 731
Homo_sapiens      K-----EIEEQEKMLKEKK---AMTAEASELDINNAVELEWRKISDSLLETMLSQADSL 734
Pan_troglodytes   K-----EIEEQEKMLKEKK---AMTAEASELDINNAVELEWRKISDSLLETMLSQVDSL 734
Macaca_mulatta    K-----EIEEQEKMLKEKK---AMTAEASELDINNAVELEWRKISDSLLETMLSQADSL 759
Callithrix_jacchus K-----EIEEQEKMLKEKK---AMTAEASELDINNAVELEWRKISDSLLETMLSQADSL 741
Bos_taurus        K-----DIEEQEKMLKEKT---IITAEASELDISNAVDFGWRKISDSGLLDTVLSQVDSL 728
Equus_caballus    K-----EIEEQEKMLKEKK---VIAAETSELDINNAVELEWRKINDSGLLDTMLSQVDSL 727
Canis_lupus_familiaris K-----EIEEQEKMLKEKK---VIAAEEASESGINNAVDLEWRKISDSGLLETMLSQVDSL 735
Rhinatrema_bivittatum K-----EIEEQERRLKEKKLDASDCPETPAVCGSKGMDLEWMKISEG----- 725
Xenopus_tropicalis R-----EFFFFFFEQLKLD-----TESSHTLDHGSRTDRNNITESVQERVSPVDNY 705
.....730.....740.....750.....760.....770.....780

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:      : : * * : : * .. : : * : : * : :
Pavo_muticus      HNANSTSIG--FAHTTSPNFTTSTSETSFFLWGPSSGSGVIKTSVSRPSNRIKTRWTQIFT 787
Pavo_cristatus    HNANSTSIG--FAHTTSPNFTTSTSETSFFLWGPSSGSGVIKTSVSRPSNRIKTRWTQIFT 787
Gallus_gallus     HNANSTSIG--FAHTTSPNFTTSTSETSFFLWGPSSGSGVIKTSVSRPSNRIKTRWTQIFT 787
Chelonia_mydas    HNTNSNSTGKSFANTTMPSSFGSTNEAPFYLWGPSSGSGMSKISASR-LIRAKTRWSQAFN 788
Mus_musculus      QTSNN--SG--FITSALQYSFGSAGEAPFYLWGSILTSGVTRVSGTRPCGRAQAKWSQVFN 784
Rattus_norvegicus QTSNN--SG--FLSSALQYSFGSASEVPLYLRGSLTSGVTKLSVTRPFGRAQPKWSQVFS 787
Homo_sapiens      HTSNNSNSSG--FTNSAMQYSFVSANEAPFYLWGSSTSGLTKLSVTRPFGRAKTRWSQVFS 792
Pan_troglodytes   HTSNNSNSSG--FTNSALQYSFVSANEAPFYLWGSSTSGLTKLSVARPFGRAKTRWSQVFS 792
Macaca_mulatta    HTSNNSNSSG--FTNSALQYSFVSANEAPFYLWGSSTSGLTKLSVTRPFGRAKTRWSQVFS 817
Callithrix_jacchus HTSNNSNSSG--FTNSALQYSFGSANEAPFYLWGSAGGLTKLSVTRPFGRAKTRWSQVFS 799
Bos_taurus        HTSNNSNSSG--FTSSALQHSFASANEVPFYLWGSSSSGLTKLSVTRPFGRAKTKWSQVFS 786
Equus_caballus    HTSNNSNSSG--FTNSALQHSFGSVSEAPFYLWASSTSGLTKLSVTRPFGRAKPKWSQGFS 785
Canis_lupus_familiaris HTSNNSNSSG--FTNSALQHSFASANEAPFYLWGSSTSGLNKL SVTRPFGRAKPKWSQVFS 793
Rhinatrema_bivittatum -----LANVTNQNNSFGSPREPPFYLRGPASSGIPKMAVPKSIGRTRPRWSQVFT 774
Xenopus_tropicalis HSCSTYSTV---SATSQHSYGSANESSLGLWGPVKSRAPTSISSSHGRKTRWSQVYS 761
.....790.....800.....810.....820.....830.....840

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Pavo_muticus      PEIQMKFDKITAVAKGFLTRRLLOTEKLKHLKQTVKDTMEFIRNFQSEAPLKRGSVSEOD 847
Pavo_cristatus    PEIQMKFDKITAVAKGFLTRRLLOTEKLKHLKQTVKDTMEFIRNFQSEAPLKRGSVSEOD 847
Gallus_gallus     PEIQMKFDKITAVAKGFLTRRLLOTEKLKHLKQTVKDTMEFIRNFQSEAPLKRGSVSAQD 847
Chelonia_mydas    PEMQMKFSKITALAKGFLTRRLMOTDKLKYLRQTVKDTMEFIKIFQSEAPLKRGTVSQVD 848
Mus_musculus      PEIHAKFNKITAVAKGFLTRKLMQTDKQLRQTVKDTMEFIRSFQSEAPLKRGVVSAQD 844
Rattus_norvegicus PEIQAKFNKITAVAKGFLTRKLMQTDKQLRQTVKDTMEFIRSFQSEAPLKRGVVSAQD 847
Homo_sapiens      LEIQAKFNKITAVAKGFLTRRLMOTDKLQRLQTVKDTMEFIRSFQSEAPLKRGI VSAQD 852
Pan_troglodytes   LEIQAKFNKITAVAKGFLTRRLMOTDKLQRLQTVKDTMEFIRSFQSEAPLKRGI VSAQD 852
Macaca_mulatta    PEIQAKFNKITAVAKGFLTRRLMOTDKLQRLQTVKDTMEFIRSFQSEAPLKRGVVSAQD 877
Callithrix_jacchus PEVQAKFSKITAMAKGYLTRRLMOTDKLQRLQTVKDTMEFIRSFQSEAPLKRGVVSAQD 859
Bos_taurus        PEVQAKLNKITAVAKGFLTRRLMOTDKLQRLQTVKDTMEFIRSFQSEAPLKRGVVSAQD 846
Equus_caballus    PEVQAKFSKITAVAKGFLTRRLMOTDKLQRLQTVKDTMEFIRSFQSEAPLKRGVVSAQD 845
Canis_lupus_familiaris PEVQTKFNKITAVAKGFLTRRLMOTDKLQRLQTVKDTMEFIRSFQSEAPLKRGVVSAQD 853
Rhinatrema_bivittatum PEMQMKFNKVITALAKGFLTRRLMOTDKLHLRQTIKDTMEFMKMFQSEVPLKRGVVSTQD 834
Xenopus_tropicalis PAMQKFNKATALAKGFLTRRLMOTDKLKNLKKTVKDTAEFMRTFQSEFFPLSRGMVSSOD 821
.....850.....860.....870.....880.....890.....900

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****:::****::: *::**** *:: :*** ** ***** *:::***:
Pavo_muticus      ASLHERVMAQLRAALYDIHDIFFTMEASERMNILRHDEVRKEKMLROM----- 896
Pavo_cristatus    ASLHERVMAQLRAALYDIHDIFFTMEASERMNILRHDEVRKEKMLROM----- 896
Gallus_gallus     ASLHERVMAQLRAALYDIHDIFFTMEASERMNILRHDEVRKEKMLROM----- 896
Chelonia_mydas    ASLQERVMAQLRAALYDIHDIFFIMEVSEMHILRHDEVRKEKMLROM----- 897
Mus_musculus      ASLQERVLAQLRAALYGIHDIFFVMDAAERMSILHHDREARKEKLLROM----- 893
Rattus_norvegicus ASLQERVLAQLRAALYGIHDIFFVMDAAERMSILHHDREARKEKLLROM----- 896
Homo_sapiens      ASLQERVLAQLRAALYGIHDIFFVMDAAERMSILHHDREVRKEKMLROM----- 901
Pan_troglodytes   ASLQERVLAQLRAALYGIHDIFFVMDAAERMSILHHDREVRKEKMLROM----- 901
Macaca_mulatta    ASLQERVLAQLRAALYGIHDIFFVMDAATERMSILHHDREVRKEKMLROM----- 926
Callithrix_jacchus ASLQERVLAQLRAALYGIHDIFFVMDAAERMSILHHDREVRKEKMLROM----- 908
Bos_taurus        ASLQERVLAQLRAALYGIHDIFFVMDAAERMSILHHDREVRKEKMLROMGIFSTQGSNLS 906
Equus_caballus    ASLQERVFAQLRAALYGIHDIFFVMDAAERMSILHHDREVRKEKMLROL----- 894
Canis_lupus_familiaris ASLQERVLAQLRAALYGIHDIFFVMDAAERMSILHHDREVRKEKMLROM----- 902
Rhinatrema_bivittatum ASLQERVLAQLRAALYEIYDIFFGMEVSEMHILSHDREVRREKMIROM----- 883
Xenopus_tropicalis ASLQERVLAQLRSALFEIHDIFFAMEPAERMNILAHDELRLREKMIROM----- 870
.....910.....920.....930.....940.....950.....960

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*:::*** :::** ***** :. :::***: * . . * *::***
Pavo_muticus      -----DKVKS PRERATLSTATQKSLDRKKYMKASEMGMP SKKIVIKORSPE SRVLQP 948
Pavo_cristatus    -----DKVKS PRERATLSTATQKSLDRKKYMKASEMGMP SKKIVIKORSPE SRVLQP 948
Gallus_gallus     -----DKVKS PRERATLSTATQKSLDRKKYMKASEMGMP SKKIVIKORSPE SRVLQP 948
Chelonia_mydas    -----AKIKTPRERVTLSTATQKSLDRKKYMKASEMGMPNKKLILKONTPEARVLQP 949
Mus_musculus      -----DKMKSPR--VALSVATQKSLDRKKFMKVAEMGMPNKKFLLKONPSETRVLQP 943
Rattus_norvegicus -----DKMRSPR--VALSVATQKSLDRKKFMKVAEMGMANKKFLKONPSETRVLQP 946
Homo_sapiens      -----DKMKSPR--VALSAATQKSLDRKKYMKAAEMGMPNKKFLVKONPSETRVLQP 951
Pan_troglodytes   -----DKMKSPR--VALSAATQKSLDRKKYMKAAEMGMPNKKFLVKONPSETRVLQP 951
Macaca_mulatta    -----DKMKSPR--VALSAATQKSLDRKKYMKAAEMGMPNKKFLVKONPSETRVLQP 976
Callithrix_jacchus -----DKMKSPR--VALSAATQKSLDRKKYMKAAEMGMPNKKFLVKONPSETRVLQP 958
Bos_taurus        LLCLLQWQDKMKSPR--VALSAATQKSLDRKKYMKAAEMGMP SKKFLVKONPSETRVLQP 964
Equus_caballus    -----DKMKSPR--VALSAATQKSLDRKKFMKAAEMGMPNKKFLVKONPSETRILQP 944
Canis_lupus_familiaris -----DKMKSPR--VALSAATQKSLDRKKYMKAAEMGMPNKKFLVKONPSETRVLQP 952
Rhinatrema_bivittatum -----EKVKS PRERVALSAATQKSLDRKKLLKAVEMGMPNKKLLKQKMSSETRVLQP 935
Xenopus_tropicalis -----EKIKSPRERVTLSSATQKSLDRKKITRVVHIGMPKKLQPKPRASENRILQP 922
.....970.....980.....990.....1000.....1010.....1020

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*****: *:::***:
Pavo_muticus      NQGQNAPVHRLLCRQGT PKTSMKGVEQNRKKAPES SVSNKA-VSGAYAGRTORKKPNVVT 1007
Pavo_cristatus    NQGQNAPVHRLLCRQGT PKTSMKGVEQNRKKAPES SVSNKA-VSGAYAGRTORKKPNVVT 1007
Gallus_gallus     NQGQNAPVHRLLCRQGT PKTSMKGVEQNRKKASE SVSNKA-VSGAYAGRTORKKPNVVT 1007
Chelonia_mydas    NQGQNTPIHRLLCRQGT PKTSMKGVEQNRKKSSSE SVPNKA-TSGVYAGRIORKKPNVVT 1008
Mus_musculus      NQGQNAPVHRLLSRQGS-----ICRKNPKKAAKCCDNLRRQHS LG- 983
Rattus_norvegicus NQGQNAPVHRLLSRQGT PKTSVKGVVQNRQKPSQSRVPNRPVSVSGYAGKIORKRPNVAT 1006
Homo_sapiens      NQGQNAPVHRLLSRQGS-----ICRKNPKKAAKCCDNLRRQHS LG- 991
Pan_troglodytes   NQGQNAPVHRLLSRQGT PKTSVKGVVQNRQKPSQSRVPNRPVSVSGYAGKIORKRPNVAT 1011
Macaca_mulatta    NQGQNAPVHRLLSRQGT PKTSVKGVVQNRQKPSQSRVPNRPVSVSGYAGKIORKRPNVAT 1036
Callithrix_jacchus NQGQNAPVHRLLSRQGT PKTSVKGAVQNRQKPSQSRVPNRPVSVSGYAGKIORKRPNVAT 1018
Bos_taurus        NQGQNAPVHRLLSRQGT PKTSVKGVVQNRQKSSQSRVPNRPVSVSGYAGKIORKRPNVAT 1024
Equus_caballus    NQGQNAPGHRLLSRQGT PKTSVKGVVQNRQKSSQSRVPNRPVSVSGYAGKIORKRPNVAT 1004
Canis_lupus_familiaris NQGQNAPVHRLLSRQGT PKTSVKGVVQNRQKSSQSRVPNRPVSVSGYAGKIORKRPNVAT 1012
Rhinatrema_bivittatum NQGQNAPLNLRLFCRQGS-----ICRKNPKKEAKCCDNLRRQHS LG- 975
Xenopus_tropicalis NQGQNAPMHRLLSREGS-----ICKKNPKKEAKCCDNLRRQHS LG- 962
.....1030.....1040.....1050.....1060.....1070.....1080

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/CCPD10pep Tue Feb 1 11:36:31 2022

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Pavo_muticus	I	1008
Pavo_cristatus	I	1008
Gallus_gallus	I	1008
Chelonia_mydas	I	1009
Mus_musculus	-	983
Rattus_norvegicus	I	1007
Homo_sapiens	-	991
Pan_troglodytes	I	1012
Macaca_mulatta	I	1037
Callithrix_jacchus	I	1019
Bos_taurus	I	1025
Equus_caballus	I	1005
Canis_lupus_familiaris	I	1013
Rhinatrema_bivittatum	-	975
Xenopus_tropicalis	-	962
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