

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/ADAMIES12.pst Feb 1 10:59:01 2022

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		:	*	.	::	:	*	.	*	::	:	*	
Pavo_muticus	-----	MPCVPP	SWAASG	SFWLLVLH	-----	VPA-LCGT	GGS----	LFPD	GROG	QQFI	KTLL	44	
Pavo_cristatus	-----	MPCVPP	SWAASG	SFWLLVLH	-----	VPA-LCGT	GGS----	LFPD	GROG	QQFI	KTLL	44	
Gallus_gallus	-----	MPCVPP	SWAASG	SFWLLVLH	-----	VPALLCGT	GAS----	LFPD	GROG	QQFI	KTLL	45	
Chelonia_mydas	-----	MPCVQR	NWIANF	SFWVQFL	-----	MQALCYGRN	PPPGRFF	FPDK	ROEH	FIRTL		49	
Mus_musculus	-----	MPCARG	SWLAKL	SIVAQLIN	-----	FGAFCHGR	QTQPWPV	RFPDP	PROEH	FIKSL		49	
Rattus_norvegicus	-----	MPCAGN	NWMAKL	SMVAQLLN	-----	FGAFCHGR	QAQPWPV	RFPDP	KOEHF	IKSL		49	
Homo_sapiens	-----	MPCAQRS	SWLANL	SVVAQLLN	-----	FGALCYGR	QPQP	GPVR	FPDR	ROEHF	IKGL	49	
Pan_troglodytes	-----	MPCAQRS	SWLANL	SVVAQLLN	-----	FGALCYGR	QPQP	GPVR	FPDR	ROEHF	IKGL	49	
Macaca_mulatta	-----	MPCAQRS	SWLANL	SVVAQLLN	-----	FGALCYGR	QPQP	GPVR	FPDR	ROEHF	VKGL	49	
Callithrix_jacchus	-----	MPCAQRS	SWLANL	SMVAQLLN	-----	FGALCHGR	QPQP	GPVF	SFPDR	ROEHF	IKSL	49	
Bos_taurus	-----	MPCAQRS	SWLAKL	SVVAQLLN	-----	LGALCYGR	QPQP	GPVR	FPDK	ROEHF	IKAL	49	
Equus_caballus	-----	MPCAQRS	SWLANL	SVVAQLLN	-----	FGALCYGR	QPLPG	PVHF	PDR	ROEHF	IKAL	49	
Canis_lupus_familiaris	-----	MPCARR	SWLARL	SVVAHLLN	-----	FGALCHGT	QAQP	GPVH	FPDR	ROEHF	IKAL	49	
Rhinatrema_bivittatum	-MCSNT	IMVCIQ	RGTASF	SFLVQFLYV	---	FTVSLCHG	SHLQ	PGNF	YFPDK	KOEHF	MKTL	56	
Xenopus_tropicalis	MNIFSP	LLRPSH	AMYAER	PACRYFIFCT	FP	LLLAICH	TRLHR	DNPH	SLHKG	QEHLD	HSL	60	
	1.....	10.....	20.....	30.....	40.....	50.....	60.....						
		::*	*::*	*..	*::*	::*	*	::*	*	::*	::*		
Pavo_muticus	Q-EYEV	VDPA	RVDAS	GHFVS	FNLHRY	ISNTR	KKRDL	GEKEN	AIYYK	INHKE	KDLFF	NLTI 103	
Pavo_cristatus	Q-EYEV	VDPA	RVDAS	GHFVS	FNLHRY	ISNTR	KKRDL	GEKEN	AIYYK	INHKE	KDLFF	NLTI 103	
Gallus_gallus	Q-EYEV	VDPA	RVDANG	HGFVS	FNLHHH	ISNTR	KKRDL	GKKEN	VVYYK	INHKE	KDLFF	NLTI 104	
Chelonia_mydas	Q-EYHIV	GPAKV	DASGH	FLSY	SLHHHT	SDARR	KRDFS	RKENL	VYYK	INHKE	KDLFF	NLTI 108	
Mus_musculus	P-EYHIV	SPVQ	VDASG	HFLSY	GLHHP	VTSSR	KKRAA	GGSGD	QVYYR	ISHEE	KDLFF	NLTI 108	
Rattus_norvegicus	P-EYHIV	SPVQ	VDASG	HFLSY	GLHHP	VTSSR	KKRAA	GGSGD	QVYYR	ISHEE	KDLFF	NLTI 108	
Homo_sapiens	P-EYHV	VGPVR	VDASG	HFLSY	GLHYP	ITSSR	KKRDL	DGSED	WVYYR	ISHEE	KDLFF	NLTI 108	
Pan_troglodytes	P-EYHV	VGPVR	VDASG	HFLSY	GLHYP	ITSSR	KKRDL	DGSED	WVYYR	ISHEE	KDLFF	NLTI 108	
Macaca_mulatta	P-EYHV	VGPVR	VDASG	HFLSY	GLHYP	ITSSR	RRRDL	DGSED	WVYYR	ISHEE	KDLFF	NLTI 108	
Callithrix_jacchus	P-EYHV	VGPVR	VDASG	HFLSY	GLHLL	ITSSR	KKRDL	DGSED	WVYYR	ITHEE	KDLFF	NLTI 108	
Bos_taurus	P-EYHV	VAPVR	VDASG	RFLSY	GLHHS	VNRRR	KRDL	DDPE	GRVYY	RISHH	EKDLFF	NLTI 108	
Equus_caballus	P-EYHV	VAPVR	VDASG	HFLSY	GLHHP	PISSR	KKRDL	GGPED	QVYYR	ISHEE	KDLFF	NLTI 108	
Canis_lupus_familiaris	P-EYHV	VAPVR	VDASG	RFLSY	GLHPP	ITSSR	RRRDL	AGPED	RAYYR	ISHED	KDLFF	NLTI 108	
Rhinatrema_bivittatum	Q-GYDV	VTVP	KVDES	GHFQ	SYNLY	HDSSS	TRRKR	DLN	GNPN	-LYYK	INHRA	KELFF	NLTI 114
Xenopus_tropicalis	PLAF	EVVE	VPKV	DEKGN	FLSYN	LQH---	RRKR	--SVAS	QAIHYR	IHKTH	NLFF	NLTI 113	
	70.....	80.....	90.....	100.....	110.....	120.....						
		::*	::*::*	*:	:	::	::*	::*	:	*	::*::*	::*	
Pavo_muticus	HMGFL	SHNYI	VERRR	GNHSH	AKIAMH	SGVPC	HFIGT	VLQPG	--SES	GTA	AISTC	NGLTGY 161	
Pavo_cristatus	HMGFL	SHNYI	VERRR	GNHSH	AKIAMH	SGVPC	HFIGT	VLQPG	--SES	GTA	AISTC	NGLTGY 161	
Gallus_gallus	HMGFL	SHNYI	VERRR	GNHSH	AKIAMH	SGVPC	HFIGS	VLQPG	--SGS	GTA	AISTC	NGLTGY 162	
Chelonia_mydas	HRGFL	SANYV	LERRY	GNHTG	AKIVPY	SGTSC	HILGT	VLQPN	--SGN	GPA	VISTC	NGLTGY 166	
Mus_musculus	NWEFL	SNGYV	VVEKRY	GNLSH	VKMVASS	GQPCH	LRGT	VLQQT	TVIG	ITA	ALSAC	QGLTGF 168	
Rattus_norvegicus	NWEFL	SNGYV	VVEKRY	GNLSH	VKMAASS	GQPCH	LRGT	VLQQT	TI	RMG	TAALS	ACQGLTGF 168	
Homo_sapiens	NQGFL	SNSYI	MEKRY	GNLSH	VKMMASS	APLCH	LSGT	VLQQT	--TRV	GTA	ALSACH	GLTGF 166	
Pan_troglodytes	NQGFL	SNSYI	MEKRY	GNLSH	VKMMASS	APLCH	LSGT	VLQQT	--TRV	GTA	ALSACH	GLTGF 166	
Macaca_mulatta	NRGFL	SNSYI	MEKRY	GNLSR	VKMMASS	APLCH	LSGT	VLQQT	--TRV	GTA	ALSACH	GLTGF 166	
Callithrix_jacchus	NRGFL	SNSYI	MEKRY	GNLSN	VKMMASS	APLCH	LSGT	VLQQT	--TRV	GTA	AFSACH	GLTGF 166	
Bos_taurus	NQGLL	SKNYI	VERRY	GNLSR	VKMEASS	GPPCH	LRGT	VLQQT	--TRV	GTA	ALSTCH	GLTGF 166	
Equus_caballus	NQGLL	SKSYI	VERRY	GNLSH	VKMVASS	GPPCH	LRGT	VLQQT	--TR	GTA	ALSACH	GLTGL 166	
Canis_lupus_familiaris	TQGFL	SESYI	LERRH	GNLSH	VMVASS	APPCH	LGT	VLQQT	--TR	MGT	ALSAC	QGLTGF 166	
Rhinatrema_bivittatum	NEGFL	SSNYI	LERRY	GNHTG	GKIASH	SGTACH	LIGT	VLQPG	--VG	SGS	AAISTC	SGLAGF 172	
Xenopus_tropicalis	RDGFL	SDNFIL	ERRNG	NSSHAR	ISPQL	GNGCH	LIGT	AQRAH	--VG	GVA	AISVC	NGLAGF 171	
	130.....	140.....	150.....	160.....	170.....	180.....						

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*:.**.*:****.:.      .      *:.**.:      .      .      .:.*
FHLPHGDYFIEPIKKHLQKKGAPQPHIIYEANTLQNALRRRRAIPV-EEQACGVNDTLNF      220
FHLPHGDYFIEPIKKHLQKKGAPQPHIIYEANTLQNALRRRRAIPV-EEQACGVNDTLNF      220
FHLPHGDYFIEPIKKHLQKKGTPOPHIIYEANTLPNALRRRRAVPVEEQACGVNDTLNF      222
FRLPHGDYFIEPIKKHPLKEEGIAYPHIIYRANILQNALQKORRETTTDEQACGLNDFS      226
FHLPHGDFFIEPVKKHPLTEEGSYPHVVYR-----RQSIRAPETKEPICGLKDSLND      220
FHLPHGDFFIEPVKKHPLTEEGYQPHVIYR-----RQSYRVPETKEPTCGLKDSLND      220
FQLPHGDFFIEPVKKHPLVEGGYHPHIVYR-----RQK--VPETKEPTCGLKDSVNI      216
FQLPHGDFFIEPVKKHPLVEGGYHPHIVYR-----RQK--VPETKEPTCGLKDSVNI      216
FQLPHGDFFIEPVKKHPLVEGGYHPHIVYR-----RQK--VPETKEPTCGLNDSVNI      216
FQLPHGDFFIEPVKNHPLAEGGYHPHIIYR-----RQK--VPETKEPTCGLKDSVNI      216
FHLPHGDFFIEPVKNHPLAEGEYHPHVVYR-----RQRRGVPEMKDPTCGLKDSPGT      218
FHLPHGDFFIEPIKKHPLAEGGYHPHIIYR-----RQRRRVPEMKPTCGLKDSLGT      218
FHLPHGDFFIEPVKKHPVAEGEYHPHIIYR-----RLRQRVPEQKEPTCGLKDGLAT      218
FHLPHGDYFIEPVKSYPVKEGYPHIIYRRDTSQR-FHKQPRSPPROTELWGVDNFST      231
FRLPDGDYFIEPFHGATQVSGKPHQHIIYQDPSF---HRNRRELPISTGDFCAVNDNSK      228
.....190.....200.....210.....220.....230.....240

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.: . *.* : *:***:*****:* : *** :*:*****:**:*
LRQEDRRREKWEONHVAVRKVSRSSVSKERWVETLVVADSKMVEYHGSDHVESYILTIMN    280
LRQEDRRREKWEONHVAVRKVSRSSVSKERWVETLVVADSKMVEYHGSDHVESYILTIMN    280
FKQEDHRREKWEONHVAVRKVSRSSVSKERWVETLVVADSKMVEYHGSDHVESYILTIMN    282
FKQEHRR-ERWEGNHRAAKTISRSSVSKERWVETLVVADSKMIEYHGSDNVESYILTIIIN    285
SVKQELQREKWERKTLSRSLSRRSISKERWVETLVVADTKTVEYHGSENVESYILTIMN      280
SVKQELQREKWERKNWPSSRSLSRRSISKERWVETLVVADTKMVEYHGSENVESYILTIMN      280
SQKQELWREKWERHNLPSSRSLSRRSISKERWVETLVVADTKMIEYHGSENVESYILTIMN      276
SRKQELWREKWERHNLPSSRSLSRRSISKERWVETLVVADTKMIEYHGSENVESYILTIMN      276
SQKQELWREKWERHNLPSSRSLSRRSISKERWVETLVVADTKMIEYHGSENVESYILTIMN      276
SQKQELLREKWERSHLRGSLRRSISKERWVETLVVADTKMIEYHGRENVESYILTIMN        278
SQKLLELQREKWERKNLSRGLSRRSISKERWVETLVVADTKMIEYHGSENVESYILTIMN        278
SQKLERQREKVERNHWPRKGLSRRSISKERWVETLVVADTKMIEYHGSDNVESYILTIMN        278
ALQQELRREKWERQQPKKKKISQRSVSKERWVETLVVADSKMIEYHGRENVESYIFTILN      291
VLQQERQRFEWERKHNGRKISRQSVSKERWVETLVVADTKMIAYHGSDNVESYIFTIMN      288
.....250.....260.....270.....280.....290.....300

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*****.*.:** :** :*****:*****:*****:*.:*.:*****:***.* :*
MVTGLFHDPSSIGNAIHIVLVRLLILFEEEEQGLKIVHHADKTLASFCKWQKSVNPKSDVNP 340
MVTGLFHDPSSIGNAIHIVLVRLLILFEEEEQGLKIVHHADKTLASFCKWQKSVNPKSDVNP 340
MVTGLFHDPSSIGNAIHIVLVRLLILFEEEEQGLKIVHHADKTLASFCKWQKSVNPKSDVNP 342
MVTGLFHDPSSIGNAIHIVLVRLLILLEEEEEQGLKIVHHADKTLASFCKWQKSVNPKNDVNP 345
MVTGLFHPSPSIGNLVHIVVRLILLLEEEEEQGLKIVHHA EKTLSSFCKWQKSVNPKSDLNP 340
MVTGLFHNPSIGNAVHIVVRLILLLEEEEEQGLKIVHHA EKTLSSFCKWQKSVNPKSDLNP 340
MVTGLFHNPSIGNAIHIVVRLILLLEEEEEQGLKIVHHA EKTLSSFCKWQKSVNPKSDLNP 336
MVTGLFHNPSIGNAIHIVVRLILLLEEEEEQGLKIVHHA EKTLSSFCKWQKSVNPKSDLNP 336
MVTGLFHNPSIGNAIHIVVRLILLLEEEEEQGLKIVHHA EKTLSSFCKWQKSVNPKSDLNP 336
MVTGLFHNPSIGNAIHIVVRLILLLEEEEEQGLKIVHHA EKTLSSFCKWQKSVNPKSDLNP 338
MVTGLFHNPSIGNAIHIVVRLILLLEEEEEQGLKIVHHA EKTLSSFCKWQKSVNPKSDLNP 338
MVTGLFHNPSIGNAIHIVVRLILLLEEEEEQGLKIVHHA EKTLSSFCKWQKSVNPKSDLNP 338
MVTGLFHDPSSVGNAIHIILVRLILLLEEEEEQGLKIVHHADH TLASFCKWQKSVNPKSDAHP 351
MVTGLFHDPNIGNAIHIKVRLILLLEEEEG LKIVHNADQTLASFCKWQKSVNPKSDAHP 348
.....310.....320.....330.....340.....350.....360
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*****:****:*. * *****:***** :*****:*****:*****
Pavo_muticus      THHDVAVLLTRKDICAGMNRPCETLGLSHLSGMCOPHRSCNINEDSGLPLAFTIAHELGH 400
Pavo_cristatus    THHDVAVLLTRKDICAGMNRPCETLGLSHLSGMCOPHRSCNINEDSGLPLAFTIAHELGH 400
Gallus_gallus     THHDVAVLLTRKDICAGMNRPCETLGLSHLSGMCOPHRSCNINEDSGLPLAFTIAHELGH 402
Chelonia_mydas    IHHDVAVLLTRKDICAGMNRPCETLGLSHLSGMCOPHRSCNINEDSGLPLAFTIAHELGH 405
Mus_musculus      VHHDVAVLLTRKDICAGVNRPCETLGLSGLSGMCOPHRSCNINEDSGLPLAFTIAHELGH 400
Rattus_norvegicus VHHDVAVLLTRKDICAGVNRPCETLGLSGLSGMCOPHRSCNINEDSGLPLAFTIAHELGH 400
Homo_sapiens      VHHDVAVLLTRKDICAGFNRPCETLGLSHLSGMCOPHRSCNINEDSGLPLAFTIAHELGH 396
Pan_troglodytes   VHHDVAVLLTRKDICAGFNRPCETLGLSHLSGMCOPHRSCNINEDSGLPLAFTIAHELGH 396
Macaca_mulatta    VHHDVAVLLTRKDICAGFNRPCETLGLSHLSGMCOPHRSCNINEDSGLPLAFTIAHELGH 396
Callithrix_jacchus VHHDVAVLLTRKDICAGSNRPCETLGLSHLSGMCOPHRSCNINEDSGLPLAFTIAHELGH 396
Bos_taurus        AHHDVAVLLTRKDLCAAGVNRPCETLGLSHLSGMCOPHRSCNINEDSGLPLAFTIAHELGH 398
Equus_caballus    AHHDVAVLLTRKDICAGVNRPCETLGLSHLSGMCOPHRSCNINEDSGLPLAFTIAHELGH 398
Canis_lupus_familiaris AHHDVAVLLTRKDICAGVNRPCETLGLSHLSGMCOPHRSCNINEDSGLPLAFTIAHELGH 398
Rhinatrema_bivittatum AHHDVAVLLTRKDICAGMNSPCETLGLSHLSGMCOPHRSCNINEDSGLPLAFTIAHELGH 411
Xenopus_tropicalis AHHDVAVLLTRKDICASKNSPCETLGLSHLSGMCOPSKSCNINEDTGLPLAFTIAHELGH 408
.....370.....380.....390.....400.....410.....420

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**.:*****: **** .. :****:***:***** **.:***** * **** *
Pavo_muticus      SFGIQHDGKENDCEPVGKRPIYMSRQLQYDPTPLTWSQCSKEYITRFLDRGWGFCLDDIP 460
Pavo_cristatus    SFGIQHDGKENDCEPVGKRPIYMSRQLQYDPTPLTWSQCSKEYITRFLDRGWGFCLDDIP 460
Gallus_gallus     SFGIQHDGKENDCEPVGKRPIYMSRQLQYDPTPLTWSQCSKEYITRFLDRGWGFCLDDIP 462
Chelonia_mydas    SFGIQHDGKENDCEPIGRHPYIMSRQLKYDPSPLTWSPCSKEYITRFLDRGWGFCLDDIP 465
Mus_musculus      SFGIQHDGKENDCEPVGRHPYIMSQIQYDPTPLTWSKCSKEYITRFLDRGRGFCLDDIP 460
Rattus_norvegicus SFGIQHDGKENDCEPVGRHPYIMSQIQYDPTPLTWSKCSKEYITRFLDRGRGFCLDDVP 460
Homo_sapiens      SFGIQHDGKENDCEPVGRHPYIMSRQLQYDPTPLTWSKCSKEYITRFLDRGWGFCLDDIP 456
Pan_troglodytes   SFGIQHDGKENDCEPVGRHPYIMSRQLQYDPTPLTWSKCSKEYITRFLDRGWGFCLDDIP 456
Macaca_mulatta    SFGIQHDGKENDCEPVGRHPYIMSRQLQYDPTPLTWSKCSKEYITRFLDRGWGFCLDDIP 456
Callithrix_jacchus SFGIQHDGKENDCEPVGRHPYIMSRQLQYDPTPLTWSKCSKEYITRFLDRGWGFCLDDIP 456
Bos_taurus        SFGIQHDGKENDCEPLGRHLYIMSRQLQYNPAPLTWSKCSKEYITRFLDRGWGFCLDDIP 458
Equus_caballus    SFGIQHDGKENDCEPIDRHPYIMSRQLQYNPAPLTWSKCSKEYITRFLDRGWGFCLDDIP 458
Canis_lupus_familiaris SFSIQHDGKENDCEPVGRHPYIMSRQLQYNPAPLTWSQCSKEYITRFLDRGWGFCLDDIP 458
Rhinatrema_bivittatum SFGIQHDGQGNDCPEPIGKHPYIMSRRLQYDPSPLTWSQCSKEYITRFLDRGWGSCLDVDP 471
Xenopus_tropicalis SFGIQHDGQGNDCPEIAGRNPYIMSRQLQYNTSPLTWSPCSKEYITRFLDRGWGFCLDDVP 468
.....430.....440.....450.....460.....470.....480

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Pavo_muticus      QKEVLKSPVIAPGVYIDVHHQCQLQYGSNATFCEDVDNLCQTLWCSVKGSCRSKLDAAAD 520
Pavo_cristatus    QKEVLKSPVIAPGVYIDVHHQCQLQYGSNATFCEDVDNLCQTLWCSVKGSCRSKLDAAAD 520
Gallus_gallus     QKEVLKSPVIAPGVYIDVHHQCQLQYGSNATFCEDVDNLCQTLWCSVKGSCRSKLDAAAD 522
Chelonia_mydas    KKKDLKSPLIAPGVYIDVHHQCQLQYGPATFCCEVDNICQTLWCSVKGSCRSKLDAAAD 525
Mus_musculus      SKKGLKSNVIAPGVYIDVHHQCQLQYGPATFCQEVENVQCQTLWCSVKGFCSRSLDAAAD 520
Rattus_norvegicus RKKGLKSNVIAPGVYIDVHHQCQLQYGPATFCQEVENVQCQTLWCSVKGFCSRSLDAAAD 520
Homo_sapiens      KKKGLKSKVIAPGVYIDVHHQCQLQYGPATFCQEVENVQCQTLWCSVKGFCSRSLDAAAD 516
Pan_troglodytes   KKKGLKSKVIAPGVYIDVHHQCQLQYGPATFCQEVENVQCQTLWCSVKGFCSRSLDAAAD 516
Macaca_mulatta    KKKGLKSKVIAPGVYIDVHHQCQLQYGPATFCQEVENVQCQTLWCSVKGFCSRSLDAAAD 516
Callithrix_jacchus TKKGLRSKVIAPGVYIDVHHQCQLQYGPATFCQEVENVQCQTLWCSVKGYCSRSLDAAAD 516
Bos_taurus        QKKGLKSNIIAPGVYIDVHHQCQLQYGPATFCQEVENVQCQTLWCSVKGFCSRSLDAAAD 518
Equus_caballus    KKKGLKSKIVAPGVYIDVHHQCQLQYGPATFCQEVENVQCQTLWCSVKGFCSRSLDAAAD 518
Canis_lupus_familiaris QKKGLKSKVIAPGVYIDVHHQCQLQYGPATFCQEVENVQCQTLWCSVKGFCSRSLDAAAD 518
Rhinatrema_bivittatum AKKDLKPPVAPGVLYDVHHQCQLQYGLNSTFCCEVDNICQTLWCLVKGSCRSKLDAAAD 531
Xenopus_tropicalis AKKDLKPPVAPGVLYDVHHQCQLQYGPATFCCEVDNVCQTLWCSVKNSCSRSLDAAAD 528
.....490.....500.....510.....520.....530.....540

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Pavo_muticus      GTRCGENKWCFSGECITVGKTPPEAIHGGWGVWSWSHCTRTRCGAGVQSAERPDCNPEPQF 580
Pavo_cristatus    GTRCGENKWCFSGECITVGKTPPEAIHGGWGVWSWSHCTRTRCGAGVQSAERPDCNPEPQF 580
Gallus_gallus     GTRCGENKWCFSGECITVGKTPPEAIHGGWGVWSWSHCTRTRCGAGVQSAERPDCNPEPQF 582
Chelonia_mydas    GTRCGEKKWCFNAECIRVGKNPEMINGGWGTWSSWSHCTRTRCGAGVQSAERHCNNPEPQF 585
Mus_musculus      GTRCGEKKWCMAGKCITVGKKPESIPGGWGRWSPWSHCSRTCGAGAQSAERLCNNPEPKF 580
Rattus_norvegicus GTRCGEKKWCMAGKCITVGKKPESIPGGWGRWSPWSHCSRTCGAGAQSAERLCNNPEPKF 580
Homo_sapiens      GTQCGEKKWCMAGKCITVGKKPESIPGGWGRWSPWSHCSRTCGAGVQSAERLCNNPEPKF 576
Pan_troglodytes   GTQCGEKKWCMAGKCITVGKKPESIPGGWGRWSPWSHCSRTCGAGVQSAERLCNNPEPKF 576
Macaca_mulatta    GTQCGEKKWCMAGKCITVGKKPESIPGGWGRWSPWSHCSRTCGAGVQSAERLCNNPEPKF 576
Callithrix_jacchus GTQCGEKKWCMAGKCITVGKKPESIPGGWGRWSPWSHCSRTCGAGVQSAERLCNNPEPKF 576
Bos_taurus        GTQCGEKKWCMAGKCITVGKKPESIPGGWGRWSPWSHCSRTCGAGAQSAERLCNNPEPKF 578
Equus_caballus    GTRCGEKKWCMAGKCITVGKKPESIPGGWGRWSPWSHCSRTCGAGAQSAERLCNSPEPKF 578
Canis_lupus_familiaris GTRCGEKKWCMAGKCITVGKKPESIPGGWGRWSPWSHCSRTCGAGAQSAERLCNNPEPKF 578
Rhinatrema_bivittatum GTRCGENKWCFSGECITIGKHPESISGGWGEWTAWTHCTRTRCGAGVQSAERQCNNEPQF 591
Xenopus_tropicalis GTRCGESKWCFNKGKINVGTTPTQTINGGWGAWTPWSHCSRTCGAGAENAERKCNNEPQF 588
.....550.....560.....570.....580.....590.....600

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Pavo_muticus      GGDYCTGERKRYRMCNISPCKGLPTFROMQCTEFDTPVPYQNEFYHWVPVYNTANPCELH 640
Pavo_cristatus    GGDYCTGERKRYRMCNISPCKGLPTFROMQCTEFDTPVPYQNEFYHWVPVYNTANPCELH 640
Gallus_gallus     GGDYCTGERKRYRMCNISPCKGLPTFROMQCTEFDTPVPYQNEFYHWVPVYNTANPCELH 642
Chelonia_mydas    GGKYCTGERKRYRMCNIVPCRQDTPFROMQCFEFDTPVPYKNEFYQWIPVYNTANPCELH 645
Mus_musculus      GGKYCTGERKRYRLCNVHPCRSDTPTFROMQCFEFDTPVPYKNQFYRWFPVFNAHPCELY 640
Rattus_norvegicus GGKYCTGERKRYRLCNVHPCRSDTPTFROMQCFEFDTPVPYKNQFYRWFPVFNAHPCELY 640
Homo_sapiens      GGKYCTGERKRYRLCNVHPCRSEAPTFROMQCFEFDTPVPYKNELYHWFPVFNAHPCELY 636
Pan_troglodytes   GGKYCTGERKRYRLCNVHPCRSETPTFROMQCFEFDTPVPYKNELYHWFPVFNAHPCELY 636
Macaca_mulatta    GGKYCTGERKRYRLCNVHPCRSEAPTFROMQCFEFDTPVPYKNELYHWFPVFNAHPCELY 636
Callithrix_jacchus GGKYCTGERKRYRLCNVHPCRSDTPTFROMQCFEFDTPVPYKNEFYRWFPVFNAHPCELY 636
Bos_taurus        GGKYCTGERKRYRLCNVHPCRSDTPTFROMQCFEFDTPVPYKNEFYRWFPVFNAHPCELY 638
Equus_caballus    GGKYCTGERKRYRLCNVHPCRSDTPTFROMQCFEFDTPVPYKNEFYRWFPVFNAHPCELY 638
Canis_lupus_familiaris GGKYCTGERKRYRLCNVHPCRSDTPTFROMQCFEFDTPVPYKNEFYRWFPVFNAHPCELY 638
Rhinatrema_bivittatum GGKYCTGERKRYRMCEILPCLNEMPTFROMQCFEFDTPVPYKNELYQWIPVYNTANPCELD 651
Xenopus_tropicalis GGKYCTGERKRYRICNIQPCPKDYPFREMOCTEFNTVPYKNELYQWIPVYNTANPCELH 648
.....610.....620.....630.....640.....650.....660

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**:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*
Pavo_muticus      CRPIDRHFSEKMLDAVIDGTPCFEGRHSRDICINGMCKAVGCDYEINSNATEDQCGVCLG 700
Pavo_cristatus    CRPIDRHFSEKMLDAVIDGTPCFEGRHSRDICINGMCKAVGCDYEINSNATEDQCGVCLG 700
Gallus_gallus     CRPIDHHFSEKMLDAVIDGTPCFEGRHSRDICINGMCKAVGCDYEINSNATEDQCGVCLG 702
Chelonia_mydas    CRPVDGQFSEKMLDAVSDGTPCFEGRNIRDICINGMCKTVGCDYEINSNATEDRQGVCLG 705
Mus_musculus      CRPIDEQFSEKMLDAVIDGTPCFEGGNSRNVCINGICKRVGCDYEIDSNATEDRQGVCLG 700
Rattus_norvegicus CRPIDEQFSEKMLDAVIDGTPCFEGGNSRNVCINGICKRVGCDYEIDSNATEDRQGVCLG 700
Homo_sapiens      CRPIDGQFSEKMLDAVIDGTPCFEGGNSRNVCINGICKMVGCDYEIDSNATEDRQGVCLG 696
Pan_troglodytes   CRPIDGQFSEKMLDAVIDGTPCFEGGNSRNVCINGICKMVGCDYEIDSNATEDRQGVCLG 696
Macaca_mulatta    CRPIDGQFSEKMLDAVIDGTPCFEGGNSRNVCINGICKMVGCDYEIDSNATEDRQGVCLG 696
Callithrix_jacchus CRPIDGKFSEKMLDAVIDGTPCFEGGNSRNVCINGICKIVGCDYEIDSNATEDRQGVCLG 696
Bos_taurus        CRPIDGHFSEKMLDAVIDGTPCFEGGNSRNVCINGICKMVGCDYEIDSNATEDRQGVCLG 698
Equus_caballus    CRPIDGQFSEKMLDAVIDGTPCFEGGNSRNVCINGICKMVGCDYEIDSNATEDRQGVCLG 698
Canis_lupus_familiaris CRPIDGQFSEKMLDAVIDGTPCFEGGNSRNVCINGICKMVGCDYEIGSNATEDRQGVCLG 698
Rhinatrema_bivittatum CRPIDGRFSEKMLDAVIDGTTTCFEGNNSRDICINGMCKNVGCDYELNSFAMEDRQGVCLG 711
Xenopus_tropicalis CRSSSGNFANKFLDAVIDGTPCFERNKSRDVCINGICKKVGCDYEIDSNATEDRQGVCLG 708
.....670.....680.....690.....700.....710.....720

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/ADAMIES12.pps Feb 1 10:59:01 2022

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****::: *.:* *:*.****.*.:*: *: *****:*.** *****.
Pavo_muticus      DGSACHTVKMTFNQSEGFYVDIGLIPKGARGIRVTEVAEAGNFLAVRSKDPEKYYLNGG 760
Pavo_cristatus    DGSACHTVKMTFNQSEGFYVDIGLIPKGARGIRVTEVAEAGNFLAVRSKDPEKYYLNGG 760
Gallus_gallus     DGSACHTVKMTFNQSEGFYVDIGLIPKGARGIRVTEVAEAGNFLAVRSKDPEKYYLNGG 762
Chelonia_mydas    DGSACQTVKMMFNQSEGLGYVDIGLIPKGARDIRVVEVAEAGNFLAVRSEDPEKYYLNGG 765
Mus_musculus      DGSACQTVKKLFQKEGSGYVDIGLIPKGARDIRVMEIKAAGNFLAIRSEDPEKYYLNGG 760
Rattus_norvegicus DGSACQTVKKVFRQKEGSGYIDIGLIPKGARDIRVMEIKAAGNFLAIRSEDPEKYYLNGG 760
Homo_sapiens      DGSSCQTVRKMFKQKEGSGYVDIGLIPKGARDIRVMEIEGAGNFLAIRSEDPEKYYLNGG 756
Pan_troglodytes   DGSSCQTVRKMFKQKEGSGYVDIGLIPKGARDIRVMEIEGAGNFLAIRSEDPEKYYLNGG 756
Macaca_mulatta    DGSSCQTVRKMFKQKEGSGYVDIGLIPKGARDIRVMEIEGAGNFLAIRSEDPEKYYLNGG 756
Callithrix_jacchus DGSSCQTVRKIFQKEGSGYVDIGLIPKGARDIRVVEIAGAGNFLAIRSEDPEKYYLNGG 756
Bos_taurus        DGSACQTVKKMFQKEGSGYVDIGLIPKGARDIRVMEVEGAGNFLAIRSEDPEKYYLNGG 758
Equus_caballus    DGSACQTVRKMFKQKEGSGYVDIGLIPKGARDIRIMEVEGAGNFLAIRSEDPEKYYLNGG 758
Canis_lupus_familiaris DGSSCQTVKKMFQKEGSGYVDIGLIPKGARDIRVMEVEGAGNFLAIRSEDPEKYYLNGG 758
Rhinatrema_bivittatum DGSTCQTVKKTFNQTEGFYVDIALIPKDARDIRIMEVEEAGNFLAIRSEDPEKYYLNGG 771
Xenopus_tropicalis DGSSCQTIKKVFNQTDGFYVDVGLIPKGARDIKIEEVEEAGNFLAIRSEDPEKYYLNGA 768
.....730.....740.....750.....760.....770.....780

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: ***** *.:* *:*.****.*.:*: *: *****:*.** *****:
Pavo_muticus      FIIQWNGEYKVGATIFQYDRTGDLNLTAPGPTNESIWIQLLFQETNPGIKYEYTVRKKEE 820
Pavo_cristatus    FIIQWNGEYKVGATIFQYDRTGDLNLTAPGPTNESIWIQLLFQETNPGIKYEYTVRKKEE 820
Gallus_gallus     FIIQWNGEYKVGATVFQYDRTGDLNLTAPGPTNESIWIQLLFQETNPGIKYEYTVRKKEE 822
Chelonia_mydas    FIIQWNGAYKVGATTFQYERKGDLENLTASGPTNESVWIQLLFQENNPNGIKYEYTIKKEG 825
Mus_musculus      FIIQWNGNYKLAGTVFQYDRKGDLEKLIAPGPTNESVWLQLLFQVTNPGIKYEYTVRKDG 820
Rattus_norvegicus FIIQWNGNYKLAGTVFQYDRKGDLEKLIAPGPTNESVWLQLLFQVTNPGIKYEYTVRKDG 820
Homo_sapiens      FIIQWNGNYKLAGTVFQYDRKGDLEKLMATGPTNESVWIQLLFQVTNPGIKYEYTIQKDG 816
Pan_troglodytes   FIIQWNGNYKLAGTVFQYDRKGDLEKLMATGPTNESVWIQLLFQVTNPGIKYEYTIQKDG 816
Macaca_mulatta    FIIQWNGNYKLAGTVFQYDRKGDLEKLMATGPTNESVWIQLLFQVTNPGIKYEYTIQKDG 816
Callithrix_jacchus FAIQWNGNYKLAGTIFQYDRKGDLEKLMATGPTNESVWIQLLFQVTNPGIKYEYTIQKDG 816
Bos_taurus        FIIQWNGNYKLAGTIFQYDRKGDLEKLMATGPTNESVWIQLLFQVTNPGIKYEYTVRKDG 818
Equus_caballus    FIIQWNGNYKLAGTIFQYDRKGDLEKLIATGPTNESVWIQLLFQVTNPGIKYEYTIKKEG 818
Canis_lupus_familiaris FIIQWNGNYKLAGTIFQYDRKGDLEKLMATGPTNESVWIQLLFQVTNPGIKYEYTIKKEG 818
Rhinatrema_bivittatum FIIQWNGDYSFAGTKFQYERNGLNENLVASGPTNESLWIQLLFQENNPNGIKYEYTIKKEG 831
Xenopus_tropicalis YIIQWNGEYKVGATIFHYQRNNDTENITASGPTNESIWIQLLFQEHNPVGRYEYVIQKDV 828
.....790.....800.....810.....820.....830.....840

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::: . * *:.* ** *:.* ** *:.* ** *:.* ** *:.* ** *:.* ** *:
Pavo_muticus      SHENEIGEPEYFWQYGEWTACTVTCGRGVRRQIAHCMRKGGGAIKNSFCDPATQPNGRQK 880
Pavo_cristatus    SHENEIGEPEYFWQYGEWTACTVTCGRGVRRQIAHCMRKGGGAIKNSFCDPATQPNGRQK 880
Gallus_gallus     NNENEIGEPEYFWQYGEWTACTVTCGRGVRRQIAHCMRKGGGVKINSFCDPATQPNGRQK 882
Chelonia_mydas    SLENEVGDPYFWQYGGWTDSCVTCGRGVRRQIAHCMRKGGGVKINSFCDPATQPNGRQK 885
Mus_musculus      -LDNDVEKLLYFWQYGRWTECSVTCGTGIRROAAHCVKKGHGIVKTTFCNPETQPSVROK 879
Rattus_norvegicus -LDNDVEKLLYFWQYGRWTECSVTCGTGIRROAAHCVKKGHGIVKTTFCNPETQPSVROK 879
Homo_sapiens      -LDNDVEQQMYFWQYGHWTESVTCGTGIRROTAHCKKGRGMVKATFCDPETQPNGRQK 875
Pan_troglodytes   -LDNDVEQQMYFWQYGHWTESVTCGTGIRROTAHCKKGRGMVKATFCDPETQPNGRQK 875
Macaca_mulatta    -LDNDVEQQMYFWQYGRWTECSVTCGTGIRROTAHCKKGRGMVKATFCDPETQPNGRQK 875
Callithrix_jacchus -LDNDVEQQMYFWQYGRWTECSVTCGTGIRROTAHCKKGRGMVKATFCDPETQPNGRQK 875
Bos_taurus        -LDNDVEKLVYFWQYGRWTECSVTCGTGIRROTAHCKKGRGMVKATFCDPETQPNGRQK 877
Equus_caballus    -LDNDVEKLVYFWQYGHWTESVTCGTGIRROMAHCVKQGHGMVKATFCDPEAOPNGROK 877
Canis_lupus_familiaris -LDNDVNKLVFYFWQYGRWTECSVTCGTGIRROTAYCVKKGHGGMVKATFCDPETQPNGRQK 877
Rhinatrema_bivittatum NTENEIGDQYFYWQYGGWTVCSVTCGTGIKROAVRCVKKGRGVVKNTFCDQEMQPIROK 891
Xenopus_tropicalis NLENEIES-VYTWRYGGWTDSCATCGTGVOHISRCVNKKRGVVKNTFCQDQEMQPIROK 887
.....850.....860.....870.....880.....890.....900

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/ADAMIES12.pst Feb 1 10:59:01 2022

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:* : *****.*: ** :*** :*****:* * **.* :*: **
Pavo_muticus      KCYEKDCPPRWWAGEWQKCSSTCGPTGQKKRTVLCIQTVGSDEQALAVTECOHLLKPKTH 940
Pavo_cristatus    KCYEKDCPPRWWAGEWQKCSSTCGPTGQKKRTVLCIQTVGSDEQALAVTECOHLLKPKTH 940
Gallus_gallus     KCYEKDCPPRWWAGEWQKCSSTCGPTGQKKRTVLCIQTVGSDEQALAVTECOHLLKPKTH 942
Chelonia_mydas    KCNEKDCPPRWWAGEWQKCSSTCGPTGQKKRTVLCIQTVGSDEQVLAADCOHLLKPKTH 945
Mus_musculus      KCHEKDCPPRWWAGEWEACSTTCGPHYGEKKRTVLCIQTMGSDEQALPATDCOHLLKPKAL 939
Rattus_norvegicus KCYEKDCPPRWWAGEWEACSMTCGPHYGEKKRTVLCIQTMGSDEQALPATDCOHLLKPKTL 939
Homo_sapiens      KCHEKACPPRWWAGEWEACSATCGPHGEKKRTVLCIQTMVSDQALPPTDCOHLLKPKTL 935
Pan_troglodytes   KCHEKACPPRWWAGEWEACSATCGPHGEKKRTVLCIQTMGSDEQALPPTDCOHLLKPKTL 935
Macaca_mulatta    KCHEKACPPRWWAGEWEACSATCGPHGEKKRTVLCIQTMGSDEQALPPTDCOHLLKPKTL 935
Callithrix_jacchus KCHEKACPPRWWAGEWEACSATCGPHGEKKRTVLCIQTMGSDEQALPPTDCOHLLKPKTL 935
Bos_taurus        KCHEQDCPPRWWAGEWEACSATCGPHGEKKRTVLCIQTMGSDEQALPTQDCOHLLKPKTL 937
Equus_caballus    KCYERDCPPRWWAGEWEACSATCGPHGEKKRTVLCIQTMGSDEQALQAKDCOHLLKPKTL 937
Canis_lupus_familiaris KCHEKDCPPRWWAGEWEACSATCGPHGEKKRTVLCIQTMGSDEQALPAKDCOHLLKPKTL 937
Rhinatrema_bivittatum NCNEKDCPPRWWVGEWQKCSSTCGPSGEKKRTVLCIQTVGSDEQALPAKDCOHLPKPKAH 951
Xenopus_tropicalis KCNTKECPFRWWVGWQWQCSTTCGPTGQKKRTVLCIKTSGSDEEALRSEDCHHLTKPKVY 947
.....910.....920.....930.....940.....950.....960

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*****:*****.*: ** :*** :*****:* * **.* :*: **
Pavo_muticus      LSCNRDVLCPDWTVSNWTECTVTTCGGGIRTRSVTCAKNHNEPCDSSSKRPNSKALCGLQQ 1000
Pavo_cristatus    LSCNRDVLCPDWTVSNWTECTVTTCGGGIRTRSVTCAKNHNEPCDSSSKRPNSKALCGLQQ 1000
Gallus_gallus     QSCNRDVLCPDWTVSNWTECTVTTCGGGIRTRSVTCAKNSHEPCDSSSKRPNSKALCGLQQ 1002
Chelonia_mydas    FSCNRDVLCPDWTVSNWTECTVTTCGGGVTRKISCAKNNEPCDMFKRPNAKALCGLQQ 1005
Mus_musculus      VSCNRDILCPDWTVGNWSECSVSCGGGVRIIRSVTCAKNLNEPCDKTRKPNRSLCGLQQ 999
Rattus_norvegicus VSCNRDILCPDWTVGNWSECSVSCGGGVRIIRSVTCAKNLNEPCDKTRKPNRSLCGLQQ 999
Homo_sapiens      LSCNRDILCPDWTVGNWSECSVSCGGGVRIIRSVTCAKNHDEPCDVTRKPNRSLCGLQQ 995
Pan_troglodytes   LSCNRDILCPDWTVGNWSECSVSCGGGVRIIRSVTCAKNHDEPCDVTRKPNRSLCGLQQ 995
Macaca_mulatta    LSCNRDILCPDWTVGNWSECSVSCGGGVRIIRSVTCAKNHDEPCDVTRKPNRSLCGLQQ 995
Callithrix_jacchus LSCNRDILCPDWTVGNWSECSVSCGGGVRIIRSVTCAKNHDEPCDVTRKPNRSLCGLQQ 995
Bos_taurus        VSCNRDILCPDWTVGNWSECSVSCGGGVRIIRSVTCAKNHDEPCDMTRKPNRSLCGLQQ 997
Equus_caballus    ISCNRDILCPDWTVGNWSECSVSCGGGVRIIRSVTCAKNHDEPCDVTRKPNRSLCGLQQ 997
Canis_lupus_familiaris ISCNRDILCPDWTVGNWSECSVSCGGGVRIIRSVTCAKNHDEPCDVTRKPNRSLCGLQQ 997
Rhinatrema_bivittatum FSCNRDILCPDWTVSNWSECTVTTCGGGLRSRNVCTKNKGEPCDISKRPNSKALCGLQQ 1011
Xenopus_tropicalis LSCNRDILCPDWTVSNWSECSVTCGGGVTRRNITCAKNNEPCDSSSKRPNSKALCGLQQ 1007
.....970.....980.....990.....1000.....1010.....1020

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* . :*.
Pavo_muticus      CPSARRFLIPPLAPRRGKIII---RKT-TNPKWSPPRRIPVPSPRFHTTT----- 1048
Pavo_cristatus    CPSARRFLIPPLAPRRGKIII---RKT-TNPKWSPPRRIPVPSPRFHTTT----- 1048
Gallus_gallus     CPSARRFLIPPLAPKRGKIII---RKT-TNPKWSPPRR--IPVPSPRFHTTT----- 1048
Chelonia_mydas    CPSTRLLIPPVKPNRGKIII---RKTAVNPKRGPSGRIPKLSQKYQTT----- 1054
Mus_musculus      CPFSSRRVLKP----NKDIAPS---GKNQSTAEHDPFKPIAPTSTRPTPLSTP----- 1044
Rattus_norvegicus CPFSSRRVLKP----NKDTPVS---GKNPTTSEHDFKPIAPTSTRPTPLSTP----- 1044
Homo_sapiens      CPSSRRVLKP----NKGITISN---GKNPPT-----LKPVPPTSTRPRMLTTP----- 1035
Pan_troglodytes   CPSSRRVLKP----NKGITISN---GKNPPT-----LKPVPPTSTRPRMLTTP----- 1035
Macaca_mulatta    CPSSRRGLKP----NKGITISN---GKNPPTPEQDPVKPVLPTSTRPRMLTTP----- 1040
Callithrix_jacchus CPSSRRGLKH----NKGITIFN---GKNPPTPEQDPLKPIPTSTRPRMLTTP----- 1040
Bos_taurus        CPSSRRILKP----NRGTIFS---GKKLPTP--DPFKPVPPTTPSPRILTTPSPR----- 1043
Equus_caballus    CPSSRRVLKP----NKGITIFN---GKKLPTPEQDPLKPIPTTPSPRMLTTP----- 1042
Canis_lupus_familiaris CPSSRRVLKP----NKGAISS---GTKPPASQPEPPKATPKPIPKVTRKATPEPIPKPI 1049
Rhinatrema_bivittatum CPFLTKSLPPQTETKRGKFIIRTIPRKAVPIPKRGPLGGTLLPEVKPOFLTTA----- 1064
Xenopus_tropicalis CVVQKTLPKPPIKYNRKKIIK-----KKSQDPKRRIFLPKNHVRVQTT----- 1052
.....1030.....1040.....1050.....1060.....1070.....1080

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/ADAMIES12pFeb 1 10:59:01 2022

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      *      :
Pavo_muticus      -----GIPKPETVTPSP-----TSSGLGKIPQKEETANITLQNNFAVSSD 1088
Pavo_cristatus    -----GIPKPETVTPSP-----TSSGLGKIPQKEETANITLQNNFAVSSD 1088
Gallus_gallus     -----GVPKPESVTPSP-----TSSGLGKIPQKEETDNATLENSFAVSTD 1088
Chelonia_mydas    -----KIPESQSTTALDS-----TSSSPVHSSKKDNMEKRTLQNNNSNRSNN 1095
Mus_musculus      -----TVPESTMSTSTPT-----INSLGSTIASQ-EDANGMGWQNNSTQAE 1084
Rattus_norvegicus -----TVPESVSTSTPT-----INSLGSTITSQ-EEPDGIGWQNNSTQAE 1084
Homo_sapiens      -----TGPESMSTSTPA-----ISSPSPPTASKEGDLGGKQWQDSSTQPEL 1076
Pan_troglodytes   -----TGPESMSTSTPA-----ISSPSPPTASKEGDLGGKQWQDSSTQPEL 1076
Macaca_mulatta    -----IGPESTMSTSPAA-----ISSPHPTASKEGDMGGTQWQDSSTQPEL 1081
Callithrix_jacchus -----IGPESTMSTSTPA-----ISSPSPPTASKEGDLGEGWQNNSTQPEL 1081
Bos_taurus        -VLTSPTVPGLSTSTPT-----MNSPGPTASKEGDLGKQGNSSIQTEL 1089
Equus_caballus    -----TVQSMSPSVWA-----SNSPAPTTASK-GDLGKQWQNTSTQTEL 1082
Canis_lupus_familiaris PKVTPKATPEPIPKATPAPIPKVTPKPTPEPTPEPIPKATPEPVPTTPRSRSPSTPPGP 1109
Rhinatrema_bivittatum -----KTPEPLITSTSS-----LSSFSMPKPPGNEDSKENKVQMNSTHSNT 1105
Xenopus_tropicalis -----GLPRVFMSTSS-----NSSSPSVKSIKEDFQINEIPN-STHFN 1091
.....1090.....1100.....1110.....1120.....1130.....1140

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      *
Pavo_muticus      VYNYPVFSTENSFHQNTTSWPFPSLSLSTEIIRHAEKASDGEAVSTVED-ELQRSEDAPVT 1147
Pavo_cristatus    VYNYPVFSTENSFHQNTTSWPFPSLSLSTEIIRHAEKASDGEAVSTVED-ELQRSEDAPVT 1147
Gallus_gallus     VYNYPVFSTENSFHQNTTLWPFPSLGTETIKHAEKISKSETVSTVEG-ELQRSEDTPVS 1147
Chelonia_mydas    DYNYPFVFNGNRSRQDSTVS---NSSSIENIRKVNVSNDMDMSASEGVVQTGGASCTT 1152
Mus_musculus      GSHFPTSS-----GSTSQVPVTSWSLSIQPDENVSSAIGPTSEGDFWATTTSDSGL 1137
Rattus_norvegicus DSHIPTSV-----GSTSQPLTSWSWSMOPDENVSSAIGPTSESDFWATTS-DSGL 1136
Homo_sapiens      SSRYLIST-----GSTSQPILTSQSLSIQPSSEENVSSDTGPTSEGGLVATTTSGSGL 1129
Pan_troglodytes   SSRYLIST-----GSTSQPILTSQSLSIQPSSEENVSSDTGPTSEGGLVATTTSGSGL 1129
Macaca_mulatta    SSRYLIPT-----GSTSQPILTSRSVSIQPSSEENVSSDAGPTWEGGLVATTS-GSDL 1133
Callithrix_jacchus SSCYLTSP-----GSISQPIPTAPSLSIQPNKENVSSATGPTWEGGLVATTTSGSDL 1134
Bos_taurus        DTHNVIST-----GSTSQPILTSWSLSIQPNEENVSNPDTGPTSEGLDVIMTTSGSDS 1142
Equus_caballus    DSHYVYST-----GGTSQPILTSWSLSIQPNKETVSSSDPGPTSEGLDLATTTMSGSDL 1135
Canis_lupus_familiaris ESLSTSAR-----AARSPPPPTAPGGARPLASGPSIQSGPSSAGDFPAATVGGSRW 1162
Rhinatrema_bivittatum DYKSDFFL-----IKNTSQEKDISKPIGNKMVSDLELGHSTDLGLTNAPMNDPNV 1155
Xenopus_tropicalis DYKYNFVL-----VENNRKRVHVNATSSISPSVSNRTKVGNNMTGTIESIAEKDPP 1141
.....1150.....1160.....1170.....1180.....1190.....1200

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      .      :      .      .      .
Pavo_muticus      SFTSSPEITSSYDYLTEESDDVDGSTE-GSEKPTDCLYST-----ERNLEIRTRSTML 1199
Pavo_cristatus    SFTSSPEITSSYDYLTEESDDVDGSTE-GSEKPTDCLYST-----ERNLEIRTRSTML 1199
Gallus_gallus     SFTSSPEITSNYDYLTEESDDVDGSTE-GSEKPTDRLYST-----EHNLEIRTSSTTQ 1199
Chelonia_mydas    SLTRSPEVNPFGYDYLTEESDNTDWSIE-GNDKPSDIPSDKG-----ESSPAIKTRSKTP 1205
Mus_musculus      SSS-DAMTWQVTPFYSTMTPDPEVEIHS GSGEDSDQPLNKD-----KNSVWIKIGVP 1190
Rattus_norvegicus SSS-NAMTWQVTPFYSTATTEPEVEIHS GSGEDSDQPLNKE-----ENNSVLWNKIRVP 1189
Homo_sapiens      SSSRNPIITWPVTPFYNTLTGKPEMEIHS GSGEEREQPEDKD-----ESNPVIWTKIRVP 1183
Pan_troglodytes   SSSHNPIITWPVTPFYNTLTGKPEMEIHS GSGEEREQPEDKD-----ESNPVIWTKIRVP 1183
Macaca_mulatta    SSSRNPMTPVTPFYNTLTGKPEMEIHS GSGEDREOPEGKD-----ESNPVIWTKIRVP 1187
Callithrix_jacchus SSSSNPMTPVTPFYNTLTGKPEMEIHS GSGEDREOPEGKD-----ESNPVIWTKIRVP 1188
Bos_taurus        STSSNAMTWQVTSFYSPLTKEPEMEIHS GSGEGSEPEKKN-----ENNSVTWTKIRVP 1196
Equus_caballus    SSSSNPVTVQVTSFYDILTKEPEMEIHS GSGE---OPENKN-----GNNSVIWTKIRVP 1186
Canis_lupus_familiaris PRPGAPAWGQVTPSYGPSITKEAGGDAHS GSGEGGSENR-----EHSVAWVQTRAP 1216
Rhinatrema_bivittatum TFTSDQSTVEVTASYSYFTEESDTEDDNTDGSTEDNENLQDSFDPVQNKSVVKSRSSTIP 1215
Xenopus_tropicalis IFTTTRRPEELTSKYQLLTEQPOSQTESGNMRGSTVDPNGD-----YDTDFNFIIESRSK 1196
.....1210.....1220.....1230.....1240.....1250.....1260

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/ADAMIES12.psf Feb 1 10:59:01 2022

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Pavo_muticus      DTNSVVLQNGDVTSHLPPSFHPQEPSVPLPDSRAPQGLTFPTTA---SSISSQVDVPPIRE 1256
Pavo_cristatus    DTNSVVLQNGDVTSHLPPSFHPQEPSVPLPDSRAPQGLTFPTTA---SSISSQVDVPPIRE 1256
Gallus_gallus     DTNSPIFQNGDVTSDPPPSHPQEPSMPPPDSDRAGQGLTFPTTA---SSTSLQVDVPPIRE 1256
Chelonia_mydas    NIRSHVIT---TPKMSPTFYQHESSTQSTSSIAAERLSSSTAVNL-KSIRVQIDTPVTE 1260
Mus_musculus      EHDAPMETDAELPLGPPPTSYMGEEPSWPPFSTKMEGSLP---AWS-FKNETPRDDGMIA 1246
Rattus_norvegicus ERDAPMEMDAEIPLGPPPTSYVTEESSWPPFSTMMKSSLP---AWS-FKNETPRDEGMIT 1245
Homo_sapiens      GNDAPVE-STEMPLAPPLTPDLSRESWWPPFSTVMEGLLPSPRPST-SETGTPRVEGMVT 1241
Pan_troglodytes   GNDAPVE-STEMPLAPPLTPDLSRESWWPPFSTVMEGLLPSPRPST-SETGTPRVEGMVT 1241
Macaca_mulatta    GNDAPVE-STEMPLAPPLTPDLGGESPWPTFSTVIEGLLPQRPRST-PKTGTPRVEGMVT 1245
Callithrix_jacchus GNDAPVERSTEMPLAPPLTPDLSRESWPWPLFSTVMEGLLPSPRPST-LKNGIPRVEGMVT 1247
Bos_taurus        GNDAPGERSTEIPLGPPPTPYLGGESLWPLFSTVSEGLVPSQRPST-LKNGTSRAKGTVT 1255
Equus_caballus    GNDASVERSTEIPLGPPPTPYLRGSSLWPPFSTVTEGSLPRORPTT-PQNAISRAEGLVT 1245
Canis_lupus_familiaris AEDAPGAPGAEMPLGAPPTPSLGAASPRAPSGDPDG-----PAPPPAEGPGP 1263
Rhinatrema_bivittatum KERSFTLRNNNETLKMPLTFSPGMSPTSFSTTAAEGLSYSNTIRSPATINMQITEPLEK 1275
Xenopus_tropicalis RHKGKTNQNNHPTNLNQTESPTNSSILIN-----QTPLST 1233
.....1270.....1280.....1290.....1300.....1310.....1320

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Pavo_muticus      VSTREASVTIVPTTFGNELGGAQDSRTETKFPG--NITSS--TOLLVKNKHALKNHTATSE 1312
Pavo_cristatus    LSTREASVTIVPTTFGNELGGAQDSRTETKFPG--NITSS--TOLLVKNKHALKNHTATSE 1312
Gallus_gallus     VTTQEA-VTEVPTTFGNVLRGAQDSRTEMKLPD--NITSS--TOLLVKNKHALKNHMETSE 1311
Chelonia_mydas    KATTERPVTIKPAFMDNVSrvQFENGTEMEPSDEIDHTQS--TKSPSLEDAPKNHSTVSE 1318
Mus_musculus      EKSRIKPLPLA-GDHHPATSEKLENHDKLALPNTTNPQTQ--FGPVLTEEDAS--NLIAE 1301
Rattus_norvegicus EKSGNIPPLPLG-GDHQTTSPKELGNDQLASANSNPTQ--SGPVLTEEDAS--TLIEE 1300
Homo_sapiens      EKPANTLLPLG-GDHQPEPSGKTANRNHLKLPNNMQTKS--SEPVLTEEDAT--SLITE 1296
Pan_troglodytes   EKPANTLLPLG-GDHQPEPSGKTANHNHLKLPNNMQTKS--SEPVLTEEDAT--SLIAE 1296
Macaca_mulatta    EKPADTLLPLG-RDHQPEPSGKTANHSHLKLNDMNQTES--TEPVLTEEDAT--SLIAE 1300
Callithrix_jacchus EKPANTLLPLG-GDHQPEPSGKTANHNHLKLPNDMNQTKS--SQPVLTEEDAT--SLIAE 1302
Bos_taurus        EKPANTPLPLG-EDHQPAYSKKPVNPHPTLPSNMNLQTS--SGPVLTKEDAT--SLMAE 1310
Equus_caballus    EKPADTPFPLG-GDHQPTPSEKSVNPNPPELPSDMNLQTS--SGQVLTEEDAT--SLIAE 1300
Canis_lupus_familiaris GRPARPAAPPA-GPG-PAPPGR-----AAPRSAPPPRS--PGGLAEADAE--ALIAE 1310
Rhinatrema_bivittatum NEVTEISVTKHPNLVEKGSRLKDHANYVMQPNIDQIDHODSESHIPEHTPRNSTPNSD 1335
Xenopus_tropicalis YNTVSISNTEG-NSTRNNQDWRDVAPTASAQPSFLOVTS-----NTPENSWKVNNASN 1287
.....1330.....1340.....1350.....1360.....1370.....1380

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Pavo_muticus      KILN-VTESSLLITSNS-LPGDAYWIVGNWSECSTTCGMGAFWRHVECSKKNVSHCQHTK 1370
Pavo_cristatus    KILN-VTESSLLITSNS-LPGDAYWIVGNWSECSTTCGMGAFWRHVECSKKNVSHCQHTK 1370
Gallus_gallus     RILMNVTESSLLITSSS-LPGDAYWIVGNWSECSTTCGMGAFWRHVECSKKNVSHCQHTK 1370
Chelonia_mydas    GKLSNATELDYARISNI-LHGDVYWIVGNWSECSTTCGVGAFWRHVECSKNESDCQHVK 1377
Mus_musculus      GFLLNASDYKHLMKD---HSPAYWIVGNWSKCSTTCGLGAYWRSVECSGVDADCTTIQ 1357
Rattus_norvegicus GFLLNASNYKHLMKD---HSAHWIVGNWSKCSTTCGLGAYWRSVECSGMNADCAAIQ 1356
Homo_sapiens      GFLLNASNYKQLTNG---HGSAAHWIVGNWSECSTTCGLGAYWRRVECSQMDSDCAAIQ 1352
Pan_troglodytes   GFLLNASNYKQLTNG---HGSAAHWIVGNWSECSTTCGLGAYWRRVECSQMDSDCAAIQ 1352
Macaca_mulatta    GFLLNASNYKQLTND---HGSAAHWIVGNWSECSTTCGLGAYWRRVECSQMDSDCAAIQ 1356
Callithrix_jacchus GFLLNASNYKRLTNG---HSSAAHWIIGNWSECSTTCGLGAYWRRVECSQMDSDCAAVQ 1358
Bos_taurus        GFLLNASDYKHLMSG---RSPAYWIVGNWSECSTTCGLGTYWRSVQCSTHVDSDCATLQ 1366
Equus_caballus    GFLLNASNYKQLSTS---RSPAYWVGNWSECSTTCGLGAYWRHVECSHLDSDCAAIQ 1356
Canis_lupus_familiaris GFLLNASDYQRLPPG---GRSAHWIAGNWSECSTTCGLGAYWRSVQCSTHVDSDCATIQ 1366
Rhinatrema_bivittatum KNSLNSLKYDNPPGLSNVIRSAWITGNWSECSTTCGLGAYWRHVQCNITTESDCQHVK 1395
Xenopus_tropicalis RYLLNTHYENGTEGLNFNVSKVEYWIVGNWSECSTSCGLGAMWRPVDCTEFDDCKHVK 1347
.....1390.....1400.....1410.....1420.....1430.....1440

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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      : ** *:::***** * .*:*** * **: *:: * : : : *****:
Pavo_muticus      KPDPARKCYLRPCASWKTGNWSKCSAYCNGGFKTRDVQCIDVRE-KQLLRPFHCQLLG-Y 1428
Pavo_cristatus    KPDPARKCYLRPCASWKTGNWSKCSAYCNGGFKTRDVQCIDVRE-KQLLRPFHCQLLG-Y 1428
Gallus_gallus     KPDPARKCYLRPCASWKTGNWSKCSAYCNGGFKTRDVQCIDVRE-KQLLRPFHCQLLG-Y 1428
Chelonia_mydas    KPDPARRCHLRPCANWKTGSWSKCSSTNCGGGFRTRDVHCTDVRD-KRILRPFHCOLLE-H 1435
Mus_musculus      RPDPAKKCHLRPCAGWRVGNWSKCSRNCSGGGFKIREVQCMDSLDHHSRLRPFHCQFLAGA 1417
Rattus_norvegicus RPDPAKKCHLRPCAGWRVGNWSKCSRNCSGGGFKIREVQCMDGVDHHSRLRPFHCQFLAGV 1416
Homo_sapiens      RPDPAKRCHLRPCAGWKVGNWSKCSRNCSGGGFKIREIQCVDSRD-HRNLRPFHCQFLAGI 1411
Pan_troglodytes   RPDPAKRCHLRPCAGWKVGNWSKCSRNCSGGGFKIREIQCVDSRD-HRNLRPFHCQFLAGI 1411
Macaca_mulatta    RPDPAKRCHLRPCAGWKVGNWSKCSRNCSGGGFKIREIQCVDSRD-HRNLRPFHCQFLAGI 1415
Callithrix_jacchus RPDPAKRCHLRPCAGWKVGNWSKCSRNCSGGGFKIREIQCVDSRD-HRNLRPFHCQFLAGI 1417
Bos_taurus        RPDPAKRCHLRPCAGWKVGNWSKCSRNCSGGGFKIREIQCVDSRD-HRSLRPFHCRCFLAGL 1425
Equus_caballus    RPDPAKRCHLRPCAGWKVGNWSKCSRNCSGGGFKIREIQCVDSRD-HRSLRPFHCQFLAGI 1415
Canis_lupus_familiaris RPDPAKRCHLRPCAGWKVGNWSKCSRNCSGGGFKIREIQCVDSRD-HQSLRPFHCQFLAGI 1425
Rhinatrema_bivittatum KPDPARRCHLRPCATWTTGNWSKCSKNCGEGFKTREVCINAHK-KRSLRPFHCQLSG-H 1453
Xenopus_tropicalis KPDPARRCHLRPCARWETGDTWTKSKNCOGGFKTREVCVDIRE-NRPLRPFHCQSPG-K 1405
      .....1450.....1460.....1470.....1480.....1490.....1500

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      * . *** :** * .:*** **:
Pavo_muticus      KPQLTASCNTKPCLOWRVEPWNECT----- 1453
Pavo_cristatus    KPQLTASCNTKPCLOWRVEPWNECT----- 1453
Gallus_gallus     KPQLTTSCNTEPCLOWRVEPWNECT----- 1453
Chelonia_mydas    KPQLSISCNTEPCLEWRVEPWNECSRTCGGGLOERHIYCPVEDYCDWTKKPNSTARCNQO 1495
Mus_musculus      PPPLSMSCNLEPCGEWQVEPWSQCSRS CGGGVQERGVFCPPG-LCDWTKRPATTVPCNRH 1476
Rattus_norvegicus PPPLSMSCNLEPCGEWQVEPWSQCSRS CGGGVQERGVFCPPG-LCDWTKRPASTVPCNRH 1475
Homo_sapiens      PPPLSMSCNPEPCGEWQVEPWSQCSRS CGGGVQERGVFCPPG-LCDWTKRPTSTMSCNEH 1470
Pan_troglodytes   PPPLSMSCNPEPCGEWQVEPWSQCSRS CGGGVQERGVFCPPG-LCDWTKRPTSTLSCNEH 1470
Macaca_mulatta    PPPLSMSCNPEPCGEWQVEPWSQCSRS CGGGVQEREVFCPPG-LCDWTKRPTSTMSCNEH 1474
Callithrix_jacchus PPPLSMSCNPEPCGEWQVEPWSQCSRS CGGGVQERGVFCPPG-LCDWTKRPTSTMSCNEH 1476
Bos_taurus        PPPLTTSCNLEPCGEWQVEPWSQCSRS CGGGVQKRGVTCPPG-LCDWTERPTSTTPCSGQ 1483
Equus_caballus    PPPLSMSCNTEPCGEWQVEPWSQCSRS CGGGVQERIVTCPPG-FCDWTKKPTSTRPCNVH 1474
Canis_lupus_familiaris PPPLSRSCNPEPCGEWQVEPWSQCSRS CGGGVQERAVTCLGG-LCDWTKRPTPTAPCNSQ 1484
Rhinatrema_bivittatum QPRHNISCNVKKPCSEWLVEPWRECS----- 1478
Xenopus_tropicalis NPEQNVSCNTEPCLSWLAKPWSECSKTCGGGIRQROVLCPKEDRCDWKKIPPVSLPCNDE 1465
      .....1510.....1520.....1530.....1540.....1550.....1560

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      .***. *::: * . : * : * : *
Pavo_muticus      -----VSCGGGIQORTVKCRNIETDEEDN--MCVVK-PKPTEHQOCNQO 1496
Pavo_cristatus    -----VSCGGGIQORTVKCRNIETDEEDN--MCVVK-PKPTEHQOCNQO 1496
Gallus_gallus     -----VSCGGGIQORTVKCRNIETDEEDN--MCVVK-PKPTEHQOCNQO 1496
Chelonia_mydas    PCTRWINGMWNSCTASCGGGIQQRTVKCINTEDNKAEDQI--MCEHE-FKPPESQKCNMQ 1552
Mus_musculus      LCCHWATGNWELCNTSCGGGSQKRTIHCIPSENSTTEDQDQCLCDHQ-VKPPEFQTCNQO 1535
Rattus_norvegicus LCCHWATGNWELCTTSCGGGSQKRTVHCIPSENSTTEDQDQCFCDHQ-ARPPEFQNCNQO 1534
Homo_sapiens      LCCHWATGNWDLCTSTSCGGGFQKRTVQCVPSSEGNKTEDQDQCLCDHK-PRPPEFKKCNQO 1529
Pan_troglodytes   LCCHWATGNWDLCTSTSCGGGFQKRTVQCVPSSEGNKTEDQDQCLCDHK-PRPPEFKKCNQO 1529
Macaca_mulatta    LCCHWATGNWELCTSTSCGGGFQKRTVHCVPSENNKTEDQDQCLCDHE-PRPPEFKKCNQO 1533
Callithrix_jacchus LCCHWATGNWDLCTSTSCGGGFQKRTVHCVPSENNKTEDQDQCLCDHE-PRPPEFKKCNQO 1535
Bos_taurus        PCCHWAAGNWDPCITVSCGGGFQKRTVHCVPSENNKTEGQDQCLCDHE-RRPPEFQKCNQO 1542
Equus_caballus    PCCHWATGNWDLCTASCGGGFQKRTVHCVPSENNKTEDQDQCLCDHE-PRPPEFQKCNQO 1533
Canis_lupus_familiaris PCCHWATGNWDLCTASCGGGFQKRTVHCVPSENNKTEDQDQCLCDHE-PRPPEFQKCGQO 1541
Rhinatrema_bivittatum -----ASCGDGIQHRTITCIDMDNMKTEDPN--LCEEDKPKPQETRKCKIQ 1522
Xenopus_tropicalis PCTRWNISWMECSVPCGGGTQRTVEICINHNSTVHOD--LCQTEAKPROTQECNOP 1523
      .....1570.....1580.....1590.....1600.....1610.....1620

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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*.. . * :*:~* **:::~* :~*~*~*~*
Pavo_muticus      ECRK-STGLPCSKDQLSIHFCQRLRGIGKCLVPSIQLOCCFTCSHPRI RNKARYWDORGL 1555
Pavo_cristatus    ECRK-STGLPCSKDQLSIHFCQRLRGIGKCLVPSIQLOCCFTCSHPRI RNKARYWDORGL 1555
Gallus_gallus     ECRK-NTGLPCSKDQLSIHFCQRLRGIGKCLVPSIQLOCCFTCSHPRI RNKARYWDQOGL 1555
Chelonia_mydas    ECRK-SAGLPCHKDKLSINFQRLKQIGKCLVPSMOTQCCVTCNRPRIPNKRRSGNOQHF 1611
Mus_musculus      ACRK-SADLTCLKDRLSISFCQTLKSMKKCSVP SVRAQCCLSCPQAPSIHTORQRKQOLL 1594
Rattus_norvegicus ACRK-SADLTCTKDRLSTSFCQTLKSMKKCSVP SVRVQCCLSCPQTQSIHTORQRKQOML 1593
Homo_sapiens      ACKK-SADLLCTKDKLSASFQTLKAMKKCSVPTVRAECCFSCPQTHITHTORQRORRL 1588
Pan_troglodytes   ACKK-SADLLCTKDKLSASFQTLKAMKKCSVPTVRAECCFSCPQTHITHTORQRORRL 1588
Macaca_mulatta    ACKK-SADLLCTKDKLSASFQTLKAMKKCSVPTVRAECCFSCPQTHITHSQRQRORLP 1592
Callithrix_jacchus TCKK-SADLLCTKDKLSTSFCQTLKAMKKCSVPTVRVQCCFSCPQTHITHTORQRKOWLL 1594
Bos_taurus        ACRK-NADLLCIKDNLSASFQTLKTMKKCSVPTVRAQCCLSQTHVAHTORPRKROPL 1601
Equus_caballus    ACRK-SDDLLCTKDKLSTSFCQTLKTMKKCSVPTVRVQCCLSQTHIVTRRRPRKPSF 1592
Canis_lupus_familiaris ACEK-SPDLLCTKDNLSASFQTLKSMKKCSVPTVRAQCCLSQTHIVTRRRPRKPSL 1600
Rhinatrema_bivittatum MCQE-KTGLACTKDKMSVNFQTVKSIGKCSLPAIQTQCCFTCSLQ----- 1567
Xenopus_tropicalis ECORNAEDPACRDKMSVNFQTVKSIGRCSVKSIQTQCCFTCSRL----- 1569
.....1630.....1640.....1650.....1660.....1670.....1680

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Pavo_muticus      K-QYYTKPRRKSPQNQENNSQAAQH 1579
Pavo_cristatus    K-QYYTKPRRKSPQNQENNSQAAQH 1579
Gallus_gallus     KQYYTKSRRKSPRNQENNSQAAQH 1580
Chelonia_mydas    KEQNYTKPRRKLRIHSL----- 1629
Mus_musculus      QNHDM----- 1600
Rattus_norvegicus QNHDT----- 1599
Homo_sapiens      QKSKEL----- 1594
Pan_troglodytes   QKPKEL----- 1594
Macaca_mulatta    QKPKAL----- 1598
Callithrix_jacchus QKPKAH----- 1600
Bos_taurus        KNPKAP----- 1607
Equus_caballus    KSPKAF----- 1598
Canis_lupus_familiaris KNPKGF----- 1606
Rhinatrema_bivittatum ----- 1567
Xenopus_tropicalis ----- 1569
.....1690.....1700.....

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