

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/KMT2A.pst Tue Feb 1 13:52:23 2022

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Pavo_muticus	-----AE	2
Pavo_cristatus	-----AE	2
Gallus_gallus	MAHSGRWRFARP-----GSGGWGRRGLGGS-RLRVPAVRS-----LRAAE	40
Chelonia_mydas	MAHSGRWRFARP-----GSGGWGRRGLGGS-RLRVPAVRN-----LRAPE	40
Mus_musculus	MAHSCRWRFPARP GTTGGGGGGGRRGLGGAPRQRPALLLPPGPQAGGGGPGAPPSPPAV	60
Rattus_norvegicus	MAHSCRWRFPARP GTTGGGGGGGRRGLGGAPRQRPALLLPPGPPAGGGGPGAPPSPPAV	60
Homo_sapiens	MAHSCRWRFPARP GTTGGGGGGGRRGLGGAPRQRPALLLPPGPPVGGGGPGAPPSPPAV	60
Pan_troglodytes	MAHSCRWRFPARP GTTGGGGGGGRRGLGGAPRQRPALLLPPGPPVGGGGPGAPPSPPAV	60
Macaca_mulatta	MAHSCRWRFPARP GTTGGGGGGGRRGLGGAPRQRPALLLPPGPPVGGGGPGAPPSPPAV	60
Callithrix_jacchus	MAHSCRWRFPARP GTTGGGGGGGRRGLGGAPRQRPALLLPPGPPVGGGGPGAPPSPPAV	60
Equus_caballus	MAHSCRWRFPARP GTTGGGGGGGRRGLGGAPRQRPALLLPPGPPVGGGGPGAPPSPPAV	60
Bos_taurus	MAHSCRWRFPARP GTTGGGGGGGRRGLGGAPRQRPALLLPPGPPVGGGGPGAPPSPPAV	60
Canis_lupus_familiaris	MAHSCRWRFPARP GTTGGGGGGGRRGLGGAPRQRPALLLPPGPPVGGGGPGAPPSPPAV	60
Rhinatrema_bivittatum	MAHSCRWRFPARP-----TGRKLGARQRLPALLQP-----	31
Xenopus_tropicalis	MAHSCRWRFPARP-----TGRRLGARHRLSAILID-----	31
	1.....10.....20.....30.....40.....50.....60	
Pavo_muticus	PAGPSAAGRTERPRQDQAAGAEDAGGSGAPRLVPGGTSAWSR-----AGAGPALRLQSD	57
Pavo_cristatus	PAGPSAAGRTERPRQDQAAGAEDAGGSGAPRLVPGGTSAWSR-----AGAGPALRLQSD	57
Gallus_gallus	PAAPEAAGDGERGGPCSGGGAAGSGGGGAAPGSGGSGGPAAG-----VGPGFDAALQVSA	95
Chelonia_mydas	PPPQAGAGEAELGGPGSG-GAAGSGGGGAVPGSGGPGGPAAG-----VGPGFDAALQVSA	94
Mus_musculus	AAAAAAG--SSGAGVPGGAAAAAASASSSSASSSSSSSSASSSGPALLRVGPGFDAALQVSA	118
Rattus_norvegicus	AAAAAAG--SSGAGVPGGAAAAAASASSSSASSSSSSSSASSSGPALLRVGPGFDAALQVSA	119
Homo_sapiens	AAAAAAGSSGAGVPGGAAAAAASASSSSASSSSSSSSASSSGPALLRVGPGFDAALQVSA	120
Pan_troglodytes	AAAAAAGSSGAGVPGGAAAAAASASSSSASSSSSSSSASSSGPALLRVGPGFDAALQVSA	120
Macaca_mulatta	AAAAAAGSSGAGVPGGAAAAAASASSSSASSSSSSSSASSSGPALLRVGPGFDAALQVSA	120
Callithrix_jacchus	AAAAAAGSSGAGVPGGAAAAAASASSSSASSSSSSSSASSSGPALLRVGPGFDAALQVSA	120
Equus_caballus	AAAAAAGSSGAGVPGGAAAAAASASSSSASSSSSSSSASSSGPALLRVGPGFDAALQVSA	120
Bos_taurus	AAAAAAGSSGAGVPGGAAAAAASASSSSASSSSSSSSASSSGPALLRVGPGFDAALQVSA	120
Canis_lupus_familiaris	AAAAAAGSSGAGVPGGAAAAAASASSSSASSSSSSSSASSSGPALLRVGPGFDAALQVSA	120
Rhinatrema_bivittatum	-----ATGAALPAPGP-----LRVGPFGFDAALQVSA	57
Xenopus_tropicalis	-----DVSEYRSNPGASGSAGASSAGTLAPGGPGNCLG-----VALGFDAALQVSA	77
	.....70.....80.....90.....100.....110.....120	
Pavo_muticus	. * * * * GEGAPPARYPALC--PIGLGP-----DEQ	79
Pavo_cristatus	GEGAPPARYPALC--PIGLGP-----DEQ	79
Gallus_gallus	AIGINLRRFRAACGAEGSGE-----DEQ	119
Chelonia_mydas	AIGINLRRFRAACGSEAGSGE-----DEQ	118
Mus_musculus	AIGTNLRRFRAVFGESGGGGSGE-----DEQ	145
Rattus_norvegicus	AIGTNLRRFRAVFGESGGGGSGE-----DEQ	146
Homo_sapiens	AIGTNLRRFRAVFGESGGGGSG-----EDEQ	147
Pan_troglodytes	AIGTNLRRFRAVFGESGGGGSGELTTQIPCSWRTKGHIHDKKTEPFRLLAWSWCLNDEQ	180
Macaca_mulatta	AIGTNLRRFRAVFGESGGGGSGELTTQIPCSWRTKGHIHDKKTEPFRLLAWSWCLNDEQ	180
Callithrix_jacchus	AIGTNLRRFRAVFGESGGGGSGELTTQIPCSWRTKGLIHDKKTEPFRLLAWSWCLNDEQ	180
Equus_caballus	AIGTNLRRFRAVFGESGGGGSGELTTQIPCSWRTKGLIHDKKTEPFRLLAWSWCLNDEQ	180
Bos_taurus	AIGTNLRRFRAVFGESGGGGSGELTTQIPCSWRTKGLIHDKKTEPFRLLAWSWCLNDEQ	180
Canis_lupus_familiaris	AIGTNLRRFRAVFGESGGGGSGELTTQIPCSWRTKGLIHDKKTEPFRLLAWSWCLNDEQ	180
Rhinatrema_bivittatum	AIGSNLRRFLEVLGGSGEEEE-----Q	79
Xenopus_tropicalis	AIGNNLRRFRDVSGGSSGEEEE-----Q	99
130.....140.....150.....160.....170.....180	

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*****:: :*: : *
Pavo_muticus      FLGFGSDEEIKVQSPTRSP-----VKSSPRKPRGR 110
Pavo_cristatus    FLGFGSDEEIKVQSPTRSP-----VKSSPRKPRGR 110
Gallus_gallus     FLGFGSDEEIKVQSPTRSP-----VKSSPRKPRGR 150
Chelonia_mydas    FLGFGSDEEVKVRSPTRSP-----VKSSPRKPRRR 149
Mus_musculus      FLGFGSDEEVRVRSPTRSPS-----VKASPRKPRGR 176
Rattus_norvegicus FLGFGSDEEVRVRSPTRSPS-----VKASPRKPRGR 177
Homo_sapiens      FLGFGSDEEVRVRSPTRSPS-----VKTSPRKPRGR 178
Pan_troglodytes   FLGFGSDEEVRVRSPTRSPS-----VKTSPRKPRGR 211
Macaca_mulatta    FLGFGSDEEVRVRSPTRSPS-----VKTSPRKPRGR 211
Callithrix_jacchus FLGFGSDEEVRVRSPTRSPS-----VKTSPRKPRGR 211
Equus_caballus    FLGFGSDEEVRVRSPTRSPS-----VKTSPRKPRGR 211
Bos_taurus        FLGFGSDEEVRVRSPTRSPS-----VKTSPRKPRGR 211
Canis_lupus_familiaris FLGFGSDEEVRVRSPTRSPS-----VKTSPRKPRGR 211
Rhinatrema_bivittatum FLGFGSDEEVKLRSPTRFPTSPSGRSTRLRLSKFPNRPWDQSECOOLKHSRKPRGR 139
Xenopus_tropicalis FLGFGSDEEVKGRSPAKSPK-----DQTQKPRGR 130
.....190.....200.....210.....220.....230.....240

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Pavo_muticus      P-RSSSDRSSAVLSDSS--VCSPSSKSETTSMKVKKKDLKSGEKRRGRPPILTTSVKFKL 168
Pavo_cristatus    P-RSSSDRSSAVLSDSS--VCSPSSKSETTSMKVKKKDLKSGEKRRGRPPILTTSVKFKL 168
Gallus_gallus     P-RSSSDRSSAVLSDSS--VCSPSSKSETTSMKVKKKDLKSGEKRRGRPPILTTSVKFKL 208
Chelonia_mydas    P-RSSPDRSSAAHSDSS--VCSPLSKSETTSMKVKKKDLKSGEKRRGRPPALSSVKFKL 207
Mus_musculus      P-RSGSDRNPAILSDPS--VFSPLNKSETKSGDKIKKKDKSIEKKRGRPPTFPGVKIKI 233
Rattus_norvegicus P-RSGSDRNPAILSDPS--VFSPLNKSETKSGDKIKKKDKSIEKKRGRPPTFPGVKIKI 234
Homo_sapiens      P-RSGSDRNPAILSDPS--VFSPLNKSETKSGDKIKKKDKSIEKKRGRPPTFPGVKIKI 235
Pan_troglodytes   P-RSGSDRNPAILSDPS--VFSPLNKSETKSGDKIKKKDKSIEKKRGRPPTFPGVKIKI 268
Macaca_mulatta    P-RSGSDRNPAILSDPS--VFSPLNKSETKSGDKIKKKDKSIEKKRGRPPTFPGVKIKI 268
Callithrix_jacchus P-RSGSDRNPAILSDPS--VFSPLNKSETKSGDKIKKKDKSIEKKRGRPPTFPGVKIKI 268
Equus_caballus    P-RSGSDRNPAILSDPS--VFSPLNKSETKSGDKIKKKDKSIEKKRGRPPTFPGVKIKI 268
Bos_taurus        P-RSGSDRNPAILSDPS--VFSPLNKSETKSGDKIKKKDKSIEKKRGRPPTFPGVKIKI 268
Canis_lupus_familiaris P-RSGSDRNPAILSDPS--VFSPLNKSETKSGDKIKKKDKSIEKKRGRPPTFPGVKIKI 268
Rhinatrema_bivittatum PPRTNSVRNLALKSSPPP-AFPTLNKSEPKPAEKIKRNQVTGEEKRRGRPPILTSSVKFRV 198
Xenopus_tropicalis P-RNSLSRCSDASSLNLCENTTSTLNKQETRLLDKVKKPEKTEKKRGRPPAHGNVFKFL 189
.....250.....260.....270.....280.....290.....300

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Pavo_muticus      SQVKDTS-DIQKGSKEDKESLKKIKRSPSTTFQATKIKKLRTSKLSPLKSKFKPGAKLQ 227
Pavo_cristatus    SQVKDTS-DIQKGSKEDKESLKKIKRSPSTTFQATKIKKLRTSKLSPLKSKFKPGAKLQ 227
Gallus_gallus     SQVKDTS-DIQKGSKEDKESLKKIKRSPSTTFQATKIKKLRTSKLSPLKSKFKPGAKLQ 267
Chelonia_mydas    SQVKDIS-DIHKGSKEAKENLKKIKRAPSTTFQHAAKIKKLRTGKLSPLKSKFKTGKQLQ 266
Mus_musculus      THGKDIA-ELTQGSKE--DSLKKVKRTPSAMFQATKIKKLRAKLSPLKSKFKTG-KLQ 289
Rattus_norvegicus THGKDIA-ELTQGSKE--DSLKKVKRTPSAMFQATKIKKLRAKLSPLKSKFKTG-KLQ 290
Homo_sapiens      THGKDIS-ELPKGNKE--DSLKKIKRTPSATFQATKIKKLRAKLSPLKSKFKTG-KLQ 291
Pan_troglodytes   THGKDIS-ELPKGNKE--DSLKKIKRTPSATFQATKIKKLRAKLSPLKSKFKTG-KLQ 324
Macaca_mulatta    THGKDIS-ELPKGNKE--DNLKKIKRTPSATFQATKIKKLRAKLSPLKSKFKTG-KLQ 324
Callithrix_jacchus THGKDIS-ELPKGNKE--DSLKKIKRTPSATFQATKIKKLRAKLSPLKSKFKTG-KLQ 324
Equus_caballus    THGKDIS-ELPKGNKE--DSLKKIKRTPSATFQATKIKKLRAKLSPLKSKFKTG-KLQ 324
Bos_taurus        THGKDVS-ELPKGNKE--DSLKKMKRTPSATFQATKIKKLRAKLSPLKSKFKTG-KLQ 324
Canis_lupus_familiaris THGKDIS-ELPKGSKE--ESLKKIKRTPSATFQATKIKKLRAKLSPLKSKFKTG-KLQ 324
Rhinatrema_bivittatum TQEKKVTILALPKGDKSERETLKKVKRIPSAAFQAAKIKKLRTAKLSPLKSKFKSR-KLQ 257
Xenopus_tropicalis PQEKRDGTESIKAPCE---EKSKRRKPSATFQHAAKIKKLRAKLSPLKSKFKSN-KLK 244
.....310.....320.....330.....340.....350.....360

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Pavo_muticus	IGRKS	-	VOIVRRRGRPP	SSER	-	LKTSS	SLVINSQLEK	PQIRKEK	DGTPPPTKEE	-	KTAV	284		
Pavo_cristatus	IGRKS	-	VOIVRRRGRPP	SSER	-	LKTSS	SLVINSQLEK	PQIRKEK	DGTPPPTKEE	-	KTAV	284		
Gallus_gallus	IGRKS	-	VOIVRRRGRPP	SSER	-	LKTSS	SLVINSQLEK	PQIRKEK	DGTPPPTKEE	-	KTAV	324		
Chelonia_mydas	IGRKA	-	VOIVRRRGRPP	SSER	-	LKTAS	PLINSQLEK	PQVRKEK	DGTPPLTKEE	-	KTAV	323		
Mus_musculus	IGRKG	-	VOIVRRRGRPP	STER	-	IKTPS	GLLINSELEK	PQVRKDKEG	TPPLTKED	-	KTVV	346		
Rattus_norvegicus	IGRKG	-	VOIVRRRGRPP	STER	-	IKTPS	GLLINSELEK	PQVRKDKEG	TPPLTKED	-	KTVV	347		
Homo_sapiens	IGRKG	-	VOIVRRRGRPP	STER	-	IKTPS	GLLINSELEK	PQVRKDKEG	TPPLTKED	-	KTVV	348		
Pan_troglodytes	IGRKG	-	VOIVRRRGRPP	STER	-	IKTPS	GLLINSELEK	PQVRKDKEG	TPPLTKED	-	KTVV	381		
Macaca_mulatta	IGRKG	-	VOIVRRRGRPP	STER	-	IKTPS	GLLINSELEK	PQVRKDKEG	TPPLTKED	-	KTVV	381		
Callithrix_jacchus	IGRKG	-	VOIVRRRGRPP	STER	-	IKTPS	GLLINSELEK	PQVRKDKEG	TPPLTKED	-	KTVV	381		
Equus_caballus	LGRKG	-	VOIVRRRGRPP	STER	-	VKTPS	GLLINSELEK	PQVRKDKEG	TPPLTKED	-	KTVV	381		
Bos_taurus	IGRKG	-	VOIVRRRGRPP	STER	-	IKTPS	GLLINSELEK	PQVRKDKEG	TPPLTKED	-	KTVV	381		
Canis_lupus_familiaris	IGRKG	-	VOIVRRRGRPP	STER	-	IKTPS	GLLINSELEK	PQVRKDKEG	TPPLTKED	-	KTVV	381		
Rhinatrema_bivittatum	LGRKGGV	P	VOIVRRRGRPP	SSERS	-	KA	VPSALLLSQLEK	HQIRREK	DGVASLTKEE	-	KAVV	316		
Xenopus_tropicalis	LGRKGGV	S	IVRRRGRPP	SSER	-	FK	DIHGSFPKQVPT	DRSQNGKDV	SQPSKEDIRVSV			303		
	.....	370	.....	380	.....	390	.....	400	.....	410	.....	420

	*****:*****: ****::*****:*****:* ***:***** **:*.***	
Pavo_muticus	ROSPPRIKPVRIIPSTKRTDATIAKOLLORAKKGAAKKIEKEAAKLOGRKGRTOLKNIRO	344
Pavo_cristatus	ROSPPRIKPVRIIPSTKRTDATIAKOLLORAKKGAAKKIEKEAAKLOGRKGRTOLKNIRO	344
Gallus_gallus	ROSPPRIKPVRIIPSTKRTDATIAKOLLORAKKGAAKKIEKEAAKLOGRKGRTOLKNIRO	384
Chelonia_mydas	ROSPPRIKPVRIIPSTKRTDATIAKOLLORAKKGAAKKIEKEAAKLOGRKGRTOLKNIRO	383
Mus_musculus	ROSPPRIKPVRIIPSCKRTDATIAKOLLORAKKGAAKKIEKEAAKLOGRKVKTOVKNIRO	406
Rattus_norvegicus	ROSPPRIKPVRIIPSSKRTDATIAKOLLORAKKGAAKKIEKEAAKLOGRKVKTOVKNIRO	407
Homo_sapiens	ROSPPRIKPVRIIPSSKRTDATIAKOLLORAKKGAAKKIEKEAAKLOGRKVKTOVKNIRO	408
Pan_troglodytes	ROSPPRIKPVRIIPSSKRTDATIAKOLLORAKKGAAKKIEKEAAKLOGRKVKTOVKNIRO	441
Macaca_mulatta	ROSPPRIKPVRIIPSSKRTDATIAKOLLORAKKGAAKKIEKEAAKLOGRKVKTOVKNIRO	441
Callithrix_jacchus	ROSPPRIKPVRIIPSSKRTDATIAKOLLORAKKGAAKKIEKEAAKLOGRKVKTOVKNIRO	441
Equus_caballus	ROSPPRIKPVRIIPSSKRTDATIAKOLLORAKKGAAKKIEKEAAKLOGRKVKTOVKNIRO	441
Bos_taurus	ROSPPRIKPVRIIPSSKRTDATIAKOLLORAKKGAAKKIEKEAAKLOGRKVKTOVKNIRO	441
Canis_lupus_familiaris	ROSPPRIKPVRIIPSSKRTDATIAKOLLORAKKGAAKKIEKEAAKLOGRKVKTOVKNIRO	441
Rhinatrema_bivittatum	ROSPPRIKPVRIIPATKRTDATIAKOLLORAKKGAAKKIEKEAAKLOGRKGRTOLKTIRO	376
Xenopus_tropicalis	ROSPPRMKPVRIIPSSKRTDTAIAKOLLORAKKGAAKKMELAAKLOGRKGGTOLKNIRO	363
	.....430.....440.....450.....460.....470.....480	

	*****.:*****:*****:*.:.:**** ** .*.:.***** **	
Pavo_muticus	FIMPVVSAISSRIIKTPKRFIEDEDYDPPIKISRLLESTPN-SRFSATS CGSSEKSSAASQ	403
Pavo_cristatus	FIMPVVSAISSRIIKTPKRFIEDEDYDPPIKISRLLESTPN-SRFSATS CGSSEKSSAASQ	403
Gallus_gallus	FIMPVVSAISSRIIKTPKRFIEDEDYDPPIKISRLLESTPN-SRFSATS CGSSEKSSAASQ	443
Chelonia_mydas	FIMPVVSAISSRIIKTPKRFIEDEDYDPPIKIARLESTPN-SRFSATS CGSSEKSSAASQ	442
Mus_musculus	FIMPVVSAISSRIIKTPRRFIEDEDYDPPMKIARLESTPN-SRFSATS CGSSEKSSAASQ	465
Rattus_norvegicus	FIMPVVSAISSRIIKTPRRFIEDEDYDPPIKIARLESTPN-SRFSATS CGSSEKSSAASQ	466
Homo_sapiens	FIMPVVSAISSRIIKTPRRFIEDEDYDPPIKIARLESTPN-SRFSAPS CGSSEKSSAASQ	467
Pan_troglodytes	FIMPVVSAISSRIIKTPRRFIEDEDYDPPIKIARLESTPN-SRFSAPS CGSSEKSSAASQ	500
Macaca_mulatta	FIMPVVSAISSRIIKTPRRFIEDEDYDPPIKIARLESTPN-SRFSAPS CGSSEKSSAASQ	500
Callithrix_jacchus	FIMPVVSAISSRIIKTPRRFIEDEDYDPPIKIARLESTPN-SRFSAPS CGSSEKSSAASQ	500
Equus_caballus	FIMPVVSAISSRIIKTPRRFIEDEDYDPPIKIARLESTPN-SRFSATS CGSSEKSSAASQ	500
Bos_taurus	FIMPVVSAISSRIIKTPRRFIEDEDYDPPIKIARLESTPN-SRFSATS CGSSEKSSAASQ	500
Canis_lupus_familiaris	FIMPVVSAISSRIIKTPRRFIEDEDYDPPIKIARLESTPN-SRFSATS CGSSEKSSAASQ	500
Rhinatrema_bivittatum	FIMPVVSAISSRIIKTPKRFIEDEDYDPPVKISRLLEMPN-NRFNATS CGSSEKSSAMSQ	435
Xenopus_tropicalis	FIMPVVSTVSSRIIKTPRRFIEDEDYEPPIKARLESAPNGSRFSTAS CGSSEKSSAASQ	423
490.....500.....510.....520.....530.....540	

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Pavo_muticus      HSSQMSSDSSRSSSPSVDTSTDSQAS--EEMQTLSEERSNTPEVHTPLPVSQSPENDNSDR 462
Pavo_cristatus    HSSQMSSDSSRSSSPSVDTSTDSQAS--EEMQTLSEERSNTPEVHTPLPVSQSPENDNSDR 462
Gallus_gallus     HSSQMSSDSSRSSSPSVDTSTDSQAS--EEMQTLSEERSNTPEVHTPLPVSQSPENDNSDR 502
Chelonia_mydas    HSSQMSSDSSRSSSPSVDTSTDSQAS--EEMQALSEERSNTPEAHTPLPISQSPENDNGDR 501
Mus_musculus      HSSQMSSDSSRSSSPSIDTTSDSQAS--EEIQALPEERSNTPEVHTPLPISQSPENESNDR 524
Rattus_norvegicus HSSQMSSDSSRSSSPSIDTTSDSQAS--EEIQALPEERSNTPEVHTPLPISQSPENESNDR 525
Homo_sapiens      HSSQMSSDSSRSSSPSVDTSTDSQAS--EEIQVLPEERSDTPEVHPPLPISQSPENESNDR 526
Pan_troglodytes   HSSQMSSDSSRSSSPSVDTSTDSQAS--EEIQVLPEERSDTPEVHPPLPISQSPENESNDR 559
Macaca_mulatta    HSSQMSSDSSRSSSPSVDTSTDSQAS--EEIQVLPEERSDTPEVHTPLPISQSPENESNDR 559
Callithrix_jacchus HSSQMSSDSSRSSSPSVDTSTDSQAS--EEIQVLPEERSDTPEVHTPLPISQSPENESNDR 559
Equus_caballus    HSSQMSSDSSRSSSPSVDTSTDSQVS--EEIQVLPEERSDTPEVRPPLPISQSPENDGNDR 559
Bos_taurus        HSSQMSSDSSRSSSPSVDTSTDSQAS--EEIQVLPEERSDTPEVHTPLPISQSPEDDSDDR 559
Canis_lupus_familiaris HSSQMSSDSSRSSSPSVDTSTDSQASEDQIQVLPEERSDTPEVHTPLPISQSPENDSSDR 560
Rhinatrema_bivittatum HSSQMSSDSSRSSSPSVDTSTDSQAS--EEMQGLLEEQSHTPPEHTPSPVPQTSSENGVER 494
Xenopus_tropicalis QSSQATSDDSRSSSPSVDTSTESQAS--EETPVVSEPOGRVAETITSVPTQQQP--LESNGV 481
.....550.....560.....570.....580.....590.....600

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Pavo_muticus      RNRRFSITERSFGQRTAKKLSALPSVPQQQSSSSPPPPLLTPPPPLQPASGISDHTPWLM 522
Pavo_cristatus    RNRRFSITERSFGQRTAKKLSALPSVPQQQSSSSPPPPLLTPPPPLQPASGISDHTPWLM 522
Gallus_gallus     RNRRFSITERSFGQRTAKKLSAVPSVPQQQSSSSPPPPLLTPPPPLQPASGISDHTPWLM 562
Chelonia_mydas    RSRRFSMSERSFGQRAAKKLSLQSVSQQSSSSPPPPLLTPPPPLQPATGISDHTPWLM 561
Mus_musculus      RSRRYSMSERSFGSRATKKLPTLQSAPOQQTSSSPPPPLTPPPPLQPASGISDHTPWLM 584
Rattus_norvegicus RGRYSMSERSFGSRRTTKKLPTLQSAPOQQTSSSPPPPLTPPPPLQPASGISDHTPWLM 585
Homo_sapiens      RSRRYSVSERSFGSRRTTKKLSTLQSAPOQQTSSSPPPPLTPPPPLQPASSISDHTPWLM 586
Pan_troglodytes   RSRRYSVSERSFGSRRTTKKLSTLQSAPOQQTSSSPPPPLTPPPPLQPASSISDHTPWLM 619
Macaca_mulatta    RSRRYSVSERSFGSRRTTKKL--TLQSAPOQQTSSSPPPPLTPPPPLQPASSISDHTPWLM 618
Callithrix_jacchus RSRRYSVSERSFGSRRTTKKLSTLQSAPOQQTSSSPPPPLTPPPPLQPASSISDHTPWLM 619
Equus_caballus    RSRRYSVSERSFGSRRTAKKLSALQSAPOQQTSSSPPPPLTPPPPLQPASSISDHTPWLM 619
Bos_taurus        RSRRYSVSERSFGSRRTTKKLSTLQSAPOQQTSSSPPPPLTPPPPLQPASSISDHTPWLM 619
Canis_lupus_familiaris RSRRYSVSERSFGSRRTAKKLSLQSAPOQQPSSSPPPPLTPPPPLQPASGISDHTPWLM 620
Rhinatrema_bivittatum RSRRFSVSERSYGPGSTKRLTSQVPS--QQISSSPPPPLTPPPPLQPPSSISEHTPWLM 552
Xenopus_tropicalis RTRRLPVCNKNFSSRPAKKIVLRPSFQ--QKSSVSPPPPLTPPPPLQPSASLPDHTPWLM 540
.....610.....620.....630.....640.....650.....660

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Pavo_muticus      PPTIPLASPFLLPTSAAPMQEKRKSILREPTFRWTSLKHSRSEPQYFSSAKYAKEGLIRKP 582
Pavo_cristatus    PPTIPLASPFLLPTSAAPMQEKRKSILREPTFRWTSLKHSRSEPQYFSSAKYAKEGLIRKP 582
Gallus_gallus     PPTIPLASPFLLPTSAAPMQEKRKSILREPTFRWTSLKHSRSEPQYFSSAKYAKEGLIRKP 622
Chelonia_mydas    PPTIPLASPFLLPTSAAPMQEKRKSILREPTFRWTSLKHSRSEPQYFSSAKYAKEGLIRKP 621
Mus_musculus      PPTIPLASPFLLPASAAPMQGKRKSILREPTFRWTSLKHSRSEPQYFSSAKYAKEGLIRKP 644
Rattus_norvegicus PPTIPLASPFLLPASAAPMQGKRKSILREPTFRWTSLKHSRSEPQYFSSAKYAKEGLIRKP 645
Homo_sapiens      PPTIPLASPFLLPASTAPMQGKRKSILREPTFRWTSLKHSRSEPQYFSSAKYAKEGLIRKP 646
Pan_troglodytes   PPTIPLASPFLLPASTAPMQGKRKSILREPTFRWTSLKHSRSEPQYFSSAKYAKEGLIRKP 679
Macaca_mulatta    PPTIPLASPFLLPASTAPMQGKRKSILREPTFRWTSLKHSRSEPQYFSSAKYAKEGLIRKP 678
Callithrix_jacchus PPTIPLASPFLLPASTAPMQGKRKSILREPTFRWTSLKHSRSEPQYFSSAKYAKEGLIRKP 679
Equus_caballus    PPTIPLASPFLLPASAAPMQGKRKSILREPTFRWTSLKHSRSEPQYFSSAKYAKEGLIRKP 679
Bos_taurus        PPTIPLASPFLLPTSAAPMQGKRKSILREPTFRWTSLKHSRSEPQYFSSAKYAKEGLIRKP 679
Canis_lupus_familiaris PPTIPLASPFLLPASAAPMQGKRKSILREPTFRWTSLKHSRSEPQYFSSAKYAKEGLIRKP 680
Rhinatrema_bivittatum PPTIPLASPFLLPSAAPMQEKRKSILREPTFKWTSLKHSRSEPQYFSSAKYAKEGLIRKP 612
Xenopus_tropicalis P-AIPMATPFI--SASRMHEKRKSILREPTFRWTSLKHSRLSESQYFSSAKYAKEGLIRKP 597
.....670.....680.....690.....700.....710.....720

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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	:	*****:	*..	. . . *	:*	:***:****:*****	
Pavo_muticus	IFDNFRPPPLTPEDVGFASG--FSTPGATAPARLFS-LHSG-TRFDMHKRSPLLRAPRFT	638					
Pavo_cristatus	IFDNFRPPPLTPEDVGFASG--FSTPGATAPARLFS-LHSG-TRFDMHKRSPLLRAPRFT	638					
Gallus_gallus	IFDNFRPPPLTPEDVGFASG--FSTPGATAPARLFS-LHSG-TRFDMHKRSPLLRAPRFT	678					
Chelonia_mydas	VFDNFRPPPLTPEDVGFASG--FSTSGATAPARLFSALHSG-TRFDMHKRSPLLRAPRFT	678					
Mus_musculus	IFDNFRPPPLTPEDVGFASG--FSASGTAASARLFSPLHSG-TRFDIHKRSPILRAPRFT	701					
Rattus_norvegicus	IFDNFRPPPLTPEDVGFASG--FSASGSAASARLFSPLHSG-TRFDIHKRSPILRAPRFT	702					
Homo_sapiens	IFDNFRPPPLTPEDVGFASG--FSASGTAASARLFSPLHSG-TRFDMHKRSPLLRAPRFT	703					
Pan_troglodytes	IFDNFRPPPLTPEDVGFASG--FSASGTAASARLFSPLHSG-TRFDMHKRSPLLRAPRFT	736					
Macaca_mulatta	IFDNFRPPPLTPEDVGFASG--FSASGTATSARLFSPLHSG-TRFDMHKRSPLLRAPRFT	735					
Callithrix_jacchus	IFDNFRPPPLTPEDVGFASG--FSASGTAASARLFSPLHSG-TRFDMHKRSPLLRAPRFT	736					
Equus caballus	IFDNFRPPPLTPEDVGFASG--FSTSSTAASARLFSPLHSG-TRFDMHKRSPLLRAPRFT	736					
Bos_taurus	IFDNFRPPPLTPEDVGFASG--FSTSSTAASARLFSPLHSG-TRFDMHKRSPLLRAPRFT	736					
Canis_lupus_familiaris	IFDNFRPPPLTPEDVGFASG--FSASGTAASARLFSPLHSG-TRFDMHKRSPLLRAPRFT	737					
Rhinatrema_bivittatum	IFDNFRPPPLTPEDVGLASGFSFSSAVGGPGRLFSAFHGG-TRFDVHKRSPLLRAPRFT	671					
Xenopus_tropicalis	IFDNFRPPPLTPEDVGLATASGFFSHTVVGPGRLFSHIHSGARFDVHKRSPLLRAPRFT	657					
	.....730.....740.....750.....760.....770.....780					

	*****.*:::.**:**.*:**.*:*****	
Pavo_muticus	PSEAHSRIFESVTILPSSVGRIATGTSATGVSRKRKRKVFSPIRS-EPRSPSHSMRTRSG	697
Pavo_cristatus	PSEAHSRIFESVTILPSSVGRIATGTSATGVSRKRKRKVFSPIRS-EPRSPSHSMRTRSG	697
Gallus_gallus	PSEAHSRIFESVTILPSSVGRIATGTSATGVSRKRKRKVFSPIRS-EPRSPSHSMRTRSG	737
Chelonia_mydas	PSEAHSRIFESVTILPSSVRIATGTSVTGISRKRKRKVFSPIRS-EPRSPSHSMRTRSG	737
Mus_musculus	PSEAHSRIFESVTILPS--NRTSSGASSSGVSNRKRKRKVFSPIRS-EPRSPSHSMRTRSG	758
Rattus_norvegicus	PSEAHSRIFESVTILPS--NRTSSGASSSGVSNRKRKRKVFSPIRS-EPRSPSHSMRTRSG	759
Homo_sapiens	PSEAHSRIFESVTILPS--NRTSAGTSSSGVSNRKRKRKVFSPIRS-EPRSPSHSMRTRSG	760
Pan_troglodytes	PSEAHSRIFESVTILPS--NRTSAGTSSSGVSNRKRKRKVFSPIRS-EPRSPSHSMRTRSG	793
Macaca_mulatta	PSEAHSRIFESVTILPS--NRTSAGTSSSGVSNRKRKRKVFSPIRS-EPRSPSHSMRTRSG	792
Callithrix_jacchus	PSEAHSRIFESVTILPS--NRTSAGTSSSGVSNRKRKRKVFSPIRS-EPRSPSHSMRTRSG	793
Equus_caballus	PSEAHSRIFESVTILPS--NRTSAGTSSSGVSNRKRKRKVFSPIRS-EPRSPSHSMRTRSG	793
Bos_taurus	PSEAHSRIFESVTILPS--NRTSAGTSSSGVSNRKRKRKVFSPIRS-EPRSPSHSMRTRSG	793
Canis_lupus_familiaris	PSEAHSRIFESVTILPT--NRTSAGTSSSGVSNRKRKRKVFSPIRS-EPRSPSHSMRTRSG	794
Rhinatrema_bivittatum	PSEAHSRIFESVTILPS-VGRSSGQSAGIGMSRRRKRGVSPMRS-ESRSPSHSMRTRSG	729
Xenopus_tropicalis	PSEAHSRIFESVTILPPSAGRASGTSSMMGIS-RRKRKRVFNPIRSS-EPKSPSHSMRTRSR	716
	.....790.....800.....810.....820.....830.....840	

	:.....: *:.. . ****: :.:.*:::*****:.*.*. :.* : : :*: *: **	
Pavo_muticus	RLSTSDLTTLTPQSSVSSSLTSISVSSLATSALNSTFTFPSSHSLTQS-GESAERSQRQRK	756
Pavo_cristatus	RLSTSDLTTLTPQSSVSSSLTSISVSSLATSALNSTFTFPSSHSLTQS-GESAERSQRQRK	756
Gallus_gallus	RLSTSDLTTLTPQSSVSSSLTSISVSSLATSALNSTFTFPSSHSLTQS-GESAERSQRQRK	796
Chelonia_mydas	RLSTSDLTTLTPQSSVSSSLTNMSVSSLATSALNSTFTFSSHPLTQS-GESAERSQRPRK	796
Mus_musculus	RLSTSELSPLTPPPSSVSSSL-IPVSPLAASALNPTFTFPSSHSLTQS-GESTEKNQRARK	816
Rattus_norvegicus	RLSTSELSPLTPPPSSVSSSL-IPVSPLAASALNPTFTFPSSHSLTQS-GESTEKSQRARK	817
Homo_sapiens	RLSSSELSPLTPPPSSVSSSL-ISVSPLATSAALNPTFTFPSSHSLTQS-GESA EKNQRPRK	818
Pan_troglodytes	RLSTSELSPLTPPPSSVSSSL-ISVSPLATSAALNPTFTFPSSHSLTQS-GESA EKNQRPRK	851
Macaca_mulatta	RLSTSELSPLTPPPSSVSSSL-ISVSPLATSAALNPTFTFPSSHSLTQS-GESA EKNQRPRK	850
Callithrix_jacchus	RLSTSELSPLTPPPSSVSSSL-ISVSPLATSAALNPTFTFPSSHSLTQS-GESA EKNQRPRK	851
Equus_caballus	RLSTSELSPLTPPPSSVSSSL-ISVSPLATSAALNPTFTFPSSHSLTQS-GESA EKNQRPRK	851
Bos_taurus	RLSTSELSPLTPPPSSVSSSL-ISVGPLATSAALNPTFTFPSSHSLTQS-GESA EKNQRPRK	851
Canis_lupus_familiaris	RLSTAELSPLTPPPSSVSSSL-ISVSPLATSAALNPTFTFPSSHSLTQS-GESA EKSQRPRK	852
Rhinatrema_bivittatum	RLSNSDLTSLTSQSSVSSSLTSISVSSLTSAALNSTFTFSSSSLTPS-GESSEKSQRPRK	788
Xenopus_tropicalis	RVGNSLSVLASPP--SSSLTIDVSPLATSAALNPFPSSSSVTPASVDIAEKIQKPRK	774
850.....860.....870.....880.....890.....900	

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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	*:	*	***	..*****.	* * : . *	. *	* : . :	: *	***	
Pavo_muticus	QTSTP-AEPFSS--SSPTPLFPWFITTSPTQTERGRNKDRATEELSKDKDADKSVEKDKSRE	813								
Pavo_cristatus	QTSTP-AEPFSS--SSPTPLFPWFITTSPTQTERGRNKDRATEELSKDKDADKSVEKDKSRE	813								
Gallus_gallus	QTSTP-AEPFSS--SSPTPLFPWFITTSPTQTERGRNKDRATEELSKDKDADKSVEKDKSRE	853								
Chelonia_mydas	QISTP-AEPFSS--INPTPLFPWFTSPQTERGRNKDRATEELSKDKDVDSKVDKKSRE	853								
Mus_musculus	QTSAL-AEPFSS--NSP-ALFPWFITPGSQTEKGRKKDTAPEELSKORDADKSVEKDKSRE	872								
Rattus_norvegicus	QTSAP-AEPFSS--NSP-ALFPWFITPGSQTEKGRKKDTAPEELSKORDADKSVEKDKSRE	873								
Homo_sapiens	QTSAP-AEPFSS--SSPTPLFPWFITPGSQTERGRNKKDAPEELSKORDADKSVEKDKSRE	875								
Pan_troglodytes	QTSAP-AEPFSS--SSPTPLFPWFITPGSQTERGRNKKDAPEELSKORDADKSVEKDKSRE	908								
Macaca_mulatta	QTSAP-PEPFSS--SSPTPLFPWFITPGSQTERGRNKKDAPEELSKORDADKSVEKDKSRE	907								
Callithrix_jacchus	QTSAPPAEPPSS--SSPTPLFPWFITPGSQTERGRNKKDVPEELSKORDADKSVEKDKSRE	909								
Equus caballus	QTSAP-TEPFSS--SSPTPLFPWFITSGSQTERGRNKKDAPEELSKORDADKSMEKDKSRE	908								
Bos_taurus	QTSAP-AEPFSS--SSPTPLFPWFITPGSQTERGRNKKDAPEELSKERDADKSVEKDKSRE	908								
Canis_lupus_familiaris	QASTP-AEPFSS--GSPITPLFPWFITPGSQTERGRNKKDAPEESKORDADKSVEKDKSRE	909								
Rhinatrema_bivittatum	QTSSTPGGEPPSS--SSPTPLFPWFIT---QTERGRNKDIISEELSREKIDIDSQEKDKSRE	843								
Xenopus_tropicalis	PTSTP-AEHFTSSPSSEALFPWFPPSSVMEKGKSKNRGSVESSEKEREVEKNREK-----	829								
	.....910.....920.....930.....940.....950.....960								

		:****.* *: : **.* :		: .:: :	*. :::.	* :	*		
Pavo_muticus	--KDREREKENKRESRKEKRRKGSEIQSSSALFPVGKMPKEKVVSE	EDVAASSS	AKKT	AGR	871				
Pavo_cristatus	--KDREREKENKRESRKEKRRKGSEIQSSSALFPVGKMPKEKVVSE	EDVAASSS	AKKT	AGR	871				
Gallus_gallus	--KDREREKENKRESRKEKRRKGSEIQSSSALFPVGKMPKEKVVSE	EDVAASSS	AKKT	AGR	911				
Chelonia_mydas	--KDREREKENKRESRKEKRRKGLEIQSSSALFPVGRVSKKEVVNE	EDVAASSV	KKAA	AGR	911				
Mus_musculus	--RDREREKENKRESRKEKRRKGSDIQSSSALYPVGRVSKKEVAGED	VGTSSS	AKKAT	GR	930				
Rattus_norvegicus	--RDREREKENKRESRKEKRRKGSDIQSSSALYPVGRVSKKEVAGED	VGTSSS	AKKAT	GR	931				
Homo_sapiens	--RDREREKENKRESRKEKRRKGSEIQSSSALYPVGRVSKKEVVGE	DVATSSS	AKKAT	GR	933				
Pan_troglodytes	--RDREREKENKRESRKEKRRKGSEIQSSSALYPVGRVSKKEVVGE	DVATSSS	AKKAT	GR	966				
Macaca_mulatta	--RDREREKENKRESRKEKRRKGSEIQSSSALYPVGRVSKKEVVGE	DVATSSS	AKKAT	GR	965				
Callithrix_jacchus	--RDREREKENKRESRKEKRRKGSEIQSSSALYPVGRVSKKEVVGE	DVATSSS	AKKAS	GR	967				
Equus_caballus	--RDREREKENKRESRKEKRRKGSEIQSSSALYPVGRVSKKEVVGE	DVATSSS	AKKT	TGR	966				
Bos_taurus	--RDREREKENKRESKKEKRRKGSEIQSSSALYPMGRVSKKEAVGE	DVATSSS	AKKAT	GR	966				
Canis_lupus_familiaris	--RDREREKENKRESRKEKRRKGSEIQSSSALYPVGRVSKDKVGA	EDVAASSS	AKKA	AGR	967				
Rhinatrema_bivittatum	KGREREKEKENKRRSKKGKRRKGMETQSSSTALFSMCRASDKAST	EDTPASSST	KKAP	GR	903				
Xenopus_tropicalis	-----REKENS	RDSRRDKRKKSS	DSG	-----CKISR	ERND	EEG	IVTATQIKMS	VR	874
970.....980.....990.....1000.....1010.....1020								

[illegible]

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	*::**::**::*****:~::~**::**::***** ***** * ***:*****.	
Pavo_muticus	PASSTVKHSAASSISSMLAQADKLPMTDKRVASLLKKAKAQLYKIEKSksSLKQADOPKAQG	990
Pavo_cristatus	PASSTVKHSAASSISSMLAQADKLPMTDKRVASLLKKAKAQLYKIEKSksSLKQADOPKAQG	990
Gallus_gallus	PASSTVKHSAASSISSMLAQADKLPMTDKRVASLLKKAKAQLYKIEKSksSLKQADOPKAQG	1030
Chelonia_mydas	PSSSTVKHSTSSISGMLAQADKLPMTDKRVASLLKKAKAQLYKIEKSksSLKQADOPKAQG	1030
Mus_musculus	PSSSTVKHSTSSISGMLAQADKLPMTDKRVASLLKKAKAQLCKIEKSksSLKQTDOPKAQG	1050
Rattus_norvegicus	PSPSTVKHSTSSISGMLAQADKLPMTDKRVASLLKKAKAQLCKIEKSksSLKQTDOPKAQG	1051
Homo_sapiens	PSSSTVKHSTSSISGMLAQADKLPMTDKRVASLLKKAKAQLCKIEKSksSLKQTDOPKAQG	1053
Pan_troglodytes	PSSSTVKHSTSSISGMLAQADKLPMTDKRVASLLKKAKAQLCKIEKSksSLKQTDOPKAQG	1086
Macaca_mulatta	PSSSTVKHSTSSISGMLAQADKLPMTDKRVASLLKKAKAQLCKIEKSksSLKQTDOPKAQG	1085
Callithrix_jacchus	PSSSTVKHSTSSISGMLAQADKLPMTDKRVASLLKKAKAQLCKIEKSksSLKQTDOPKAQG	1087
Equus_caballus	PSSSTVKHSTSSISGMLAQADKLPMTDKRVASLLKKAKAQLCKIEKSksSLKQTDOPKAQG	1086
Bos_taurus	PSSSTVKHSTSSISGMLAQADKLPMTDKRVASLLKKAKAQLCKIEKSksSLKQTDOPKAQG	1086
Canis_lupus_familiaris	PSSSTVKHSTSSISGMLAQADKLPMTDKRVASLLKKAKAQLCKIEKSksSLKQTDOPKAQG	1087
Rhinatrema_bivittatum	P-SSTLKHSTASISTMLAQADKLPVTDKRVASLLKKAKAQLYKIEKnsSLKQADOPKAQA	1020
Xenopus_tropicalis	QPVSALKHPSTSISSMLAQADKFPVSDKHVATLLRKAKAQLCKIEKSksFLKQTDOPKAQG	992
	.....1090.....1100.....1110.....1120.....1130.....1140	

	*****.:*****:*****	
Pavo_muticus	QESDSSETSVRGPRIKHVCRRAAVALGRKRAVFPDDMPTLSALPWEEREKILSSMGNDKK	1050
Pavo_cristatus	QESDSSETSVRGPRIKHVCRRAAVALGRKRAVFPDDMPTLSALPWEEREKILSSMGNDKK	1050
Gallus_gallus	QESDSSETSVRGPRIKHVCRRAAVALGRKRAVFPDDMPTLSALPWEEREKILSSMGNDKK	1090
Chelonia_mydas	QESDSSETSVRGPRIKHVCRRAAVALGRKRAVFPDDMPTLSALPWEEREKILSSMGNDKK	1090
Mus_musculus	QESDSSETSVRGPRIKHVCRRAAVALGRKRAVFPDDMPTLSALPWEEREKILSSMGNDKK	1110
Rattus_norvegicus	QESDSSETSVRGPRIKHVCRRAAVALGRKRAVFPDDMPTLSALPWEEREKILSSMGNDKK	1111
Homo_sapiens	QESDSSETSVRGPRIKHVCRRAAVALGRKRAVFPDDMPTLSALPWEEREKILSSMGNDKK	1113
Pan_troglodytes	QESDSSETSVRGPRIKHVCRRAAVALGRKRAVFPDDMPTLSALPWEEREKILSSMGNDKK	1146
Macaca_mulatta	QESDSSETSVRGPRIKHVCRRAAVALGRKRAVFPDDMPTLSALPWEEREKILSSMGNDKK	1145
Callithrix_jacchus	QESDSSETSVRGPRIKHVCRRAAVALGRKRAVFPDDMPTLSALPWEEREKILSSMGNDKK	1147
Equus_caballus	QESDSSETSVRGPRIKHVCRRAAVALGRKRAVFPDDMPTLSALPWEEREKILSSMGNDKK	1146
Bos_taurus	QESDSSETSVRGPRIKHVCRRAAVALGRKRAVFPDDMPTLSALPWEEREKILSSMGNDKK	1146
Canis_lupus_familiaris	QESDSSETSVRGPRIKHVCRRAAVALGRKRAVFPDDMPTLSALPWEEREKILSSMGNDKK	1147
Rhinatrema_bivittatum	QESDSSETSMRGPRIKHVCRRAAVALGRKRAVFPDDMPTLSALPWEEREKILSSMGNDKK	1080
Xenopus_tropicalis	QESDSSEASVRGPRIKHVCRRAAVALGRKRAVFPDDMPTLSALPWEEREKVLSSMGNDKK	1052
	.....1150.....1160.....1170.....1180.....1190.....1200	

	:**.*: ***:**** :****: *****:*****:****:****	
Pavo_muticus	SSIAGSEEAELPAPPIKPIKPVTRNKAQOEPVPVKGRRSRRCGOCSGCOVPEDCGVCTNC	1110
Pavo_cristatus	SSIAGSEEAELPAPPIKPIKPVTRNKAQOEPVPVKGRRSRRCGOCSGCOVPEDCGVCTNC	1110
Gallus_gallus	SSVAGSEEAELPAPPIKPIKPVTRNKAQOEPVPVKGRRSRRCGOCSGCOVPEDCGVCTNC	1150
Chelonia_mydas	SSIAGSEEAELPAPPIKPIKPVTRNKAQOEPVPVKGRRSRRCGOCPGCOVPEDCGVCTNC	1150
Mus_musculus	SSVAGSEDAELPAPPIKPIKPVTRNKAQOEPVPVKGRRSRRCGOCPGCOVPEDCGICTNC	1170
Rattus_norvegicus	SSIAGSEDAELPAPPIKPIKPVTRNKAQOEPVPVKGRRSRRCGOCPGCOVPEDCGVCTNC	1171
Homo_sapiens	SSIAGSEDAELPAPPIKPIKPVTRNKAQOEPVPVKGRRSRRCGOCPGCOVPEDCGVCTNC	1173
Pan_troglodytes	SSIAGSEDAELPAPPIKPIKPVTRNKAQOEPVPVKGRRSRRCGOCPGCOVPEDCGVCTNC	1206
Macaca_mulatta	SSIAGSEDAELPAPPIKPIKPVTRNKAQOEPVPVKGRRSRRCGOCPGCOVPEDCGVCTNC	1205
Callithrix_jacchus	SSIAGSEDAELPAPPIKPIKPVTRNKAQOEPVPVKGRRSRRCGOCPGCOVPEDCGICTNC	1207
Equus_caballus	SSIAGSEDAELPAPPIKPIKPVTRNKAQOEPVPVKGRRSRRCGOCPGCOVPEDCGVCTNC	1206
Bos_taurus	SSIAGSEDAELPAPPIKPIKPVTRNKAQOEPVPVKGRRSRRCGOCPGCOVPEDCGVCTNC	1206
Canis_lupus_familiaris	SSIAGSEDAELPAPPIKPIKPVTRNKAQOEPVPVKGRRSRRCGOCPGCOVPEDCGVCTNC	1207
Rhinatrema_bivittatum	SSIAGSEDAELPAPPIKPIKPVTRNKTPQOEPVPVKGRRSRRCGOCPGCOVPEDCGVCTNC	1140
Xenopus_tropicalis	SSIAGSEDAEPAPPLPKPIKQITRNKAQOEPVPVKGRRSRRCGOCPGCOVPEDCGICTNC	1112
1210.....1220.....1230.....1240.....1250.....1260	

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*****:.*.***:.*.***
LDKPKFGGRN IKKQ CCKMRKC QNLQWMP SKAYLQKQAKAAKKKEKSKTNEKK-----ES 1165
LDKPKFGGRN IKKQ CCKMRKC QNLQWMP SKAYLQKQAKAAKKKEKSKTNEKK-----ES 1165
LDKPKFGGRN IKKQ CCKMRKC QNLQWMP SKAYLQKQAKAAKKKEKSKTNEKK-----ES 1205
LDKPKFGGRN IKKQ CCKMRKC QNLQWMP SKAYLQKQAKVKKKEKSKTNEKK-----ES 1205
LDKPKFGGRN IKKQ CCKMRKC QNLQWMP SKASLQKQTKAVKKKEKSKTTEKK-----ES 1225
LDKPKFGGRN IKKQ CCKMRKC QNLQWMP SKAYLQKQTKAVKKKEKSKATEKK-----ES 1226
LDKPKFGGRN IKKQ CCKMRKC QNLQWMP SKAYLQKQAKAVKKKEKSKTSEKK-----DS 1228
LDKPKFGGRN IKKQ CCKMRKC QNLQWMP SKAYLQKQAKAVKKKEKSKTSEKK-----DS 1261
LDKPKFGGRN IKKQ CCKMRKC QNLQWMP SKAYLQKQAKAVKKKEKSKTSEKK-----ES 1260
LDKPKFGGRN IKKQ CCKMRKC QNLQWMP SKAYLQKQAKAVKKKEKSKTSEKK-----EN 1262
LDKPKFGGRN IKKQ CCKMRKC QNLQWMP SKAYLQKQAKAVKKKEKSKTSEKK-----EN 1261
LDKPKFGGRN IKKQ CCKMRKC QNLQWMP SKAYLQKQAKAVKKKEKSKTSEKK-----ES 1261
LDKPKFGGRN IKKQ CCKMRKC QNLQWMP SKAYLQKQAKAVKKKEKSKTSEKK-----ES 1262
LDKPKFGGRN IKKQ CCKQRKC QNLQWMP SKAYLQKQAKAVKKKEKRTKSSEKK-----ES 1195
LDKPKFGGRN IKKQ CCKMRKC QNLQWMP SKAYLQKQAKAAKKKERKCVTEKKELLVPKS 1172
.....1270.....1280.....1290.....1300.....1310.....1320
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      .      *      ..      :*      :*      :*      *
HSG---KNQLDSGQKPAPPVVPREDSAVKKS--SEPARKPVEEKHEDGNSSVPPAEP-- 1218
HSG---KNQLDSGQKPAPPVVPREDSAVKKS--SEPARKPVEEKHEDGNSSVPPAEP-- 1218
HSG---KNQLDSGQKPTPTTVLPREDSAVKKS--SEPARKPVEEKHEDGNSSVPPPEP-- 1258
HSG---KNQVDSGQKPAQTVLAKEDNALKKKS--SEPARKPSEEKNEEGNTSVPLES-- 1258
KESTAVKSPLEPAQKAAPP---PREEPAPKKSSSEPPPRKPVEEKSEEGGAPAPAPAP-- 1280
KESTVVKSSLESQAQKAAPP---VREEPAPKKSSSEPPPRKPVEEKTEEGGAPAPAPAPAP 1283
KESSVVKNVVDSSQKPTPS---AREDAPAPKKSSSEPPPRKPVEEKSEEGNVSAPGPES-- 1283
KDSSVVKNVVDSSQKPTPS---AREDAPAPKKSSSEPPPRKPVEEKSEEGNVSAPGPES-- 1316
KESSVVKNVVDSSQKPTPS---AREDAPAPKKSSSEPPPRKPVEEKSEEGNVSAPGPES-- 1315
KESNVVKNVVDTSQKPTPS---AREDAPAPKKSSSEPALRKPVEEKREEGNVSPGPES-- 1317
KESSVVKNLVDSSQKPTPS---AREDAPAPKKSNNEP-ARKPVEDKSEEGNASAPGPEP-- 1315
KESSTVKNSVDSQKSTPS---AREDAPAPKKSNSDPPPRKSVEDKSEEGNTATPGPEA-- 1316
KESNVGKCVVDSSGQKPAPS---AREDAPAPKKSNSEPPPRKPVEEKSEEGNTSAPVPES-- 1317
HSG---KNPLESG---REDGVQKKN---DSLRKTAMEKSEDGSSTVPAVDP-- 1237
PSELIVKPVSAPGTSSPPVQEEPATPSLPQKK--NEPPKKQTEEKSEEQIPAASTSET-- 1228
.....1330.....1340.....1350.....1360.....1370.....1380

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      . : **  ** .      : :      : **  *
-----KQTPASGARKTGKQ-AAQPAQLPPSPPPSSGP-LKKEAPKVT 1258
-----KQTPASGARKTGKQ-AAQPAQLPPSPPPSSGP-LKKEAPKVT 1258
-----KQTPASGARKTGKQ-TAQPVLPPSPPPSSGP-LKKEAPKVT 1298
-----KQVTASGARKTGKQ-APQPLQVPLCPPSSGP-LKKEVPKTI 1298
-----EPKQVSAPASRKSSKQ-VSQPAAVVPPPPSTAP-QKKEAPKAV 1322
APAPAPAPAPAPAPAPEPKQASTPASRKSSKQ-VSQPAAVVPPPPSTAL-QKKEAPKAI 1341
-----KQATTPASRKSSKQ-VSQPALVIPPQPPTTGP-PRKEVPKTT 1323
-----KQATTPASRKSSKQ-VSQPALVIPPQPPTTGP-PRKEVPKTT 1356
-----KQATIPASRKSSKQ-VSQPAVIPPQPPTTGP-PRKEVPKTT 1355
-----KQVTTTPASRKSSKQ-VSQPAVIPSQPPSTGP-PRKEVPKTT 1357
-----KQVTTPTARKSGKQ-VSQPAVIPPQPPSTAP-PRKEVPKTT 1355
-----KHVATPASRKSSKQ-VSQPAPAIPPQPPSTAP-PRKEVPKTT 1356
-----KQVTTTPASRKSSKQ-ASQPAPVTPPPSTAP-PRKEVPKTT 1357
-----KSISTPVTRKTNLKQ-APLLVQPLLPPQLSPGL-AKKETLKS- 1276
-----KQSPNSRKTTTKQPPSQPSTTIAMTPLTATPSTKKEAPKPI 1268
.....1390.....1400.....1410.....1420.....1430.....1440

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..*.:** .. : . **.**** : * :.* *.*.*** * .* * : :.:*.
Pavo_muticus ASEPKKKQPPQP--EIGTEQNKQKKIAPRPTFPVKQKPKEKEKPPPISKPESS-TLNLLS 1315
Pavo_cristatus ASEPKKKQPPQP--EIGTEQNKQKKIAPRPTFPVKQKPKEKEKPPPISKPESS-TLNLLS 1315
Gallus_gallus TSEPKKKQPPQP--EIGTEQNKQKKIAPRPTFPVKQKPKEKEKPPPISKPESS-TLNLLS 1355
Chelonia_mydas PSEPKKKQTPQP--ELGIEQSKQKKVTPRPSFPVKQKPKEKEKPPPVNKPENS-TLNLLS 1355
Mus_musculus PSEPKKKQPPPP--EPGPEQSKQKKVAPRPSIPVKQKPKDKEKPPPVSKQENAGTLNIN 1380
Rattus_norvegicus PSEPKKKQPPPP--ESGPEQSKQKKVAPRPSIPVKQKPKDKEKPPPVSKQENAGTLNIN 1399
Homo_sapiens PSEPKKKQPPPP--ESGPEQSKQKKVAPRPSIPVKQKPKEKEKPPPVNKOENAGTLNIN 1381
Pan_troglodytes PSEPKKKQPPPP--ESGPEQSKQKKVAPRPSIPVKQKPKEKEKPPPVNKOENAGTLNIN 1414
Macaca_mulatta PSEPKKKQPPPP--ESGPEQSKQKKVAPRPSIPVKQKPKEKEKPPPVNKOENAGTLNIN 1413
Callithrix_jacchus PSEPKKKQPPPP--ESGPEQSKQKKVAPRPSIPVKQKPKEKEKPPPVSKQENAGTLNIN 1415
Equus_caballus PSEPKKKQPPPP--EAGPEQSKQKKVAPRPSIPVKQKPKEKEKPPPVNKOENAGTLNIN 1413
Bos_taurus PSEPKKKQPPPP--ESGPEQSKQKKVAPRPSIPVKQKPKEKEKPPPVNKOENAGTLNIN 1414
Canis_lupus_familiaris PSEPKKKQPPPP--EAGPEQSKQKKVAPRPSIPVKQKPKEKEKPPPVSKQENTGTNIN 1415
Rhinatrema_bivittatum PSEPKKKQPTQA--EPGMEQSKQKKGTTPRGLPVKQKPKEKEKPLPVSKPESS-TLSLLN 1333
Xenopus_tropicalis PPSRKKQPPVLPDNTSTEQNKQKKLAMRLGALLKSKGKEKDKPQPPSKPEVS--FNLLN 1326
.....1450.....1460.....1470.....1480.....1490.....1500

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.* ** :*: *:*****.***: ****:***:..:*.*:*****
Pavo_muticus TLTNGSSSKQKPPTDGVHRIRVDFKEDCEENVWEMGGLGIVTSVPITPRVVCFLCASSG 1375
Pavo_cristatus TLTNGSSSKQKPPTDGVHRIRVDFKEDCEENVWEMGGLGIVTSVPITPRVVCFLCASSG 1375
Gallus_gallus TLTNGSSSKQKPPTDGVHRIRVDFKEDCEENVWEMGGLGIVTSVPITPRVVCFLCASSG 1415
Chelonia_mydas TLTNGSSSKQKAPT DGVHRIRVDFKEDCEENVWEMGGLGILTSVPITPRVVCFLCASSG 1415
Mus_musculus PLSNGISSKQKIPADGVHRIRVDFKEDCEAENVWEMGGLGILTSVPITPRVVCFLCASSG 1440
Rattus_norvegicus PLLNGISSKQKIPADGVHRIRVDFKEDCEAENVWEMGGLGILTSVPITPRVVCFLCASSG 1459
Homo_sapiens TLTNGNSSSKQKIPADGVHRIRVDFKEDCEAENVWEMGGLGILTSVPITPRVVCFLCASSG 1441
Pan_troglodytes TLTNGNSSSKQKIPADGVHRIRVDFKEDCEAENVWEMGGLGILTSVPITPRVVCFLCASSG 1474
Macaca_mulatta TLTNGNSSSKQKIPADGVHRIRVDFKEDCEAENVWEMGGLGILTSVPITPRVVCFLCASSG 1473
Callithrix_jacchus TLTNGNSSSKQKIPADGVHRIRVDFKEDCEAENVWEMGGLGILTSVPITPRVVCFLCASSG 1475
Equus_caballus TLTNGNSSSKQKVPADGVHRIRVDFKEDCEAENVWEMGGLGILTSVPITPRVVCFLCASSG 1473
Bos_taurus TLTNGNSSSKQKVPADGVHRIRVDFKEDCEAENVWEMGGLGILTSVPITPRVVCFLCASSG 1474
Canis_lupus_familiaris TLTNGNSSSKQKIPADGVHRIRVDFKEDCEAENVWEMGGLGILTSVPITPRVVCFLCASSG 1475
Rhinatrema_bivittatum TLANGSSSKQRPADGVHRIRVDFKEDCDMENWEMGGLSILTSVPITPRVVCFLCASSG 1393
Xenopus_tropicalis TLTNGGITKQKPPSDGVHRIRVDFKHDCENVWDMGGISLLTAPVTPRVVCFLCASSG 1386
.....1510.....1520.....1530.....1540.....1550.....1560

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*:*****:***** ** ***:*****:*****:*.
Pavo_muticus HVEFVYCQVCCEPFHKFCLEESERPLEDQLENWCCRCKFCHVCGROHQAT----- 1426
Pavo_cristatus HVEFVYCQVCCEPFHKFCLEESERPLEDQLENWCCRCKFCHVCGROHQAT----- 1426
Gallus_gallus HVEFVYCQVCCEPFHKFCLEESERPLEDQLENWCCRCKFCHVCGROHQAT----- 1466
Chelonia_mydas HVEFVYCQVCCEPFHKFCLEESERPLEDQLENWCCRCKFCHVCGROHQAT----- 1466
Mus_musculus HVEFVYCQVCCEPFHKFCLEENERPLEDQLENWCCRCKFCHVCGROHQAT----- 1491
Rattus_norvegicus HVEFVYCQVCCEPFHKFCLEENERPLEDQLENWCCRCKFCHVCGROHQAT----- 1510
Homo_sapiens HVEFVYCQVCCEPFHKFCLEENERPLEDQLENWCCRCKFCHVCGROHQAT----- 1492
Pan_troglodytes HVEFVYCQVCCEPFHKFCLEENERPLEDQLENWCCRCKFCHVCGROHQAT----- 1525
Macaca_mulatta HVEFVYCQVCCEPFHKFCLEENERPLEDQLENWCCRCKFCHVCGROHQAT----- 1524
Callithrix_jacchus HVEFVYCQVCCEPFHKFCLEENERPLEDQLENWCCRCKFCHVCGROHQAT----- 1526
Equus_caballus HVEFVYCQVCCEPFHKFCLEENERPLEDQLENWCCRCKFCHVCGROHQAT----- 1524
Bos_taurus HVEFVYCQVCCEPFHKFCLEENERPLEDQLENWCCRCKFCHVCGROHQAA----- 1525
Canis_lupus_familiaris HVEFVYCQVCCEPFHKFCLEENERPLEDQLENWCCRCKFCHVCGROHQAT----- 1526
Rhinatrema_bivittatum HLEFVYCQVCCEPFHRFCLEESERPIEDQLENWCCRCKFCHVCGROHQAT----- 1444
Xenopus_tropicalis HVEFVYCQVCCEPFHRFCLEERERPSQDIENWCCRCKFCHVCGROQQATKESIGRONT 1446
.....1570.....1580.....1590.....1600.....1610.....1620

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*****.*****.*****.*****.*****
Pavo_muticus      -----KQLLECNKCRNSYHPECLGPNYPTKPTKTKKKKVWICTKCVRCKSCGSTTPGKGWD 1480
Pavo_cristatus    -----KQLLECNKCRNSYHPECLGPNYPTKPTKTKKKKVWICTKCVRCKSCGSTTPGKGWD 1480
Gallus_gallus     -----KQLLECNKCRNSYHPECLGPNYPTKPTKTKKKKVWICTKCVRCKSCGSTTPGKGWD 1520
Chelonia_mydas    -----KQLLECNKCRNSYHPECLGPNYPTKPTKTKKKKVWICTKCVRCKSCGSTTPGKGWD 1520
Mus_musculus      -----KQLLECNKCRNSYHPECLGPNYPTKPTKTKKKKVWICTKCVRCKSCGSTTPGKGWD 1545
Rattus_norvegicus -----KQLLECNKCRNSYHPECLGPNYPTKPTKTKKKKVWICTKCVRCKSCGSTTPGKGWD 1564
Homo_sapiens      -----KQLLECNKCRNSYHPECLGPNYPTKPTKTKKKKVWICTKCVRCKSCGSTTPGKGWD 1546
Pan_troglodytes   -----KQLLECNKCRNSYHPECLGPNYPTKPTKTKKKKVWICTKCVRCKSCGSTTPGKGWD 1579
Macaca_mulatta    -----KQLLECNKCRNSYHPECLGPNYPTKPTKTKKKKVWICTKCVRCKSCGSTTPGKGWD 1578
Callithrix_jacchus -----KQLLECNKCRNSYHPECLGPNYPTKPTKTKKKKVWICTKCVRCKSCGSTTPGKGWD 1580
Equus_caballus    -----KQLLECNKCRNSYHPECLGPNYPTKPTKTKKKKVWICTKCVRCKSCGSTTPGKGWD 1578
Bos_taurus        -----KQLLECNKCRNSYHPECLGPNYPTKPTKTKKKKVWICTKCVRCKSCGSTTPGKGWD 1579
Canis_lupus_familiaris -----KQLLECNKCRNSYHPECLGPNYPTKPTKTKKKKVWICTKCVRCKSCGSTTPGKGWD 1580
Rhinatrema_bivittatum -----KQLLECSKCRNSYHPECLGPNYPTKPTKTKKKKVWICTKCVHCKSCGATTPGKGWD 1498
Xenopus_tropicalis ISDMSLKQLLECNKCRNSYHPECLGPNYPTKPTKTKKKKVWICTKCVRCKSCGSTTPGKGWD 1506
.....1630.....1640.....1650.....1660.....1670.....1680

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*****.*****.*****.*****.*****
Pavo_muticus      AQWSHDFS LCHDCAKLFAKGNFCPLCDKCYDDDDYESKMMQCGKCDRWVHSHKCNLS --- 1537
Pavo_cristatus    AQWSHDFS LCHDCAKLFAKGNFCPLCDKCYDDDDYESKMMQCGKCDRWVHSHKCNLS --- 1537
Gallus_gallus     AQWSHDFS LCHDCAKLFAKGNFCPLCDKCYDDDDYESKMMQCGKCDRWVHSHKCNLS --- 1577
Chelonia_mydas    AQWSHDFS LCHDCAKLFAKGNFCPLCDKCYDDDDYESKMMQCGKCDRWVHSHKCNLS DLP 1580
Mus_musculus      AQWSHDFS LCHDCAKLFAKGNFCPLCDKCYDDDDYESKMMQCGKCDRWVHSHKCNLS SG-- 1603
Rattus_norvegicus AQWSHDFS LCHDCAKLFAKGNFCPLCDKCYDDDDYESKMMQCGKCDRWVHSHKCEGLSG-- 1622
Homo_sapiens      AQWSHDFS LCHDCAKLFAKGNFCPLCDKCYDDDDYESKMMQCGKCDRWVHSHKCNLS SG-- 1604
Pan_troglodytes   AQWSHDFS LCHDCAKLFAKGNFCPLCDKCYDDDDYESKMMQCGKCDRWVHSHKCNLS SG-- 1637
Macaca_mulatta    AQWSHDFS LCHDCAKLFAKGNFCPLCDKCYDDDDYESKMMQCGKCDRWVHSHKCNLS --- 1635
Callithrix_jacchus AQWSHDFS LCHDCAKLFAKGNFCPLCDKCYDDDDYESKMMQCGKCDRWVHSHKCNLS SG-- 1638
Equus_caballus    AQWSHDFS LCHDCAKLFAKGNFCPLCDKCYDDDDYESKMMQCGKCDRWVHSHKCNLS SG-- 1636
Bos_taurus        AQWSHDFS LCHDCAKLFAKGNFCPLCDKCYDDDDYESKMMQCGKCDRWVHSHKCNLS SG-- 1637
Canis_lupus_familiaris AQWSHDFS LCHDCAKLFAKGNFCPLCDKCYDDDDYESKMMQCGKCDRWVHSHKCNLS SG-- 1638
Rhinatrema_bivittatum AQWSHDFS LCHDCAKLFAKGNFCPLCDKCYDDDDYESKMMQCGKCDRWVHSHKCNLS --- 1555
Xenopus_tropicalis AQWSHDFS LCHDCAKLFAKGNFCPLCNKCYDDDDYESKMMQCGKCDRWVHSHKCNLT --- 1563
.....1690.....1700.....1710.....1720.....1730.....1740

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*****.*****.*****.*****.*****
Pavo_muticus      -----DEMYEILSNLPESVAYTCINCTEQH 1562
Pavo_cristatus    -----DEMYEILSNLPESVAYTCINCTEQH 1562
Gallus_gallus     -----DEMYEILSNLPESVAYTCINCTEQH 1602
Chelonia_mydas    HCNLRPLLLVLSSATTENSLAPLIVDGKDWGMSRONEMYEILSNLPESVAYTCINCTEQH 1640
Mus_musculus      -----TEDEMYEILSNLPESVAYTCVNCTERH 1630
Rattus_norvegicus -----TEDEMYEILSNLPESVAYTCVNCTERH 1649
Homo_sapiens      -----TEDEMYEILSNLPESVAYTCVNCTERH 1631
Pan_troglodytes   -----TEDEMYEILSNLPESVAYTCVNCTERH 1664
Macaca_mulatta    -----DEMYEILSNLPESVAYTCVNCTERH 1660
Callithrix_jacchus -----TEDEMYEILSNLPESVAYTCVNCTERH 1665
Equus_caballus    -----TEDEMYEILSNLPESVAYTCVNCTERH 1663
Bos_taurus        -----TEDEMYEILSNLPESVAYTCVNCTERH 1664
Canis_lupus_familiaris -----TEDEMYEILSNLPESVAYTCVNCTERH 1665
Rhinatrema_bivittatum -----DEMYEILSNLPESVAYTCINCTDHH 1580
Xenopus_tropicalis -----DEMYEILSNLPESVAYTCINCTERH 1588
.....1750.....1760.....1770.....1780.....1790.....1800

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*****:** :*** **: ** *****:***** *:*****.:*.:*****.**
Pavo_muticus      PAEWRLALEKELOVSLKQVLTALLNSRRTTSHLLRYRQAAKPPDLNPETEESIPSRSSPEG 1622
Pavo_cristatus    PAEWRLALEKELOVSLKQVLTALLNSRRTTSHLLRYRQAAKPPDLNPETEESIPSRSSPEG 1622
Gallus_gallus     PAEWRLALEKELOVSLKQVLTALLNSRRTTSHLLRYRQAAKPPDLNPETEESIPSRSSPEG 1662
Chelonia_mydas    PAEWRLALEKELOVSLKQVLTALLNSRRTTSHLLRYRQAAKPPDLNPETEESIPSRSSPEG 1700
Mus_musculus      PAEWRLALEKELOVSLKQVLTALLNSRRTTSHLLRYRQAAKPPDLNPETEESIPSRSSPEG 1690
Rattus_norvegicus PAEWRLALEKELOVSLKQVLTALLNSRRTTSHLLRYRQAAKPPDLNPETEESIPSRSSPEG 1709
Homo_sapiens      PAEWRLALEKELOVSLKQVLTALLNSRRTTSHLLRYRQAAKPPDLNPETEESIPSRSSPEG 1691
Pan_troglodytes   PAEWRLALEKELOVSLKQVLTALLNSRRTTSHLLRYRQAAKPPDLNPETEESIPSRSSPEG 1724
Macaca_mulatta    PAEWRLALEKELOVSLKQVLTALLNSRRTTSHLLRYRQAAKPPDLNPETEESIPSRSSPEG 1720
Callithrix_jacchus PAEWRLALEKELOVSLKQVLTALLNSRRTTSHLLRYRQAAKPPDLNPETEESIPSRSSPEG 1725
Equus_caballus    PAEWRLALEKELOVSLKQVLTALLNSRRTTSHLLRYRQAAKPPDLNPETEESIPSRSSPEG 1723
Bos_taurus        PAEWRLALEKELOVSLKQVLTALLNSRRTTSHLLRYRQAAKPPDLNPETEESIPSRSSPEG 1724
Canis_lupus_familiaris PAEWRLALEKELOVSLKQVLTALLNSRRTTSHLLRYRQAAKPPDLNPETEESIPSRSSPEG 1725
Rhinatrema_bivittatum PAEWRLALGKELQSSSLKQVLMALLNSRRTTSHLLRYRQAAKPPDLNPETEESIPSRSSPEG 1640
Xenopus_tropicalis PAEWRMALTNELQASLRYVLTALLNSRRTTSHLLRCRQAAKPPDLNPEDENMPSSRSSAEG 1648
.....1810.....1820.....1830.....1840.....1850.....1860

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*****:**:*.***:* ***:*.***:***:***:*****:*****.:*.:*****:**
Pavo_muticus      PDPPVLTEVSKQEEQQPLDMGVKKRMDGGYISVLDIFSDDIVKIIQAAINSDGGQPEIK 1682
Pavo_cristatus    PDPPVLTEVSKQEEQQPLDMGVKKRMDGGYISVLDIFSDDIVKIIQAAINSDGGQPEIK 1682
Gallus_gallus     PDPPVLTEVSKQEEQQPLDMGVKKRMDGGYISVLDIFSDDIVKIIQAAINSDGGQPEIK 1722
Chelonia_mydas    PDPPVLTEVSKQEEQQPLDMGVKKRMDGGYISVLDIFSDDIVKIIQAAINSDGGQPEIK 1760
Mus_musculus      PDPPVLTEVSKQEEQQPLDMGVKKRMDGGYISVLDIFSDDIVKIIQAAINSDGGQPEIK 1750
Rattus_norvegicus PDPPVLTEVSKQEEQQPLDMGVKKRMDGGYISVLDIFSDDIVKIIQAAINSDGGQPEIK 1769
Homo_sapiens      PDPPVLTEVSKQEEQQPLDMGVKKRMDGGYISVLDIFSDDIVKIIQAAINSDGGQPEIK 1751
Pan_troglodytes   PDPPVLTEVSKQEEQQPLDMGVKKRMDGGYISVLDIFSDDIVKIIQAAINSDGGQPEIK 1784
Macaca_mulatta    PDPPVLTEVSKQEEQQPLDMGVKKRMDGGYISVLDIFSDDIVKIIQAAINSDGGQPEIK 1780
Callithrix_jacchus PDPPVLTEVSKQEEQQPLDMGVKKRMDGGYISVLDIFSDDIVKIIQAAINSDGGQPEIK 1785
Equus_caballus    PDPPVLTEVSKQEEQQPLDMGVKKRMDGGYISVLDIFSDDIVKIIQAAINSDGGQPEIK 1783
Bos_taurus        PDPPVLTEVSKQEEQQPLDMGVKKRMDGGYISVLDIFSDDIVKIIQAAINSDGGQPEIK 1784
Canis_lupus_familiaris PDPPVLTEVSKQEEQQPLDMGVKKRMDGGYISVLDIFSDDIVKIIQAAINSDGGQPEIK 1785
Rhinatrema_bivittatum PDPPVLTEVSKQEEQQPLDMGVKKRMDGGYISVLDIFSDDIVKIIQAAINSDGGQPEIK 1700
Xenopus_tropicalis PDPPILTQVGKQDEQQPLDMGVKKRMDHGKYSVLEMSDDIVRIIQAAMNADGGQPELK 1708
.....1870.....1880.....1890.....1900.....1910.....1920

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***** *****:*.***:* ***:*.***:***:***:*****:*****.:*.:*****:**
Pavo_muticus      KANSMVKSFFIRQMERVFPPWFSVKKSRFWEPNKVTSNSGMLPNAVLPPSLDHNYAQWQER 1742
Pavo_cristatus    KANSMVKSFFIRQMERVFPPWFSVKKSRFWEPNKVTSNSGMLPNAVLPPSLDHNYAQWQER 1742
Gallus_gallus     KANSMVKSFFIRQMERVFPPWFSVKKSRFWEPNKVTSNSGMLPNAVLPPSLDHNYAQWQER 1782
Chelonia_mydas    KANSMVKSFFIRQMERVFPPWFSVKKSRFWEPNKVTSNSGMLPNAVLPPSLDHNYAQWQER 1820
Mus_musculus      KANSMVKSFFIRQMERVFPPWFSVKKSRFWEPNKVTSNSGMLPNAVLPPSLDHNYAQWQER 1810
Rattus_norvegicus KANSMVKSFFIRQMERVFPPWFSVKKSRFWEPNKVTSNSGMLPNAVLPPSLDHNYAQWQER 1829
Homo_sapiens      KANSMVKSFFIRQMERVFPPWFSVKKSRFWEPNKVTSNSGMLPNAVLPPSLDHNYAQWQER 1811
Pan_troglodytes   KANSMVKSFFIRQMERVFPPWFSVKKSRFWEPNKVTSNSGMLPNAVLPPSLDHNYAQWQER 1844
Macaca_mulatta    KANSMVKSFFIRQMERVFPPWFSVKKSRFWEPNKVTSNSGMLPNAVLPPSLDHNYAQWQER 1840
Callithrix_jacchus KANSMVKSFFIRQMERVFPPWFSVKKSRFWEPNKVTSNSGMLPNAVLPPSLDHNYAQWQER 1845
Equus_caballus    KANSMVKSFFIRQMERVFPPWFSVKKSRFWEPNKVTSNSGMLPNAVLPPSLDHNYAQWQER 1843
Bos_taurus        KANSMVKSFFIRQMERVFPPWFSVKKSRFWEPNKVTSNSGMLPNAVLPPSLDHNYAQWQER 1844
Canis_lupus_familiaris KANSMVKSFFIRQMERVFPPWFSVKKSRFWEPNKVTSNSGMLPNAVLPPSLDHNYAQWQER 1845
Rhinatrema_bivittatum KANSMVKSFFIRQMERVFPPWFSVKKSRFWEPNKVTSNSGMLPNAVLPPSLDHNYAQWQER 1760
Xenopus_tropicalis KANSMVKSFFIRQMERVFPPWFSVKKSRFWEPNKVTSNSGMLPNAVLPPSLDHNYAQWQER 1768
.....1930.....1940.....1950.....1960.....1970.....1980

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* . : ** *****.:*:*:*:* :*.*** :.***:**** **.:
Pavo_muticus      EENSRTQPPPLMKKIIIPAPKPKGPGEPDSTPLHPPPTPPISGSDRSREDSPELNPPPDVE 1802
Pavo_cristatus    EENSRTQPPPLMKKIIIPAPKPKGPGEPDSTPLHPPPTPPISGSDRSREDSPELNPPPDVE 1802
Gallus_gallus     EENNHTQPPPLMKKIIIPAPKPKGPGEPDSTPLHPPPTPPISGSDRSREDSPELNPPPDVE 1842
Chelonia_mydas    EENNHTQPPPLMKKIIIPAPKPKGPGEPDSTPLHPPPTPPISGSDRSREDSPELNPPPDVE 1880
Mus_musculus      EESSHTQPPPLMKKIIIPAPKPKGPGEPDSTPLHPPPTPPILSTDRSREDSPELNPPPGID 1870
Rattus_norvegicus EESSHTQPPPLMKKIIIPAPKPKGPGEPDSTPLHPPPTPPILSTDRSREDSPELNPPPGID 1889
Homo_sapiens      EENSHTQPPPLMKKIIIPAPKPKGPGEPDSTPLHPPPTPPILSTDRSREDSPELNPPPGIE 1871
Pan_troglodytes   EENSHTQPPPLMKKIIIPAPKPKGPGEPDSTPLHPPPTPPILSTDRSREDSPELNPPPGIE 1904
Macaca_mulatta    EENSHTQPPPLMKKIIIPAPKPKGPGEPDSTPLHPPPTPPILSTDRSREDSPELNPPPGIE 1900
Callithrix_jacchus EENSHTQPPPLMKKIIIPAPKPKGPGEPDSTPLHPPPTPPILSTDRSREDSPELNPPPGIE 1905
Equus_caballus    EEDSHTQPPPLMKKIIIPAPKPKGPGEPDSTPPHPPPTPPILSTDRSREDSPELNPPPGIE 1903
Bos_taurus        EENSHTQPPPLMKKIIIPAPKPKGPGEPDSTPLHPPPTPPILSTDRSREDSPELNPPPGIE 1904
Canis_lupus_familiaris EENSHTQPPPLMKKIIIPAPKPKGPGEPDSTPLHPPPTPPILSTDRSREDSPELNPPPGIE 1905
Rhinatrema_bivittatum EENGQTIQPPPLMKKIIIPAPKARGPGEPDSPMLLHPPPTPPASSFDRSREDSPELNPPPGVE 1820
Xenopus_tropicalis E-NRLAMQPVLMKKIIIPAPKPRSPGDPESPQPVPQSTPPAPTTELNREESPELNPPPGLE 1827
.....1990.....2000.....2010.....2020.....2030.....2040

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***** ****.***:*****:*****:*****:*****:*****
Pavo_muticus      DNRQCALCLKYGDDSSANDAGRLLYIGQNEWTHVNCALWSAEVFEDDDGSLKNVHMAVIRG 1862
Pavo_cristatus    DNRQCALCLKYGDDSSANDAGRLLYIGQNEWTHVNCALWSAEVFEDDDGSLKNVHMAVIRG 1862
Gallus_gallus     DNRQCALCLKYGDDSSANDAGRLLYIGQNEWTHVNCALWSAEVFEDDDGSLKNVHMAVIRG 1902
Chelonia_mydas    DNRQCALCLKYGDDSSANDAGRLLYIGQNEWTHVNCALWSAEVFEDDDGSLKNVHMAVIRG 1940
Mus_musculus      DNRQCALCLMYGDDSSANDAGRLLYIGQNEWTHVNCALWSAEVFEDDDGSLKNVHMAVIRG 1930
Rattus_norvegicus DNRQCALCLMYGDDSSANDAGRLLYIGQNEWTHVNCALWSAEVFEDDDGSLKNVHMAVIRG 1949
Homo_sapiens      DNRQCALCLTYGDDSSANDAGRLLYIGQNEWTHVNCALWSAEVFEDDDGSLKNVHMAVIRG 1931
Pan_troglodytes   DNRQCALCLTYGDDSSANDAGRLLYIGQNEWTHVNCALWSAEVFEDDDGSLKNVHMAVIRG 1964
Macaca_mulatta    DNRQCALCLTYGDDSSANDAGRLLYIGQNEWTHVNCALWSAEVFEDDDGSLKNVHMAVIRG 1960
Callithrix_jacchus DNRQCALCLTYGDDSSANDAGRLLYIGQNEWTHVNCALWSAEVFEDDDGSLKNVHMAVIRG 1965
Equus_caballus    DNRQCALCLTYGDDSSANDAGRLLYIGQNEWTHVNCALWSAEVFEDDDGSLKNVHMAVIRG 1963
Bos_taurus        DNRQCALCLTYGDDSSANDAGRLLYIGQNEWTHVNCALWSAEVFEDDDGSLKNVHMAVIRG 1964
Canis_lupus_familiaris DNRQCALCLTYGDDSSANDAGRLLYIGQNEWTHVNCALWSAEVFEDDDGSLKNVHMAVIRG 1965
Rhinatrema_bivittatum DNRQCALCLKYGDDNANDSGRLLYIGQNEWTHVNCALWSAEVFEDDDGSLKNVHMAVIRG 1880
Xenopus_tropicalis DNRQCALCLKYGDDNANDAGRLLYIGQDEWTHVNCALWSAEVFEDDDGSLKNVHMAVIRG 1887
.....2050.....2060.....2070.....2080.....2090.....2100

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*****:* * *****.*****.*****.*****:***:***:*.
Pavo_muticus      KQLRCEFCQKSGATVGCCLTSCTSNYHFMCRAKNCVFLDDKKVYCQRHRDLIKGEVVPE 1922
Pavo_cristatus    KQLRCEFCQKSGATVGCCLTSCTSNYHFMCRAKNCVFLDDKKVYCQRHRDLIKGEVVPE 1922
Gallus_gallus     KQLRCEFCQKSGATVGCCLTSCTSNYHFMCRAKNCVFLDDKKVYCQRHRDLIKGEVVPE 1962
Chelonia_mydas    KQLRCEFCQKSGATVGCCLTSCTSNYHFMCRAKNCVFLDDKKVYCQRHRDLIRGEVVPE 2000
Mus_musculus      KQLRCEFCQKPGATVGCCLTSCTSNYHFMCRAKNCVFLDDKKVYCQRHRDLIKGEVVPE 1990
Rattus_norvegicus KQLRCEFCQKPGATVGCCLTSCTSNYHFMCRAKNCVFLDDKKVYCQRHRDLIKGEVVPE 2009
Homo_sapiens      KQLRCEFCQKPGATVGCCLTSCTSNYHFMCRAKNCVFLDDKKVYCQRHRDLIKGEVVPE 1991
Pan_troglodytes   KQLRCEFCQKPGATVGCCLTSCTSNYHFMCRAKNCVFLDDKKVYCQRHRDLIKGEVVPE 2024
Macaca_mulatta    KQLRCEFCQKPGATVGCCLTSCTSNYHFMCRAKNCVFLDDKKVYCQRHRDLIKGEVVPE 2020
Callithrix_jacchus KQLRCEFCQKPGATVGCCLTSCTSNYHFMCRAKNCVFLDDKKVYCQRHRDLIKGEVVPE 2025
Equus_caballus    KQLRCEFCQKPGATVGCCLTSCTSNYHFMCRAKNCVFLDDKKVYCQRHRDLIKGEVVPE 2023
Bos_taurus        KQLRCEFCQKPGATVGCCLTSCTSNYHFMCRAKNCVFLDDKKVYCQRHRDLIKGEVVPE 2024
Canis_lupus_familiaris KQLRCEFCQKPGATVGCCLTSCTSNYHFMCRAKNCVFLDDKKVYCQRHRDLIKGEVVPE 2025
Rhinatrema_bivittatum KQLRCELCLKPGATVGCCLTCCTSNYHFMCRTTNCVFLDDKKVYCQRHRDLIKGEMVTD 1940
Xenopus_tropicalis KQLRCELCLKLGATVGCCLTSCTSNYHFMCRAKNCVFLDDKKVYCQKHKDLIKGEIVSD 1947
.....2110.....2120.....2130.....2140.....2150.....2160

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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*****:*****:*****:*****:*****:*****:*****:*****:*****:*****
Pavo_muticus      NGFEVLRRVFVDFEGISLRRKFLSGLPENIHHMIGSMTIDCLGILNDLSDCEDKLFPIG 1982
Pavo_cristatus    NGFEVLRRVFVDFEGISLRRKFLSGLPENIHHMIGSMTIDCLGILNDLSDCEDKLFPIG 1982
Gallus_gallus     NGFEVLRRVFVDFEGISLRRKFLSGLPENIHHMIGSMTIDCLGILNDLSDCEDKLFPIG 2022
Chelonia_mydas    NGFEVLRRVFVDFEGISLRRKFLSGLPENIHHMIGSMTIDCLGILNDLSDCEDKLFPIG 2060
Mus_musculus      NGFEVFRRVFVDFEGISLRRKFLNGLEPENIHHMIGSMTIDCLGILNDLSDCEDKLFPIG 2050
Rattus_norvegicus NGFEVFRRVFVDFEGISLRRKFLNGLEPENIHHMIGSMTIDCLGILNDLSDCEDKLFPIG 2069
Homo_sapiens      NGFEVFRRVFVDFEGISLRRKFLNGLEPENIHHMIGSMTIDCLGILNDLSDCEDKLFPIG 2051
Pan_troglodytes   NGFEVFRRVFVDFEGISLRRKFLNGLEPENIHHMIGSMTIDCLGILNDLSDCEDKLFPIG 2084
Macaca_mulatta    NGFEVFRRVFVDFEGISLRRKFLNGLEPENIHHMIGSMTIDCLGILNDLSDCEDKLFPIG 2080
Callithrix_jacchus NGFEVFRRVFVDFEGISLRRKFLNGLEPENIHHMIGSMTIDCLGILNDLSDCEDKLFPIG 2085
Equus_caballus    NGFEVFRRVFVDFEGISLRRKFLNGLEPENIHHMIGSMTIDCLGILNDLSDCEDKLFPIG 2083
Bos_taurus        NGFEVFRRVFVDFEGISLRRKFLNGLEPENIHHMIGSMTIDCLGILNDLSDCEDKLFPIG 2084
Canis_lupus_familiaris NGFEVFRRVFVDFEGISLRRKFLNGLEPENIHHMIGSMTIDCLGILNDLSDCEDKLFPIG 2085
Rhinatrema_bivittatum NGFEVLRRVFVDFEGISLRRKFLNGLEPDGIHHMIGSMTIDCLGILNDLSDCEDKLFPIG 2000
Xenopus_tropicalis NGFEVLRRVFVDFEGITLRRKFLNGLEPDNIHIMIGSMTIDCLGILSDLSDCHEQKLFPIG 2007
.....2170.....2180.....2190.....2200.....2210.....2220

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*****:*****:*****:*****:*****:*****:*****:*****:*****:*****
Pavo_muticus      YQCSRVIYWSTTDARKRCVYTKIMECRPPVVEPDINSTVEHDDNRTIAHSPVP-LTETLF 2041
Pavo_cristatus    YQCSRVIYWSTTDARKRCVYTKIMECRPPVVEPDINSTVEHDDNRTIAHSPVP-LTETLF 2041
Gallus_gallus     YQCSRVIYWSTTDARKRCVYTKIMECRPPVVEPDINSTVEHDDNRTIAHSPVP-LTETLF 2081
Chelonia_mydas    YQCSRVIYWSTTDARKRCVYTKIMECRPPVVEPDINSTVEHDDNRTIAHSPVP-LTETLF 2120
Mus_musculus      YQCSRVIYWSTTDARKRCVYTKIMECRPPVVEPDINSTVEHDDNRTIAHSPSS-FIDASC 2109
Rattus_norvegicus YQCSRVIYWSTTDARKRCVYTKIMECRPPVVEPDINSTVEHDDNRTIAHSPSS-FIEASC 2128
Homo_sapiens      YQCSRVIYWSTTDARKRCVYTKIVECRPPVVEPDINSTVEHDDNRTIAHSPSS-FIEASC 2110
Pan_troglodytes   YQCSRVIYWSTTDARKRCVYTKIVECRPPVVEPDINSTVEHDDNRTIAHSPSS-FIEASC 2143
Macaca_mulatta    YQCSRVIYWSTTDARKRCVYTKIVECRPPVVEPDINSTVEHDDNRTIAHSPSS-FIEASC 2139
Callithrix_jacchus YQCSRVIYWSTTDARKRCVYTKIVECRPPVVEPDINSTVEHDDNRTIAHSPSS-FIEASC 2143
Equus_caballus    YQCSRVIYWSTTDARKRCVYTKIVECRPPVVEPDINSTVEHDDNRTIAHSPSS-LAEISS 2142
Bos_taurus        YQCSRVIYWSTTDARKRCVYTKIVECRPPVVEPDINSTVEHDDNRTIAHSPSS-LAEISS 2143
Canis_lupus_familiaris YQCSRVIYWSTTDARKRCVYTKIVECRPPVVEPDINSTVEHDDNRTIAHSPSS-LAEISS 2144
Rhinatrema_bivittatum YQCSRVIYWSTTDARKRCVYTKIMEYRPPAMEPDINSTVQHDDNRTIAHSPAI-LTEVQS 2059
Xenopus_tropicalis YQCSRVIYWSTTDARKRCVYTKILECRPPADPDINSTVQHEENRTIAHSPQLHSDVQE 2067
.....2230.....2240.....2250.....2260.....2270.....2280

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:::      : . . .      :::      * * * :*:*.*****
Pavo_muticus      KDSRNTPEIVNPPSPDRPMHSQTS SCYYPVAVSKGL--RIRTPSYSPSTQSPGSRPLPSA 2099
Pavo_cristatus    KDSRNTPEIVNPPSPDRPMHSQTS SCYYPVAVSKGL--RIRTPSYSPSTQSPGSRPLPSA 2099
Gallus_gallus     KDSRNTPEIVNPPSPDRPMHSQTS SCYYPVAVSKGL--RIRTPSYSPAQRSPGSRPLPSA 2139
Chelonia_mydas    KESRNTPEMVNPPSPDRPLHSQTS SCYYPVAVSKGL--RIRTPSYSPAQRSPGSRPLPSA 2178
Mus_musculus      KDSQSTAAILSPSPDRP-HSQTS SCYYPVAVSKGL--RIRTPSYSPAQRSPGSRPLPSA 2166
Rattus_norvegicus KDSQSTAAILSPSPDRP-RSQASS SCYYPVAVSKGL--RIRTPSYSPAQRSPGSRPLPSA 2185
Homo_sapiens      KESQNTAEIISPPSPDRPPHSQTS SCYYPVAVSKGL--RIRTPSYSPAQRSPGSRPLPSA 2168
Pan_troglodytes   KESQNTAEIISPPSPDRPPHSQTS SCYYPVAVSKGL--RIRTPSYSPAQRSPGSRPLPSA 2201
Macaca_mulatta    KESQNTAEIISPPSPDRPPHSQTS SCYYPVAVSKGL--RIRTPSYSPAQRSPGSRPLPSA 2197
Callithrix_jacchus KESQNTAEIISPPSPDRPPHSQTS SCYYPVAVSKGL--RIRTPSYSPAQRSPGSRPLPSA 2201
Equus_caballus    KESQNTAEIISPPSPDRPPHSQTS SCYYPVAVSKGL--RIRTPSYSPAQRSPGSRPLPSA 2200
Bos_taurus        KESQNTAEIISPPSPDRPPHSQTS SCYYPVAVSKGL--RIRTPSYSPAQRSPGSRPLPSA 2201
Canis_lupus_familiaris KESQNTAEIISPPSPDRPPHSQTS SCYYPVAVSKGL--RIRTPSYSPAQRSPGSRPLPSA 2201
Rhinatrema_bivittatum KESQNTAEIISPPSPDRPPHSQTS SCYYPVAVSKGL--RIRTPSYSPAQRSPGSRPLPSA 2111
Xenopus_tropicalis NQSTDGIKCIETLCLSSPDSVSAASVTKPWEVGRPSGCRTHIPRYSPPSPGSRPLPSA 2127
.....2290.....2300.....2310.....2320.....2330.....2340

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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****: .*****:*****:*****:*****: * : : .
Pavo_muticus      GSPTPMTHEIVTVGDPLLSSGLKSGISRRHSTSSLSQQQSKLRMISPTRAGNTYSRHSLS 2159
Pavo_cristatus    GSPTPMTHEIVTVGDPLLSSGLKSGISRRHSTSSLSQQQSKLRMISPTRAGNTYSRHSLS 2159
Gallus_gallus     GSPTPMTHEIVTVGDPLLSSGLKSGISRRHSTSSLSQQQSKLRMISPTRAGNTYSRHSLS 2199
Chelonia_mydas    GSPTPMTHEIVTVGDPLLSSGLRSGISRRHSTSSLSQQQSKLRMVFPTRVGNYSRHTVP 2238
Mus_musculus      GSPTPTTHEIVTVGDPLLSSGLRSGISRRHSTSSLSPLRSKLRIMSPVTRGSAYSRSRVS 2226
Rattus_norvegicus GSPTPTTHEIVTVGDPLLSSGLRSGISRRHSTSSLSPLRSKLRIMSPVRSRGSVYSRVS 2245
Homo_sapiens      GSPTPTTHEIVTVGDPLLSSGLRSGISRRHSTSSLSPLRSKLRIMSPMRTGNTYSRNNVS 2228
Pan_troglodytes   GSPTPTTHEIVTVGDPLLSSGLRSGISRRHSTSSLSPLRSKLRIMSPMRTGNTYSRNNVS 2261
Macaca_mulatta    GSPTPTTHEIVTVGDPLLSSGLRSGISRRHSTSSLSPLRSKLRIMSPMRTGNTYSRNNVS 2257
Callithrix_jacchus GSPTPTTHEIVTVGDPLLSSGLRSGISRRHSTSSLSPLRSKLRIMSPMRTGNTYSRNSVS 2261
Equus_caballus    GSPTPTTHEIVTVGDPLLSSGLRSGISRRHSTSSLSPLRSKLRIMSPMRTGSTYSRNSVS 2260
Bos_taurus        GSPTPTTHEIVTVGDPLLSSGLRSGISRRHSTSSLSPLRSKLRIMSPMRTGSTYSRNSVS 2261
Canis_lupus_familiaris GSPTPTTHEIVTVGDPLLSSGLRSGISRRHSTSSLSPLRSKLRIMSPMRTGGTYTRNSAP 2261
Rhinatrema_bivittatum GSPTVPHEIVTVGDVPLSSGLRSGISRRHSTSSLSPLRSKLRMISPTRAGNSYSRHSVS 2171
Xenopus_tropicalis GSPSPVTHEIVTVGDPLLSSGLRSGISRRHSTSSLSPLRSKLRMISPTRAGNSYSRHSVS 2187
.....2350.....2360.....2370.....2380.....2390.....2400

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. . . * . : * . : .
Pavo_muticus      SASS-IGSSSEHEQSTKTTHDFVGSVNSGTTTAPVQSCSSSAGSOKTAATSGTKTYQLDA 2218
Pavo_cristatus    SASS-IGSSSEHEQSTKTTHDFVGSVNSGTTTAPVQSCSSSAGSOKTAATSGTKTYQLDA 2218
Gallus_gallus     SVSS-IGSSSEHEQSTKTTHDFVGSVNSGTTTAPVQSCSSSAGSOKTAATSGAKTYQLDA 2258
Chelonia_mydas    GVSS-IGSSSEHESSAKNIDSFKGSVNLSTSSALANSPNSSSPRMVATSGSKTCHLGG 2297
Mus_musculus      SVPS-LGTATDPEASAKASDRG-GLLSSSAN--LGHSAPPSSSSOR--IVGGSKTSHLDG 2280
Rattus_norvegicus SVPS-LGTATDPEASAKATDRA-GPLNSSAN--LGHSAPPSSSSOR--IVGGSKTSHLDG 2301
Homo_sapiens      SVST-TGTATDLESSAKVVDHVLGPLNSSTS--LGQNTSTSSNLQRTVVTVGNKNSHLDG 2285
Pan_troglodytes   SVST-IGTATDLESSAKVVDHVLGPLNSSTS--LGQNTSTSSNLQRTVVTVGNKNSHLDG 2318
Macaca_mulatta    SVST-IGTATDLESSAKVVDHVLGPLNSSTS--LGQNTSTSSNLQRTVVTVGNKNSHLDG 2314
Callithrix_jacchus SVST-VGTASDLESSAKAVDHVLGPLNSSTS--LGQNTSTSSNLQRTVVTVGNKNSHLDG 2318
Equus_caballus    SVST-VGTATDLESSAKAVDHVLGPLNSSTS--LGQNTSTSSNLQRTVVTVGNKNSHLDG 2317
Bos_taurus        SVST-TGTATDLESSAKVVDHVLGPLNSSTS--LGQNTSTSSNLQRTVVTVGNKNSHLDG 2318
Canis_lupus_familiaris SVST-TGTATDLESSAKAVDQVLGPLNSSTS--LGQNTSTSSNLQRTVVTVGNKNSHLDG 2318
Rhinatrema_bivittatum SISVFTGSSSDHESNAKSTENFLGSFHSNTSSTVGPSTISCCPKMAVSKDGGKNIQIAG 2231
Xenopus_tropicalis GIPV-----NSLENSGNGDPVCIGASTISSK-----SSCPNTGQKAIECKL 2229
.....2410.....2420.....2430.....2440.....2450.....2460

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. . : : * * * : . : * . * . * :
Pavo_muticus      SQSTEGKHPGGSDSIAKIAIPSKVEKMKTLTSRDPDYSAHGFSSGGNSKTSTOPNCSSSGTE 2278
Pavo_cristatus    SQSTEGKHPGGSDSIAKIAIPSKVEKMKTLTSRDPDYSAHGFSSGGNSKTSTOPNCSSSGTE 2278
Gallus_gallus     SQSTEGKHPGGSDSIVKSTPSKGEKMKTLTSRDPDYSAHGFSSGGNSKTSTOPNCSSSGTE 2318
Chelonia_mydas    SQSLEIKHSTSSSELISKSTSSKGEKTKLSSSKDSDSAHSAFSPGNTKISTQVLSTSGIE 2357
Mus_musculus      SSPSEVKRCSASDLVPKGSVLKGEKNRTSSSKSTDGSAHSTAYPGIPKLTPQVHNATPGE 2340
Rattus_norvegicus SSSSGVKRCSASDLAPKGSVLKGEKNRTSSSKSTDGSAHSTAYPGIPKLTPQVHNATPGE 2361
Homo_sapiens      SSSSEMKGSSASDLVSKSSSLKGEKTKVLSSKSSEGSAAHNVAYPGIPKLTPQVHNATPGE 2345
Pan_troglodytes   SSSSEMKGSSASDLVSKSSSLKGEKTKVLSSKSSEGSAAHNVAYPGIPKLTPQVHNATPGE 2378
Macaca_mulatta    SSSSEMKGSSASDLVSKSSSLKGEKTKVLSSKSSEGSAAHNVAYPGIPKLTPQVHNATPGE 2374
Callithrix_jacchus SSSSEMKGSSASDLVSKSSSLKGEKTKVLSSKSSEGSAAHNVAYPGIPKLTPQVHNATPGE 2378
Equus_caballus    SSSSEMKGSSASDLVSKSSSLKGEKTKVLSSKSSEGSAAHNVAYPGIPKLTPQVHNATPGE 2377
Bos_taurus        SSSSEMKGSSASDLVSKSSSLKGEKTKVLSSKSSEGSAAHNVAYPGIPKLTPQVHNATPGE 2378
Canis_lupus_familiaris SSSSEMKGSSASDLVSKSSSLKGEKTKVLSSKSSEGSAAHNVAYPGIPKLTPQVHNATPGE 2378
Rhinatrema_bivittatum SHSSDIKYSKALDLLPKSIS-KIEKARLNSKNLEHVSF-----DSKVSAQSDSTLAAD 2284
Xenopus_tropicalis EKAPEARRTGLETSPKVPSTPKTEKVKTASPRVSDPSSEHPS----PKVPSQVQEMT-AD 2284
.....2470.....2480.....2490.....2500.....2510.....2520

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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      .  *  .  :  .  :  :  :  :  *  :  *  :  :  :
Pavo_muticus      ISV-KIGTFQES-AGSFSSKETVSFSLHQRGPRKDRDQHLESVQPEKT-TSVDEMDAKM 2335
Pavo_cristatus    ISV-KIGTFQES-AGSFSSKETVSFSLHQRGPRKDRDQHLESVQPEKT-TSVDEMDAKM 2335
Gallus_gallus     ISV-KIGTFQES-AGSFSSKETVSFSLHQRGPRKDRDQHLESVQPEKT-TSVDEMDAKM 2375
Chelonia_mydas    LNINKKGTGFQEPSSATLSSKDTMPFSPFHQRGPRKDRDLHMDLIOPEKI-SSVEDIDGKN 2416
Mus_musculus      LNISKIGSFAEPSTVPFSSKDTVSYPQLHLRGQRSDRDQHMDPSQSVKP-SPNEDGEIKT 2399
Rattus_norvegicus LNVSKIGTFAEPSTVPFS-KETVSYPQLHLRGQRSDRDQHMDSTQSVKP-SPNEDGEIKT 2419
Homo_sapiens      LNVSKIGSFAEPSSVSFSSKEALSFPHLHLRGQRNDRDQHTDSTQSANS-SPDEDETEVKT 2404
Pan_troglodytes   LNVSKIGSFAEPSSVSFSSKEALSFPHLHLRGQRNDRDQHTDSTQSANS-SPDEDETEVKT 2437
Macaca_mulatta    LNVSKIGSFAEPSSVSFSSKEALSFPHLHLRGQRNDRDQHTDSTQSANS-SPDEDETEVKT 2433
Callithrix_jacchus LNVSKIGSFAEPSSVSFSSKEALSFPQLHLRGQRNDRDQHADSTQLANP-SPDEDETEVKT 2437
Equus_caballus    LNVSKISTYVEHSSAPFSSKETLSFPPVHLRGQRNDRDQHTDSTQNSANP-PPSEDETEVKT 2436
Bos_taurus        LNVNKMGTTFADLSSVPFSSKEGLFPFPLHLRGQRNERDQQTNGNQSANP-NPDEDAEVKT 2437
Canis_lupus_familiaris LNASKIGTFTDLSSGPFSSKEALSFPPLHLRGQRNDRDQHTDSTQNSVNP-SSSEDETEVKT 2437
Rhinatrema_bivittatum SDVSKSGTLDPDPTMVFNSSQDLPASQSSLTRGSRNDKDQHVASSHADKANLQVEDIAAKN 2344
Xenopus_tropicalis ASKNKAGCLKDS SPALLNFKTSSN--MQHQKVIIRDNDRQSVVTQGETP----- 2331
      .....2530.....2540.....2550.....2560.....2570.....2580

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      .  :  :  :  :  :  *  *  :  :  *  *  :  :  :  :
Pavo_muticus      LKPAGVNSRSPAASEEQVVSASRDRRQKGKKIVKESFKEKHSLSLTDSSQAVGSDEG-NL 2394
Pavo_cristatus    LKPAGVNSRSPAASEEQVVSASRDRRQKGKKIVKESFKEKHSLSLTDSSQAVGSDEG-NL 2394
Gallus_gallus     LKSAGVNSRSPAASEQAVSASRDRRQKGKKIVKESFKEKHSLSLTDSSQAVGSDEG-NL 2434
Chelonia_mydas    LKPAGISSRSSASSEHVVSACRDRRQKGKKLTkdTFKEKHSVKTFTDSSQVTTASDEG-ST 2475
Mus_musculus      LKLPGMGHRPSILHEHIGSSSRDRRQKGKKS SKETCKEKHSSKSYLEPGQVTTGEEG-NL 2458
Rattus_norvegicus LKLPGMGHRPSILHEHVGSSSRDRRQKGKKS SKETCKEKHSSKSFLEPGQVTTGEEG-NL 2478
Homo_sapiens      LKLSGMSNRSSIINEHMGSSSRDRRQKGKKS CKETFKEKHSSKSFLEPGQVTTGEEG-NL 2463
Pan_troglodytes   LKLSGMSNRSSIINEHMGSSSRDRRQKGKKS CKETFKEKHSSKSFLEPGQVTTGEEG-NL 2496
Macaca_mulatta    LKLSGMSNRSSIINEHMGSSSRDRRQKGKKS CKETFKEKHSSKSFLEPGQVTTGEEG-NL 2492
Callithrix_jacchus LKLSGMSNRSSIINEHMGSSSRDRRQKGKKS CKETFKEKHSSKSFLEPGQVTTGEEG-NL 2496
Equus_caballus    LKLSGVSNRSSIITNEHVGSSSRDRRQKGKKS SKETFKEKHSSKSFLEPGQVTTGEEG-NL 2495
Bos_taurus        LKLSGVSNRSSIINEHVGASSRDRRQKGKKS CKETFKEKHSSKPFLEPGQVATGEEG-NL 2496
Canis_lupus_familiaris LKLSGVSNRSSIINEHVGSSSRDRRQKGKKS CKETFKEKHSSKSFLEPGQVTTGEEG-NL 2496
Rhinatrema_bivittatum LQPSGVHSISCVASEQALSSPKNRRQKGKKPPKENVKEMHFNKSSVDSNHTVANNEGKHL 2404
Xenopus_tropicalis -SLEKGKNSQILASNHGISVHKDRRVKTKRSMLDNSKDKHSSKPPSDNEHAPDNRON--- 2387
      .....2590.....2600.....2610.....2620.....2630.....2640

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      .  .  :  .  *  .  *  :  :  .  :  :
Pavo_muticus      TSEFGNQGLVTEQISQRLCNNIPAEKNVEKSPPSQSSSKGSAVLPEAASKESQAPRKRTV 2454
Pavo_cristatus    TSEFGNQGLVTEQISQRLCNNIPAEKNVEKSPPSQSSSKGSAVLPEAASKESQAPRKRTV 2454
Gallus_gallus     TSEFGNQGLVTEQISQRLCNNIPAEKNVEKSPPSQSSSKGSAVLPEVASKESQAPRKRTV 2494
Chelonia_mydas    KPEFINQVLATEQISQRLCSNVSAEKTGDKSPPAQGASKAPLVQVEVASKEVQAPRKRTV 2535
Mus_musculus      KPEFADEVLTTPGFLGQRPCNNVSSSEKIGDKVLPVLSGVPKGQSTQVEGSSKELQAPRKCSV 2518
Rattus_norvegicus KPEFADEVLTTPGFLGQRPCNNVSSDKTGDKILPLSGVPKGQSTQVEGSSKELQAPRKCSV 2538
Homo_sapiens      KPEFMDEVLTPEYMGQRPCNNVSSDKIGDKGLSMPGVKAPPMQVEGSAKELQAPRKRTV 2523
Pan_troglodytes   KPEFMDEVLTPEYMGQRPCNNVSSDKIGDKGLSMPGVKAPPMQVEGSAKELQAPRKRTV 2556
Macaca_mulatta    KPEFMDEVLTPEYMGQRPCNNVSSDKIGDKGLSMPGVKAPPMQVEGSAKELQAPRKRTV 2552
Callithrix_jacchus KPEFIDEVLTPEYMGQRPCNNVSSDKIGDKAISMPGVKVPVSMQVEGSTKELQAPRKRTV 2556
Equus_caballus    KPESVDEVLTPEFMG-RPCNNVSSDKIGDKVLSIPGVKAPSLQVEGSAKELQTPRKRTV 2554
Bos_taurus        KPEFVDEVLTPEFMGQRPCNNVSSSEKTGDKVHIPGVKAPSMQVEGSAKELQTPRKRTV 2556
Canis_lupus_familiaris KPEFVDEVLTPEFMGQRPCNNVSSDKIGDKVLSLPGAPKAPSLQVEGSTKELQTPRKRTV 2556
Rhinatrema_bivittatum EFKLDNPSFSNENTISQRLVNNVSGEKTGDNKDSLHSPNSQQVETKMISKE-QPPRKRTV 2463
Xenopus_tropicalis EPDTNGNHMLSDTSLFRAHL---LKKSIDNGISSPGNSQSEETLVS-----AG 2432
      .....2650.....2660.....2670.....2680.....2690.....2700

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*.:      : ::      : : :      * . : . *      * ..
Pavo_muticus      KVTLTPLKMESEGSKAAQESDAEPQAGTELASSAEPSSNSESPEDNSVVOGSPNKAP 2514
Pavo_cristatus    KVTLTPLKMESEGSKAAQESDAEPQAGTELASSAEPSSNSESPEDNSVVOGSPNKAP 2514
Gallus_gallus     KVTLTPLKMESEGSKAAQESDAEPQAGTELASSAEPSSNSESPEDTSVVOGSPNKAP 2554
Chelonia_mydas    KVTLTPLKMESESQSKNAQKESDAESQSKGAEPALTTELSTSGSQGD---VOGSPSDTP 2592
Mus_musculus      KVT--PLKMEGENQSKNTQKESGPGS-PAHIESVCPAEPVSASRSPGAGPGVQPSPNNTL 2575
Rattus_norvegicus KVT--PLKMESENQSKNTQKESGPGS-PAHMESACPAEPASASRSPGAGPGVQPSPNNTS 2595
Homo_sapiens      KVTLTPLKMESENQSKNALKESSPAS-PLQIESTSPTEPISASENPGDGPVAQPSPNNTS 2582
Pan_troglodytes   KVTLTPLKMESENQSKNALKESSPAS-PLQIESTSPTEPISASENPGDGPVAQPSPNNTS 2615
Macaca_mulatta    KVTLTPLKMESENQSKNTLKESPPAS-PLQIESTSPPEPISASENPADGPVAQPSPNNTS 2611
Callithrix_jacchus KVTLTPLKMESENQSKNALKESSPAS-PLQIESTSPTEPISASENPGDGPVAQPSPNNTS 2615
Equus_caballus    KVTLTPLKMESESQSKNTLKESPPAS-PLQIESASPTTEPISASESPGDGPVAQPSPNNTS 2613
Bos_taurus        KVTLTPLKMESEGSQSKNTLKESPPAS-PLQIESVSPTEPVSASESPGDGPVAQPSPNNTS 2615
Canis_lupus_familiaris KVTLTPLKMESEGSQSKNTPKESGSPVS-PLQIESASPTTEPVSASESPGDGPVAQPSPNNTS 2615
Rhinatrema_bivittatum KVTLTPLKMETDSLKRKAVKETTSSELSCHSSEPAALVKPSSSSECPADDPVDQLSSASVS 2523
Xenopus_tropicalis KLPQTKMGIDGGCNIEIAKQTTSSAN--QSAELADNEKHKCVSDGTGDVPVVSQTNSNADS 2490
.....2710.....2720.....2730.....2740.....2750.....2760

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.:      * :: .*: ** *.*:.*:*****
Pavo_muticus      AQESQN-NAYENLPVQDNSLMLQDGTAKAEEGSYKRRYPRRSARARSNMFFGLTPLYGVR 2573
Pavo_cristatus    AQESQN-NAYENLPVQDNSLMLQDGTAKAEEGSYKRRYPRRSARARSNMFFGLTPLYGVR 2573
Gallus_gallus     TQESQN-NAFENLPVQDNMLMLQDGTAKAEEGSYKRRYPRRSARARSNMFFGLTPLYGVR 2613
Chelonia_mydas    TQESQN-NSYPNLPVEDRNLMLQDGTAKAEDGSYKRRYPRRSARARSNMFFGLTPLYGVR 2651
Mus_musculus      SQDPQS--NNYQNLPEQDRNLMLPDGPKPOEDGSFKRRYPRRSARARSNMFFGLTPLYGVR 2634
Rattus_norvegicus SQDPQS--NNYQNLPEQDRNLMLPDGPKPOEDGSFKRRYPRRSARARSNMFFGLTPLYGVR 2654
Homo_sapiens      CQDSQS--NNYQNLPVQDRNLMLPDGPKPOEDGSFKRRYPRRSARARSNMFFGLTPLYGVR 2641
Pan_troglodytes   CQDSQS--NNYQNLPVQDRNLMLPDGPKPOEDGSFKRRYPRRSARARSNMFFGLTPLYGVR 2674
Macaca_mulatta    CQDSQS--NNYQNLPVQDRNLMLPDGPKPOEDGSFKRRYPRRSARARSNMFFGLTPLYGVR 2670
Callithrix_jacchus CQDSQS--NNYQNLPVQDRNLMLPDGPKPOEDGSFKRRYPRRSARARSNMFFGLTPLYGVR 2674
Equus_caballus    SQDSQS--NNYQNLPVQDRNLMLPDGPKPOEDGSFKRRYPRRSARARSNMFFGLTPLYGVR 2672
Bos_taurus        SQDSQS--NNYQNLPVQDRNLMLPDGPKPOEDGSFKRRYPRRSARARSNMFFGLTPLYGVR 2674
Canis_lupus_familiaris SQDPQS--NSYQNLPVQDRNLMLPDGPKPOEDGSFKRRYPRRSARARSNMFFGLTPLYGVR 2674
Rhinatrema_bivittatum TKEPQVGNAYINLPQERNLMLQDGNKTQEDSSYKRRYPRRSARARSNMFFGLTPLYGVR 2583
Xenopus_tropicalis EPQTGS----AYPIQESSLVHQDGSKTQEDGSYKRRYPRRSARARSNMFFGLTPLYGVR 2545
.....2770.....2780.....2790.....2800.....2810.....2820

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*****: ** *.:*****:*****:*** *:***:***:***:.. :***
Pavo_muticus      SYGEEDIPFYSNSTGKKRGKRSAGQVDGADDLSTS-DEDDLYYNFTRTVVSSNTEERL 2632
Pavo_cristatus    SYGEEDIPFYSNSTGKKRGKRSAGQVDGADDLSTS-DEDDLYYNFTRTVVSSNTEERL 2632
Gallus_gallus     SYGEEDIPFYSNSTGKKRGKRSAGQVDGADDLSTS-DEDDLYYNFTRTVVSSNTEERL 2672
Chelonia_mydas    SYGEEDIPFYSNSTGKKRGKRSAGQVDGADDLSTS-DEDDLYYNFTRTVVSSSAEERL 2710
Mus_musculus      SYGEEDIPFYSNSTGKKRGKRSAGQVDGADDLSTS-DEDDLYYNFTRTVISSGGEERL 2693
Rattus_norvegicus SYGEEDIPFYSSSTGKKRGKRSAGQVDGADDLSTS-DEDDLYYNFTRTVISSGGERL 2713
Homo_sapiens      SYGEEDIPFYSSSTGKKRGKRSAGQVDGADDLSTS-DEDDLYYNFTRTVISSGGEERL 2700
Pan_troglodytes   SYGEEDIPFYSSSTGKKRGKRSAGQVDGADDLSTS-DEDDLYYNFTRTVISSGGEERL 2733
Macaca_mulatta    SYGEEDIPFYSSSTGKKRGKRSAGQVDGADDLSTS-DEDDLYYNFTRTVISSGGEERL 2729
Callithrix_jacchus SYGEEDIPFYSSSTGKKRGKRSAGQVDGADDLSTS-DEDDLYYNFTRTVISSGGEERL 2733
Equus_caballus    SYGEEDIPFYSSSTGKKRGKRSAGQVDGADDLSTS-DEDDLYYNFTRTVISSGGEERL 2731
Bos_taurus        SYGEEDIPFYSSSTGKKRGKRSAGQVDGADDLSTS-DEDDLYYNFSTRTVISSGGEERL 2733
Canis_lupus_familiaris SYGEEDIPFYSSSTGKKRGKRSAGQVDGADDLSTS-DEDDLYYNFTRTVISSGGERL 2733
Rhinatrema_bivittatum SYGEEDIPFYSNSSGKKRGKRSAGQVDGADDLSTS-DEDDVYYYFSRTVVISSATEERL 2643
Xenopus_tropicalis SYGEEDLPFCSSSTPGKKRGKRAAGQVDGADDISTS-DDDDVYYYNFSTRVVIIPG-DERL 2603
.....2830.....2840.....2850.....2860.....2870.....2880

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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      :.***:***: : **.****:** :.:***:* * . * **.****: *.:
Pavo_muticus      ASHSLFREEEQCDLPKISQLDGVDDGTESDTSVTATTRKVNQVTKRSGKENGTEENLKLD 2692
Pavo_cristatus    ASHSLFREEEQCDLPKISQLDGVDDGTESDTSVTATTRKVNQVTKRSGKENGTEENLKLD 2692
Gallus_gallus     ASHNLFREEEQCDLPKISQLDGVDDGTESDTSVTATTRKVNQVTKRSGKENGTEENLKLD 2732
Chelonia_mydas    GSHNLFKEEEQCNLPKISQLDGVDDGTESDTSVTATTRKVNQVTKRSGKENGTEENLKLD 2770
Mus_musculus      ASHNLFREEEQCDLPKISQLDGVDDGTESDTSVTATSRKSSQIPKRNGKENGTEENLKID 2753
Rattus_norvegicus ASHNLFREEEQCDLPKISQLDGVDDGTESDTSVTATSRKSSQIPKRNGKENGTEENLKID 2773
Homo_sapiens      ASHNLFREEEQCDLPKISQLDGVDDGTESDTSVTATTRKSSQIPKRNGKENGTEENLKID 2760
Pan_troglodytes   ASHNLFREEEQCDLPKISQLDGVDDGTESDTSVTATTRKSSQIPKRNGKENGTEENLKID 2793
Macaca_mulatta    ASHNLFREEEQCDLPKISQLDGVDDGTESDTSVTATTRKSSQIPKRNGKENGTEENLKID 2789
Callithrix_jacchus ASHNLFREEEQCDLPKISQLDGVDDGTESDTSVTATTRKSSQIPKRNGKENGTEENLKID 2793
Equus_caballus    ASHNLFREEEQCDLPKISQLDGVDDGTESDTSVTATTRKSSQIPKRNGKENGTEENLKID 2791
Bos_taurus        TPHNLFREEEQCDLPKISQLDGIDDGTESDTSVTATTRKSSQIPKRNSKENGTEENLKMD 2793
Canis_lupus_familiaris ASHNLFREEEQCDLPKISQLDGVDDGTESDTSVTATTRKSSQIPKRNGKENGTEENLKIER 2793
Rhinatrema_bivittatum TSRTLFREEEQCDRPKISQLDGVDDGTESDTSITATTGKVNQVSKRNGKENGTEENLKLD 2703
Xenopus_tropicalis GIHTLFRQDDQDLHKIPQLDGVDDAEACNTSVTVT--KSSQAGKRSKGKQAG--KLQT 2659
      .....2890.....2900.....2910.....2920.....2930.....2940

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      .: ** : * * : * :***:***... **.****: *.: * : * : *
Pavo_muticus      TEEAGEKVQVTKSPAVHKT-DPKMDNCHPASRVKTQGDLSLEAQLSSLETGRRRAHASTPS 2751
Pavo_cristatus    TEEAGEKVQVTKSPAVHKT-DPKMDNCHPVSRVKTQGDLSLEAQLSSLETGRRRAHASTPS 2751
Gallus_gallus     TEETGEKVQVTKSPAVHKT-DPKMDNCHPVSRVKTQGDLSLEAQLSSLETGRRRAHASTPS 2791
Chelonia_mydas    AEEAGEKVQVTKSSTGHKA-DPKIDNCHAVSRVKTQGDLSLEAQLSSLDTGRRGHASTPS 2829
Mus_musculus      PEDAGEKEHVIKSSVGHKN-EPKLDNCHSVSRVKAQGDLSLEAQLSSLESSRRVHTSTPS 2812
Rattus_norvegicus PEDAGEKEHVIKSSVGHKN-EPKLDNCHSVSRVKAQGDLSLEAQLSSLESSRRVHTSTPS 2832
Homo_sapiens      PEDAGEKEHVTKSSVGHKN-EPKMDNCHSVSRVKTQGDLSLEAQLSSLESSRRVHTSTPS 2819
Pan_troglodytes   PEDAGEKDHTKSSVGHKN-EPKMDNCHSVSRVKTQGDLSLEAQLSSLESSRRVHTSTPS 2852
Macaca_mulatta    PEDAGEKEHVIKSSVGHKN-EPKMDNCHSVSRVKTQGDLSLEAQLSSLESSRRVHTSTPS 2848
Callithrix_jacchus PEDAGEKEHVIKSSVGHKN-EPKMDNCHSVSRVKTQGDLSLEAQLSSLESSRRVHTSTPS 2852
Equus_caballus    PEDAGEKEHVIKSSVGHKN-EPKMDNCHSVSRVKTQGDLSLEAQLSSLESSRRVHTSTPS 2850
Bos_taurus        PEDTGEKEHVIKSSVGHKN-EPKVDNCHAVSRVKAQGDLSLEAQLSSLESSRRVHTSTPS 2852
Canis_lupus_familiaris PEDAGEKEHVIKSSVGHKN-EPKMDNCHSVSRVKAQGDLSLEAQLSSLESSRRVHTSTPS 2852
Rhinatrema_bivittatum SDEAAEKEHVTKSSSTGHKANEPKMENCHSVNRVKPQSQDLSLEAQLSSLDTSRKGHTSTPS 2763
Xenopus_tropicalis PEGQLEKSHVGGK---GQKTSEPKIENCHAVK-----QDTLEAQLA-LDTPRAHSG---S 2707
      .....2950.....2960.....2970.....2980.....2990.....3000

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      :*.:***:*.:*****
Pavo_muticus      DKNLLDTFNTELLKSDSDNNNSDDCGNILPSDIMDFVLKNTPSMQALGESPESSSSSELLT 2811
Pavo_cristatus    DKNLLDTFNTELLKSDSDNNNSDDCGNILPSDIMDFVLKNTPSMQALGESPESSSSSELLT 2811
Gallus_gallus     DKNLLDTFNTELLKSDSDNNNSDDCGNILPSDIMDFVLKNTPSMQALGESPESSSSSELLT 2851
Chelonia_mydas    DKNLLDTFNTELLKSDSDNNNSDDCGNILPSDIMDFVLKNTPSMQALGESPESSSSSELLT 2889
Mus_musculus      DKNLLDTYNAELLKSDSDNNNSDDCGNILPSDIMDFVLKNTPSMQALGESPESSSSSELLT 2872
Rattus_norvegicus DKNLLDTYNTPELLKSDSDNNNSDDCGNILPSDIMDFVLKNTPSMQALGESPESSSSSELLT 2892
Homo_sapiens      DKNLLDTYNTPELLKSDSDNNNSDDCGNILPSDIMDFVLKNTPSMQALGESPESSSSSELLN 2879
Pan_troglodytes   DKNLLDTYNTPELLKSDSDNNNSDDCGNILPSDIMDFVLKNTPSMQALGESPESSSSSELLN 2912
Macaca_mulatta    DKNLLDTYNTPELLKSDSDNNNSDDCGNILPSDIMDFVLKNTPSMQALGESPESSSSSELLN 2908
Callithrix_jacchus DKNLLDTYNTPELLKSDSDNNNSDDCGNILPSDIMDFVLKNTPSMQALGESPESSSSSELLN 2912
Equus_caballus    DKNLLDTYNTPELLKSDSDNNNSDDCGNILPSDIMDFVLKNTPSMQALGESPESSSSSELLN 2910
Bos_taurus        DKNLLDTYNTPELLKSDSDNNNSDDCGNILPSDIMDFVLKNTPSMQALGESPESSSSSELLN 2912
Canis_lupus_familiaris DKNLLDTYNTPELLKSDSDNNNSDDCGNILPSDIMDFVLKNTPSMQALGESPESSSSSELLN 2912
Rhinatrema_bivittatum DKSILDTFNTELLKSDSDNNNSDDCGNILPSDIMDFVLKNTPSMQALGESPESSSSSELLT 2823
Xenopus_tropicalis EKNLLDTFNDDLKSDSDNNNSDDCGNILPSDIMDFVLKNTPSMQALGESPESSSSSELLT 2767
      .....3010.....3020.....3030.....3040.....3050.....3060

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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*.:*****.*.:*****.:****.*.:**.*.:*****
Pavo_muticus      LGEGLGLDSNRGKDMGLFEVFSQQLPTTEPVDSSVSSSISAEQFELPLELPSDLSVLTT 2871
Pavo_cristatus    LGEGLGLDSNRGKDMGLFEVFSQQLPTTEPVDSSVSSSISAEQFELPLELPSDLSVLTT 2871
Gallus_gallus     LGEGLGLDSNRGKDMGLFEVFSQQLPTTEPVDSSVSSSISAEQFELPLELPSDLSVLTT 2911
Chelonia_mydas    LGEGLGLDSNRGKDMGLFEVFSQQLPTTEPVDSSVSSSISAEQFELPLELPSDLSVLTT 2949
Mus_musculus      LGEGLGLDSNREKDIGLFEVFSQQLPATTEPVDSSVSSSISAEQFELPLELPSDLSVLTT 2932
Rattus_norvegicus LGEGLGLDSNREKDMGLFEVFSQQLPATTEPVDSSVSSSISAEQFELPLELPSDLSVLTT 2952
Homo_sapiens      LGEGLGLDSNREKDMGLFEVFSQQLPTTEPVDSSVSSSISAEQFELPLELPSDLSVLTT 2939
Pan_troglodytes   LGEGLGLDSNREKDMGLFEVFSQQLPTTEPVDSSVSSSISAEQFELPLELPSDLSVLTT 2972
Macaca_mulatta    LGEGLGLDSNREKDMGLFEVFSQQLPTTEPVDSSVSSSISAEQFELPLELPSDLSVLTT 2968
Callithrix_jacchus LGEGLGLDSNREKDMGLFEVFSQQLPTTEPVDSSVSSSISAEQFELPLELPSDLSVLTT 2972
Equus_caballus    LGEGLGLDGNREKDMGLFEVFSQQLPPTTEPVDSSVSSSISAEQFELPLELPSDLSVLTT 2970
Bos_taurus        LGEGLGLDSNREKDMGLFEVFSQQLPTTEPVDSSVSSSISAEQFELPLELPSDLSVLTT 2972
Canis_lupus_familiaris LGEGLGLDSNREKDMGLFEVFSQQLPTTEPVDSSVSSSISAEQFELPLELPSDLSVLTT 2972
Rhinatrema_bivittatum LSEGLGLDSNRGKDMGLFEVFSQQLPSTTEPVDGVSSTISAEQFELPLELPSDLSVLTT 2883
Xenopus_tropicalis LGDGLGLDNNRGKEMGLFEVFSQQLPTTEPVDGAVPTTISGEEQFELPLELPSDLSVLTT 2827
.....3070.....3080.....3090.....3100.....3110.....3120

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***:****.*.:***:***
Pavo_muticus      RSPTVPSQNHNRRLAVISSESSLSSSGERSMLALPST-ESGEKRVTVTEKS-TSSEGD TALL 2929
Pavo_cristatus    RSPTVPSQNHNRRLAVISSESSLSSSGERSMLALPST-ESGEKRVTVTEKS-TSSEGD TALL 2929
Gallus_gallus     RSPTVPSQNHNRRLAVISSESSLSSSGERSMLALPST-ESGEKRVTVTEKS-APSEGD AALL 2969
Chelonia_mydas    RSPTVPSQNHNRRLAVISSESSLSSSGERSMLALPST-ESGEKRVTVTEKS-ASGEGD ATLL 3007
Mus_musculus      RSPTVPSQNPRLAVISDS-----GEKRVITTEKSVASSEGDPALL 2973
Rattus_norvegicus RSPTVPSQNPRLAVISDS-----GEKRVITTEKSVTSTEGDPALL 2993
Homo_sapiens      RSPTVPSQNPRLAVISDS-----GEKRVITTEKSVASSEGDPALL 2980
Pan_troglodytes   RSPTVPSQNPRLAVISDS-----GEKRVITTEKSVASSEGDPALL 3013
Macaca_mulatta    RSPTVPSQNPRLAVISDS-----GEKRVITTEKSVASSEGDPALL 3009
Callithrix_jacchus RSPTVPSQNPRLAVISDS-----GEKRVITTEKSVASSEGDPALL 3013
Equus_caballus    RSPTVPSQNPRLAVISDS-----GEKRVITTEKSVASSEGDSALL 3011
Bos_taurus        RSPTVPSQNPRLAVISDS-----GEKRVITTEK--ASSEGDS LL 3011
Canis_lupus_familiaris RSPTVPSQNPRLAVISDS-----GEKRVITTEKSVTSSSEGDSALL 3013
Rhinatrema_bivittatum RSPTVPSQNHNRRLAVISSESSLSSPRERSILALPST-ENEEKRVAVSEKSVASSEGDSALL 2942
Xenopus_tropicalis RSPALPSQNHNRRLGVIITDSQLSTSGERSLLAITTSSDTVEKRVTVTEKSGTPGDGDS LL 2887
.....3130.....3140.....3150.....3160.....3170.....3180

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.:* :.*:*** ** .:* :*:**.*.*: * . : :*.**.:**.*
Pavo_muticus      SPGVDPSPEGHMTPDHFIQGHIDAETHIASPPCGPVEQGHGSNQDLTRNSGTPGIQVPVSP 2989
Pavo_cristatus    SPGVDPSPEGHMTPDHFIQGHIDAETHIASPPCGPVEQGHGSNQDLTRNSGTPGIQVPVSP 2989
Gallus_gallus     SPGVDPSPEGHMTPDHFIQGHIDAETHIASPPCGPVEQGHGSNQDLTRNSGTPGIQVPVSP 3029
Chelonia_mydas    SPGVDPSPEGHMTPDHFIQGHIDAETHIASPPCAPVEQGHGSNQDLTRNSGTPGLQVPVSP 3067
Mus_musculus      SPGVDPAPEGHMTPDHFIQGHMDADHISPPCGSVEQGHGNSQDLTRNSGTPGLQVPVSP 3033
Rattus_norvegicus SPGVDPAPEGHMTPDHFIQGHMDADHISPPCGSVEQGHGNNQDLTRNSSTPGLQVPVSP 3053
Homo_sapiens      SPGVDPTPEGHMTPDHFIQGHMDADHISPPCGSVEQGHGNNQDLTRNSSTPGLQVPVSP 3040
Pan_troglodytes   SPGVDPTPEGHMTPDHFIQGHMDADHISPPCGSVEQGHGNNQDLTRNSSTPGLQVPVSP 3073
Macaca_mulatta    SPGVDPTPEGHMTPDHFIQGHMDADHISPPCGSVEQGHGNNQDLTRNSSTPGLQVPVSP 3069
Callithrix_jacchus SPGVDPAPEGHMTPDHFIQGHMDADHISPPCGSVEQGHGNNQDLTRSSSTPGLQVPVSP 3073
Equus_caballus    SPGVDPTPEGHMTPDHFIQGHMDADHISPPCGSVEQGHGNNQDLTRNSSTPGLQVPVSP 3071
Bos_taurus        SPGVDPSPEGHMTPDHFIQGHMDADHISPPCGSVEQGHGNNQDLTRNSNTPGLQVPVSP 3071
Canis_lupus_familiaris SPGVDPTPEGHMTPDHFIQGHMDADHISPPCGSVEQGHGNSQDLTRNSSTPGLQVPVSP 3073
Rhinatrema_bivittatum GQGVDS TPESHLPDPFIQSHMDTEHITSPSCGQVEQGHGKQDLTRNSGTPSLQVPVSP 3002
Xenopus_tropicalis GQNLDRASEGHITPDRFITGHIDQEHISPTCGQVD--HTGREERARNSSTPNLQVSVSP 2945
.....3190.....3200.....3210.....3220.....3230.....3240

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:*.:.*** *.:.* .*:.. :*:** ***.:***.*****:*****
Pavo_muticus      TVPLQNQKYVPNSTDSPGPSQISNASVQTTPPHLKPAAEKLIVVNQNMOPLYVLQTLPNG 3049
Pavo_cristatus    TVPLQNQKYVPNSTDSPGPSQISNASVQTTPPHLKPAAEKLIVVNQNMOPLYVLQTLPNG 3049
Gallus_gallus     TVPLQNQKYVPNSTDSPGPSQISNAAVQTTPPHLKPAAEKLIVVNQNMOPLYVLQTLPNG 3089
Chelonia_mydas    TVPLQNQKYVPNSTDSPGPSQISNAAVQTTPPHLKPATEKLIVVNQNMOPLYVLQTLPNG 3127
Mus_musculus      TVPVQNQKYVPNSTDSPGPSQISNAAVQTTPPHLKPATEKLIVVNQNMOPLYVLQTLPNG 3093
Rattus_norvegicus TVPIQNQKYVPNSTDSPGPSQISNAAVQTTPPHLKPATEKLIVVNQNMOPLYVLQTLPNG 3113
Homo_sapiens      TVPIQNQKYVPNSTDSPGPSQISNAAVQTTPPHLKPATEKLIVVNQNMOPLYVLQTLPNG 3100
Pan_troglodytes   TVPIQNQKYVPNSTDSPGPSQISNAAVQTTPPHLKPATEKLIVVNQNMOPLYVLQTLPNG 3133
Macaca_mulatta    TVPIQNQKYVPNSTDSPGPSQISNAAVQTTPPHLKPATEKLIVVNQNMOPLYVLQTLPNG 3129
Callithrix_jacchus TVPIQNQKYVPNSTDSPGPSQISNAAVQTTPPHLKPATEKLIVVNQNMOPLYVLQTLPNG 3133
Equus_caballus    TVPIQNQKYVPNSTDSPGPSQISNAAVQTTPPHLKPATEKLIVVNQNMOPLYVLQTLPNG 3131
Bos_taurus        TVPIQNQKYAPNSTDSPGPSQISNAAVQTTPPHLKPATEKLIVVNQNMOPLYVLQTLPNG 3131
Canis_lupus_familiaris TVPIQNQKYVPNSTDSPGPSQISNAAVQTTPPHLKPATEKLIVVNQNMOPLYVLQTLPNG 3133
Rhinatrema_bivittatum TVPLQSQKYTPSSSES--PSNISNAAVQTTPPHLKPATEKLIVVNQNMOPLYVLQTLPNG 3060
Xenopus_tropicalis SVSIQNQKYIPSSSESPGTSQIPSNITQSTPQHLSKPAEKLIVVNQNMOPLYVLQTLPNG 3005
.....3250.....3260.....3270.....3280.....3290.....3300

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*****:.. .: . * ..**.*:..*:** ***.*.: .*:..*:.*:..
Pavo_muticus      VTQKIQLTPSVSSAQSVMETNASVLGPVGSGLTTLTGLNPSLPPSSQSLYPPTS KGLLPMS 3109
Pavo_cristatus    VTQKIQLTPSVSSAQSVMETNASVLGPVGSGLTTLTGLNPSLPPSSQSLYPPTS KGLLPMS 3109
Gallus_gallus     VTQKIQLTPSVSSAQSVMETNASVLGPVGSGLTTLTGLNPSLPPSSQSLYPPTS KGLLPMS 3149
Chelonia_mydas    VTQKIQLTPSGSSTQSVMETNTSVLGPMSGSLTTLTGLNPSLPPSSQSLFPPTS KGLLPMS 3187
Mus_musculus      VTQKIQLTPSVSSTPSVMETNTSVLGPMSGSLTTLTGLNPSLPPSPSLFPFASKGLLSVP 3153
Rattus_norvegicus VTQKIQLTPSVSSTPNVMEINTSVLGPMSGSLTTLTGLNPSLPPSSQSLFPFASKGLLSMP 3173
Homo_sapiens      VTQKIQLTSSVSSTPSVMEINTSVLGPMSGGLTTLTGLNPSLPTSQSLFPFASKGLLPMS 3160
Pan_troglodytes   VTQKIQLTSSVSSTPSVMEINTSVLGPMSGGLTTLTGLNPSLPTSQSLFPFASKGLLPMS 3193
Macaca_mulatta    VTQKIQLTSSVSSTPSVMEINTSVLGPMSGSLTTLTGLNPSLPTSQSLFPFASKGLLPMS 3189
Callithrix_jacchus VTQKIQLTSSVSSTPSVMEINTSVLGPMSGGLTTLTGLNPSLPTSQSLFPFASKGLLPMS 3193
Equus_caballus    VTQKIQLTSSVSSTPNVMEINTSVLGPMSGGLTTLTGLNPSLPTSQPLFPFASKGLLPMP 3191
Bos_taurus        VTQKIQLTSSVSSAPSVMEINTSVLGPMSGSLTTLTGLNPNLPASQSLFPFASKGLLPMS 3191
Canis_lupus_familiaris VTQKIQLTSSVSSTPNVMEINTSVLGPMSGGLTTLATGLNPSLPTSQSLFPFASKGLLPMP 3193
Rhinatrema_bivittatum VTQKIQLTPSVTSTANTMESSASVLGPISGVTTLATGLNPSLPPAQSLFPFANKGLLPIS 3120
Xenopus_tropicalis VTQKIQLAPSVPTSSSRTEGEVPVLSLPMGGGLTLATALNPTLTST---FPFASKGILPMS 3062
.....3310.....3320.....3330.....3340.....3350.....3360

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** *: .*. .*: * **:. .*****.:*.** **:.*:.*: . *.:.
HHQHIIHPFSTATQTGFPPNIGSPSPGLLIGVQPPDPOLLVSEANQRTDLGTTASTPAAA 3169
HHQHIIHPFSTATQTGFPPNIGSPSPGLLIGVQPPDPOLLVSEANQRTDLGTTASTPAAA 3169
Gallus_gallus     HHQHIIHPFSTATQTGFPPNIGSPSPGLLIGVQPPDPOLLVSEANQRTDLGTTASTPAAA 3209
Chelonia_mydas    HHQHLHTFPTATQSGFPPNIGSPASGLLIGVQPPDPOLLVSEASQRTDLGTTVTTPTSG 3247
Mus_musculus      HHQHLHSFPAAQSSFPNIISSPPSGLLIGVQPPDPOLLGSEANQRTDLTTTVATPSSG 3213
Rattus_norvegicus HHQHLHSFPAAQSSFPNIISSPPSGLLIGVQPPDPOLLGSEANQRTDLTTTVATPSSG 3233
Homo_sapiens      HHQHLHSFPAAQSSFPNIISSPPSGLLIGVQPPDPOLLVSESSQRTDLSTTVATPSSG 3220
Pan_troglodytes   HHQHLHSFPAAQSSFPNIISSPPSGLLIGVQPPDPOLLVSESSQRTDLSTTVATPSSG 3253
Macaca_mulatta    HHQHLHSFPAAQSSFPNIISSPPSGLLIGVQPPDPOLLVSESSQRTDLSTTVATPSSG 3249
Callithrix_jacchus HHQHLHSFPAAQSSFPNIISSPPSGLLIGVQPPDPOLLVSESSQRTDLSTTVATPSSG 3253
Equus_caballus    HHQHLHSFPAAQSSFPNIISSPPSGLLIGVQPPDPOLLVSEASQRTDLSTTVATPSSG 3251
Bos_taurus        HHQHLHSFPAAQSSFPNIISSP-SGLLIGVQPPDPOLLVSEASQRTDLSTTVATPSSG 3250
Canis_lupus_familiaris HHQHLHSFPAAQSSFPNIISSP-SGLLIGVQPPDPOLLVSEASQRTDLSTTVATPSSG 3252
Rhinatrema_bivittatum HHSHLYSFPGTAQTGFPPNIISSPPSGLLIGVQPPDPOLLISEANQRTDLGT--STPASC 3178
Xenopus_tropicalis HHPHLQFPFGGPQTTFPLNPNLNNQSSGLLIGVQPSSEPSLLVSETGQSDVGSSTNISAPG 3122
.....3370.....3380.....3390.....3400.....3410.....3420

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: *** *:::*****:..: ..:*****:..:..: *::
Pavo_muticus      LSKKRPI SRLQSRKNKKLAPSGTPSAIAPPDMVSNMTLINFAPSQIS----NHP--LDLG 3223
Pavo_cristatus    LSKKRPI SRLQSRKNKKLAPSGTPSAIAPPDMVSNMTLINFAPSQIS----NHP--LDLG 3223
Gallus_gallus     LSKKRPI SRLQSRKNKKLAPSGTPSAIAPPDMVSNMTLINFAPSQIS----NHP--LDLG 3263
Chelonia_mydas    LGKKRPI SRLQSRKNKKLAPSGTPSAIAPSEMVSNMTLINFAPSQIS----NSP--LDLG 3301
Mus_musculus      L-KKRPI SRLHTRKNKKLAPSSAPSNIAPSDVVSNTLINFTPSQIS----NHP--LDLG 3268
Rattus_norvegicus L-KKRPI SRLHTRKNKKLAPSSAPSNIAPSDVVSNTLINFTPSQIS----NHP--LDLG 3288
Homo_sapiens      L-KKRPI SRLQTRKNKKLAPSSTPSNIAPSDVVSNTLINFTPSQIP----NHP--LDLG 3275
Pan_troglodytes   L-KKRPI SRLQTRKNKKLAPSSTPSNIAPSDVVSNTLINFTPSQIP----NHP--LDLG 3308
Macaca_mulatta    L-KKRPI SRLQTRKNKKLAPSSTPSNIAPSDVVSNTLINFTPSQIP----NHP--LDLG 3304
Callithrix_jacchus L-KKRPI SRLQTRKNKKLAPSSTPSNIAPSDVVSNTLINFTPSQIS----N--PNLLDLG 3307
Equus_caballus    L-KKRPI SRLQTRKNKKLAPSSTPSNIAPSDVVSNTLINFTPSQIP----NHP--LDLG 3306
Bos_taurus        L-KKRPI SRLQTRKNKKLAPSSTPSNIAPSDVVSNTLINFTPSQIP----NHP--LDLG 3305
Canis_lupus_familiaris L-KKRPI SRLQTRKNKKLAPSSTPSNIAPSDVVSNTLINFTPSQIP----NHP--LDLG 3307
Rhinatrema_bivittatum LNKKRPI SRLHRSRKNKKLAPSGSSTAVAPPDVVSNTLINFTPSQISGGIPNHPGLIDMG 3238
Xenopus_tropicalis MNKKRQITRLHTRKNKKLAPSVSPASRHAPDVVSNTLINFAPSQITGALTSHGLIDLG 3182
.....3430.....3440.....3450.....3460.....3470.....3480

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:: ..*:::***** *:::..: *::: *:::..:
Pavo_muticus      TIANSTSHRTVPNIIKRKSGVMYFEQTSLLPQ----SGTAAAVGSSSPVIGPDAGHLPT 3279
Pavo_cristatus    TIANSTSHRTVPNIIKRKSGVMYFEQTSLLPQ----SGTAAAVGSSSPVIGPDAGHLPT 3279
Gallus_gallus     TIANSTSHRTVPNIIKRKSGVMYFEQTSLLPQ----SGTAAAVGSSSPVIGPDAGHLPT 3319
Chelonia_mydas    TLGNSTPHRTVPNIIKRKSGVMYFEQASLLPQ--VGAAPAAAVGTSIIIGPDAGHLTT 3360
Mus_musculus      SLN-PSSHRTVPNIIKRKSGIMYFEQAPLLP--QSVGGTAATAAGSSTISQDTSHLTS 3325
Rattus_norvegicus SLN-PSSHRTVPNIIKRKSGIMYFEQAPLLP--QSVGGTTATGAGSSTISQDTSHLTS 3345
Homo_sapiens      SLN-TSSHRTVPNIIKRKSGIMYFEQAPLLP--QSVGGTAATAAGTSTISQDTSHLTS 3331
Pan_troglodytes   SLN-TSSHRTVPNIIKRKSGIMYFEQAPLLP--QSVGGTAATAAGTSTISQDTSHLTS 3364
Macaca_mulatta    SLN-TSSHRTVPNIIKRKSGIMYFEQAPLLP--QSVGGTAATAAGTSTISQDTSHLTS 3360
Callithrix_jacchus SLN-TSSHRTVPNIIKRKSGIMYFEQAPLLP--QSVGGTAATAAGTSTISQDTSHLTS 3363
Equus_caballus    SLN-TSSHRTVPNIIKRKSGIMYFEQAPLLP--QSVGGTAATAAGTSTISQDTSHLTS 3362
Bos_taurus        SLN-TSSHRTVPNIIKRKSGIMYFEQAPLLP--QSVGGTAATAAGTSTISQDTSHLTS 3361
Canis_lupus_familiaris SLN-TSSHRTVPNIIKRKSGIMYFEQAPLLP--QSVGGTAATAAGTSTISQDTSHLTS 3363
Rhinatrema_bivittatum TLGNATSHRTVPNIIKRKSGIVYFEQASLLPQNSGTSTATTTVGSSSGIIGPDASHLTA 3298
Xenopus_tropicalis TIGNTAPHRNIPSIKTSKSGVMYFDQTPLLPQN--VGTSSSMGTAPSVIGLDTGHLP- 3238
.....3490.....3500.....3510.....3520.....3530.....3540

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* *..*:::***** ..:..: *..: * ..: *:::..:
Pavo_muticus      GPVSGLASSSSVLNVVSMQATAAPTAGGSVPGHVVGQSSVTLTSPGLL--GDIGSISNLL 3337
Pavo_cristatus    GPVSGLASSSSVLNVVSMQATAAPTGGSVPGHVVGQSSVTLTSPGLL--GDIGSISNLL 3337
Gallus_gallus     GPVSGLASSSSVLNVVSMQATAAPTGGSVPGHVVGQSSVTLTSPGLL--GDIGSISNLL 3377
Chelonia_mydas    GPVPGLASNSSVLNVVSMQATAAPTGGSVPGHVVGQSSVTLTSPGLL--GDIGSISNLL 3418
Mus_musculus      GPVSALASGSSSVLNVVSMQTTAAPTSTTSVPGHVTLNQRLLGTP-----DIGSISNLL 3379
Rattus_norvegicus GPVSALASGSSSVLNVVSMQTTTPTSTTSVPGHVTLNQRLLGTP-----DIGSISNLL 3399
Homo_sapiens      GSVSGLASSSSVLNVVSMQTTTPTSTTSVPGHVTLNPRLLGTP-----DIGSISNLL 3385
Pan_troglodytes   GSVSGLASSSSVLNVVSMQTTTPTSTTSVPGHVTLNPRLLGTP-----DIGSISNLL 3418
Macaca_mulatta    GSVSGLASSSSVLNVVSMQTTTPTSTTSVPGHVTLNPRLLGTP-----DIGSISNLL 3414
Callithrix_jacchus GSVSGLASSSSVLNVVSMQTTTPTSTTSVPGHVTLNPRLLGTP-----DIGSISNLL 3417
Equus_caballus    GPVSGLASGSSSVLNVVSMPTTAPASSASVPGHVTLNPRLLGAP-----DIGSISNLL 3416
Bos_taurus        GPVSGLASGSSSVLNVVSMQTTTAPTSTTSVPGHVTLNPRLLGTP-----DIGSISNLL 3415
Canis_lupus_familiaris GPVSGLASGSSSVLNVVSMQTTTPTSTTSVPGHVTLNPRLLGTP-----DIGSISNLL 3417
Rhinatrema_bivittatum GSVSGLTSSSPVLNVVSMQATAATSGGSVPQVVGQSSVTLTSPGLLGAPDMGSISNLL 3358
Xenopus_tropicalis QQVTSLATGSPVLNVVSMQASAAP---PVSQHVTLTSPGILNPS-----ELNSISNLL 3289
.....3550.....3560.....3570.....3580.....3590.....3600

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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**** :.***: :: :*. .****. . . :.***:****:***: :: :..
Pavo_muticus      IKASQQSLGLQEQHMTLPPASGMFSLGTSQTPSTAAMTAASSICVLPSSAQSMSMTVAQS 3397
Pavo_cristatus    IKASQQSLGLQEQHMTLPPASGMFSLGTSQTPSTAAMTAASSICVLPSSAQSMSMTVAQS 3397
Gallus_gallus     IKASQQSLGLQEQHMTLPPASGMFSLGTSQTPSTAAMTAASSICVLPSSAQSMSMTVAQS 3437
Chelonia_mydas    IKASQQSLGLQEQHMTLPPASGMFSLGTSQTPSTAAMTAASSICVLPSSAQTMGMTVAQS 3478
Mus_musculus      IKASHQSLGIQDQPVALPPSSGMFPLGTSQTPSAAAMTAASSICVLPSSQTAGMTAASP 3439
Rattus_norvegicus IKASHQSLGIQDQPVALPPSSGMFPLGTSQTPSAAAMTAASSICVLPSSQTAGMTAASP 3459
Homo_sapiens      IKASQQSLGIQDQPVALPPSSGMFPLGTSQTPSTAAMTAASSICVLPSTQTTGITAASP 3445
Pan_troglodytes   IKASQQSLGIQDQPVALPPSSGMFPLGTSQTPSTAAMTAASSICVLPSTQTTGITAASP 3478
Macaca_mulatta    IKASQQSLGIQDQPVALPPSSGMFPLGTSQTPSTAAMTAASSICVLPSTQTTGITAASP 3474
Callithrix_jacchus IKASQQSLGIQEQPVALPPSSGMFPLGTSQTPSTAAMTAASSICVLPSTQTTGITAASP 3477
Equus_caballus    IKASQQSLGIQDQPVALPPSSGMFPLGTSQTPSTAAMTAASSICVLPSTQTTGITAASP 3476
Bos_taurus        IKASQQSLGIQDQPVALPPSSGMFPLGTSQTPSTGAMTAAPSICVLPSTQTAGVTAASP 3475
Canis_lupus_familiaris IKASQQSLGMQDQPVALPPSSGMFPLGTSQTP--AATMTAASSICVLPSSAQTTGITAASP 3476
Rhinatrema_bivittatum IKASQHSLLGLPEQHMLSLSGSGMFSLGVSQSPSTTGAMTATSSICVLPSSAHVTMAVTQS 3418
Xenopus_tropicalis IKTSPOGLGIQDNHVTLPSPGPMFSLQCSL-----SATIATTSSICVVPSSQSVGMTLSQP 3344
.....3610.....3620.....3630.....3640.....3650.....3660

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.: * : : :.*** : . . : :
Pavo_muticus      STDPEGSYQLQH-MTQLLASKTGIASSQLDLGAASATA-QLSSFPQLVDVPNSTGLEQNK 3455
Pavo_cristatus    STDPEGSYQLQH-MTQLLASKTGIASSQLDLGAASATA-QLSSFPQLVDVPNSTGLEQNK 3455
Gallus_gallus     STDPEGSYQLQH-MTQLLASKTGIASSQLDLGTASATA-QLSSFPQLVDVPNSTGLEQNK 3495
Chelonia_mydas    STDPEGFPYQLQH-MTQLLAIKN--ASSQLDLATASAP--QLSSFPQLVDIPNNIGLEQSK 3533
Mus_musculus      PGEAEEHYKLQR-GNQLLAGKTGTLTSQRDRDPDSAPGTQPSNFTQTAEAPNGVRLEQNK 3498
Rattus_norvegicus PREAEEQYKLQR-VNQLLAGKTGTLTLQRDRDPDSAPGTQPSNFTQTAEAPNGVRLEQNK 3518
Homo_sapiens      SGEADEHYQLQH-VNQLLASKTGIHSSQRD--LDSASGPQVSNFTQTVDAPNSMGLEQNK 3502
Pan_troglodytes   SGEADEHYQLQH-VNQLLASKTGIHSSQRD--LDSASGPQVSNFTQTVDAPNSMGLEQNK 3535
Macaca_mulatta    SGEADEHYQLQH-VNQLLASKTGIHSSQRD--LDSASGPQVSNFTQTVDAPNSVGLEQNK 3531
Callithrix_jacchus SGEADEHYQLQH-VNQLLASKTGIHSSQRD--LDSASGPQVSNFTQTVDTHNSVGLEQNK 3534
Equus_caballus    SGEAGEHYQLQH-VNQLLASKTGILLSSQRD--LDSAPGTQGSNFTQTVDAPNSMGLEQNK 3533
Bos_taurus        SGEAEEHYQLHH-VNQLLASKTGVLSSQRD--LDSAPGSQGSSTFTQTVDAPNPMGLEQNK 3532
Canis_lupus_familiaris SGEAEEHYQLQH-VNQLLASKTGILPSQHD--LDSAPGTQGSNFTQTVDAPNSMGLEQNK 3533
Rhinatrema_bivittatum SSDSEGYPYELQQRMTQLLGSKTATIISSPMD--LASPPAAPLSTFPQLVDIPGSAGLEQNK 3476
Xenopus_tropicalis INDPDCHYPISHHMRLLNSRPQILPESSS-----ETNAR 3379
.....3670.....3680.....3690.....3700.....3710.....3720

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. . *.. : * : . . * * * * . : * . ** : . *
Pavo_muticus      VSSSVMHASSASPGGSPSS---GQQSASSSVLGSSKMKPKIKRIQPSLEKNGKKHKHTSH 3512
Pavo_cristatus    VSSSVMHASSASPGGSPSS---GQQSASSSVLGSSKMKPKIKRIQPSLEKNGKKHKHTSH 3512
Gallus_gallus     VSSSVMHASSASPGGSPSS---GQQSASSSVLGSSKMKPKIKRIQPSLEKNGKKHKHTSH 3552
Chelonia_mydas    VSSTVMHASSASPGGSPSS---GQQSASSSVLGPTKMKPKIKRIQPPLDKNGKKHKHTPH 3590
Mus_musculus      TLPSAKPASSASPGSPSS---GQQSGSSSVPGPTKPKPKAKRIQLPLDKGSGKKHKVSH 3555
Rattus_norvegicus TLPSAKQASSTSPGSPSS---GQQSGSSSVPGPTKPKPKVKRIQLPLDKGSGKKHKVSH 3575
Homo_sapiens      ALSSAVQASPTSPGGSPSSPSSGQRSASPSVPGPTKPKPKTKRFQLPLDKGNGKKHKVSH 3562
Pan_troglodytes   ALSSAVQASPTSPGGSPSSPSSGQRSASPSVPGPTKPKPKTKRFQLPLDKGNGKKHKVSH 3595
Macaca_mulatta    ALSSAVQASSTSPGGSPSSPSSGQRSASPSVPGPTKPKPKTKRFQLPLDKGNGKKHKVSH 3591
Callithrix_jacchus ALSSAVQASSTSPGGSPSSPSSGQRSASPSVPGPTKSKPKIKRIQPPLDKNGKKHKVSH 3594
Equus_caballus    ALSSAMQASSASPGGSPSS---GQQSASPSVPGPTKPKPKIKRIQLPLDKGNGKKHKVSH 3590
Bos_taurus        ALPSAMQASSASPGGSPSS---GQRSASPSVPGPTKPKPKIKRIQLPLDKGSGKKHKVSH 3589
Canis_lupus_familiaris ALSSAMQASSASPGGSPSS---GQQSASPSVPGPTKPKQKIKRFQLPLDKGNGKKHKVSH 3590
Rhinatrema_bivittatum VSSSVMHASSASPGGSPSL---GQQSASSVGTASTKTQKMKRIQPSIDKNGKKHKHTCH 3533
Xenopus_tropicalis APALQMLAESETKLTVPST---ALGLQRNPVAVPOKTKSKAKRQTAPADKTSRKKQKTLH 3436
.....3730.....3740.....3750.....3760.....3770.....3780

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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Pavo_muticus	MWTGSSEAHVPDRGTTAAPQVSAAR-TPAVKTDVODAASTDQPS-----QTQCG---	3560
Pavo_cristatus	MWTGSSEAHVPDRGTTAAPQVSAAR-TPAVKTDVODAASTDQPS-----QTQCG---	3560
Gallus_gallus	MWTGSSEAHVPDRGTTAAPQVSAAR-TPAVKTDVODAASTDQPS-----QTQCG---	3600
Chelonia_mydas	MWTSPPPEVHIPDRGANAVSQVSTAG-TPAVKADIQDTS-IDQLP-----QKPSG---	3637
Mus_musculus	LRTSS-EAHIPHRDTPAPQPSVTR-TPRANREQDAAGVEQPS-----QKECG---	3602
Rattus_norvegicus	LRTSS-EAHIPHREANPAPQPSVKR-TPRADREQEAAGVEQPS-----QKECG---	3622
Homo_sapiens	LRTSSSEAHIPDQET--TSLTSGTG-TPGAEEQODTASVEQSS-----QKECG---	3608
Pan_troglodytes	LRTSSSEAHIPDQET--TSLTSGTG-TPGAEEQODTASVEQSS-----QKECG---	3641
Macaca_mulatta	LRTSSSEAHIPDQEA--TSLTSGTG-TPGAEEQODTANVEQSS-----QKECG---	3637
Callithrix_jacchus	LRTSSSEAHIPDQEA--TSLTSGTG-TPGAEEQODTASVEQSS-----QKECG---	3640
Equus_caballus	LRTSS-EAHIPDQEANTTPLTSVTG-TPGAEEQODTANVEQSS-----QKECG---	3637
Bos_taurus	LRTSSSEAHIPDQEANTTPQTSVTG-TPGAEEQODTASVEQSP-----QKECG---	3637
Canis_lupus_familiaris	LRTSS-EAHIPDQEANTTSLTPVTG-TPGAEEQODTAKVEQSS-----QKECG---	3637
Rhinatrema_bivittatum	TWTSSVEAHIPDTEAKTPALSTTGNSVAVDSHPKQCEGQAPAGRCGHTWPRAVFGGLL	3593
Xenopus_tropicalis	LTPNPPTVQESERHDKPAASDHTGAHEEKVNTSLMVPSPMKNTIA-----EPP-----	3483
	.....3790.....3800.....3810.....3820.....3830.....3840	

			.	.	:	:	.	:	:	*	**:	*****	****	
Pavo_muticus	-----	QSAGQTAVLPESQSTQTSIT	-----	EQENAGLKAMEEE	-----	ESTFSSPLMFWLQEE		3608						
Pavo_cristatus	-----	QSAGQTAVLPESQSTQTSIT	-----	EQENAGLKAMEEE	-----	ESTFSSPLMFWLQEE		3608						
Gallus_gallus	-----	QSTGHTAVLPESQSTQTSIT	-----	EQENAGSKAIEEE	-----	ESTFSSPLMFWLQEE		3648						
Chelonia_mydas	-----	QPAGQMAILTEPQSVONTAN	-----	EQENTGSKAIEEE	-----	EGTFSSPLMFWLQEE		3685						
Mus_musculus	-----	QPAGPVAAALPEVQATONPAN	-----	EQENAEPKAMEEE	-----	ESGFSSPLMLWLQEE		3650						
Rattus_norvegicus	-----	QPAGPATALPEIQATONPAN	-----	EQENAEPKAVEEE	-----	ESSFSSPLMLWLQEE		3670						
Homo_sapiens	-----	QPAGQVAVLPEVQVTONPAN	-----	EQESAEPKTVEEE	-----	ESNFSSPLMLWLQEE		3656						
Pan_troglodytes	-----	QPAGQVAVLPEVQVTONPAN	-----	EQESTEPKTVEEE	-----	ESNFSSPLMLWLQEE		3689						
Macaca_mulatta	-----	QPAGQVAVLPEVQVTONPAN	-----	EQESTEPKTVEEE	-----	ESNFSSPLMLWLQEE		3685						
Callithrix_jacchus	-----	QPAGQVAVLPEVQVTONPAN	-----	EQESTEPKTVEEE	-----	ESNFSSPLMLWLQEE		3688						
Equus_caballus	-----	QPAGQVAALPEIQMTONPAN	-----	EQESTEPKTVEEE	-----	ESNFSSPLMLWLQEE		3685						
Bos_taurus	-----	QPAAQVAALPEIQTTONPAH	-----	EPENSEPKTAEIE	-----	ESNFSSPLMLWLQEE		3685						
Canis_lupus_familiaris	-----	QPTG--QILPEVQTONPAN	-----	EQESTEPKTVEEE	-----	ENNFSSPLMLWLQEE		3683						
Rhinatrema_bivittatum	-----	VDCPLEVPTOPKQIATIVLESRSIQKTANTS	-----	EQENAEPKASEEE	-----	QETFSPLMFWLQEE		3653						
Xenopus_tropicalis	-----	LPAGQLAIISDPEPLLKELCQDPKHDDSKQREED	-----	TGFSSPLMRLLQEE				3532						
	3850	3860	3870	3880	3890	3900		

	..*:. . *.*.*.*.*:*****.* ***:*****:*****	
Pavo_muticus	QKRKECLGEKKPKKGLVFEISSDDGFOICAESI ED AWKSLTDKVOEARSNARLKQLSFAG	3668
Pavo_cristatus	QKRKECLGEKKPKKGLVFEISSDDGFOICAESI ED AWKSLTDKVOEARSNARLKQLSFAG	3668
Gallus_gallus	QKRKECLGEKKPKKGLVFEISSDDGFOICAESI ED AWKSLTDKVOEARSNARLKQLSFAG	3708
Chelonia_mydas	QKRKESLGEKKPKKGLVFEISSDDGFOICAESI ED AWKSLTDKVOEARSNARLKQLSFAG	3745
Mus_musculus	QKRKESITERPKPKKGLVFEISSDDGFOICAESI ED AWKSLTDKVOEARSNARLKQLSFAG	3710
Rattus_norvegicus	QKRKESITERPKPKKGLVFEISSDDGFOICAESI ED AWKSLTDKVOEARSNARLKQLSFAG	3730
Homo_sapiens	QKRKESITEKKPKKGLVFEISSDDGFOICAESI ED AWKSLTDKVOEARSNARLKQLSFAG	3716
Pan_troglodytes	QKRKESITEKKPKKGLVFEISSDDGFOICAESI ED AWKSLTDKVOEARSNARLKQLSFAG	3749
Macaca_mulatta	QKRKESITEKKPKKGLVFEISSDDGFOICAESI ED AWKSLTDKVOEARSNARLKQLSFAG	3745
Callithrix_jacchus	QKRKESIAERKPKKGLVFEISSDDGFOICAESI ED AWKSLTDKVOEARSNARLKQLSFAG	3748
Equus_caballus	QKRKESIAEKKPKKGLVFEISSDDGFOICAESI ED AWKSLTDKVOEARSNARLKQLSFAG	3745
Bos_taurus	QKRKESIAEKKPKKGLVFEISSDDGFOICAESI ED AWKSLTDKVOEARSNARLKQLSFAG	3745
Canis_lupus_familiaris	QKRKESIAEKKPKKGLVFEISSDDGFOICAESI ED AWKSLTDKVOEARSNARLKQLSFAG	3743
Rhinatrema_bivittatum	QKRKESLCEKKPKKGLVFEISSDDGFOICAESI ED AWKSLTDKVOEARSNARLKQLSFAG	3713
Xenopus_tropicalis	RNRQGSPTTEKPKTGLLFEISSDDGFOISAGSIEEAWKSLTEKVOEARSNARLKQLSFAG	3592
3910.....3920.....3930.....3940.....3950.....3960	

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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*.:*****.:*:****:* ** *::*:*****:* ** :*** ***** **
VNGLRMLGIIHDTVVFLEIQLYGAKHCHNYKFRFHKPEEANEPPLNPHGSARA EVHLRKS
VNGLRMLGIIHDTVVFLEIQLYGAKHCHNYKFRFHKPEEANEPPLNPHGSARA EVHLRKS
VNGLRMLGIIHDTVVFLEIQLYGAKHCHNYKFRFHKPEEANEPPPNPHGSARA EVHLRKS
VNGLRMLGIIHDAVVFLIEIQLYGAKHCHNYKFRFHKPEETNEPPLNPHGSARA EVHLRKS
VNGLRMLGILHDAVVFLIEQLAGAKHCRNYKFRFHKPEEANEPPLNPHGSARA EVHLRKS
VNGLRMLGILHDAVVFLIEQLSGAKHCRNYKFRFHKPEEANEPPLNPHGSARA EVHLRKS
VNGLRMLGILHDAVVFLIEQLSGAKHCRNYKFRFHKPEEANEPPLNPHGSARA EVHLRKS
VNGLRMLGILHDAVVFLIEQLSGAKHCRNYKFRFHKPEEANEPPLNPHGSARA EVHLRKS
VNGLRMLGILHDAVVFLIEQLSGAKHCRNYKFRFHKPEEANEPPLNPHGSARA EVHLRKS
VNGLRMLGILHDAVVFLIEQLSGAKHCRNYKFRFHKPEEANEPPLNPHGSARA EVHLRKS
VNGLRMLGILHDAVVFLIEQLSGAKHCRNYKFRFHKPEEANEPPLNPHGSARA EVHLRKS
VNGLRMLGILHDAVVFLIEQLSGAKHCRNYKFRFHKPEEANEPPLNPHGSARA EVHLRKS
VNGLRMLGILHDAVVFLIEQLSGAKHCRNYKFRFHKPEEANEPPLNPHGSARA EVHLRKS
VNGLRMLGILHDAVVFLIEQLSGAKHCRNYKFRFHKPEEANEPPLNPHGSARA EVHLRKS
VNGLRMLGILHDAVVFLIEQLSGAKHCRNYKFRFHKPEEANEPPLNPHGSARA EVHLRKS
VNGVRMLGIIEHAVVFLIEQLYGSKHCRNYKFRFHKPEEANEPPLNPHGSARA EVHRRKS
VSGLRMLGIIVHDAVVFLVEQLYGANRCRNYKFRFHRPEGEEEPINPHGSARA EVHRRKS
.....3970.....3980.....3990.....4000.....4010.....4020

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*****:*****
AFDMFNFLASKHRQPPEYNPNDEEEEEVQLKSARRATSMDLPMMPMRFRHLKKTTSKEAVGV
AFDMFNFLASKHRQPPEYNPNDEEEEEVQLKSARRATSMDLPMMPMRFRHLKKTTSKEAVGV
AFDMFNFLASKHRQPPEYNPNDEEEEEVQLKSARRATSMDLPMMPMRFRHLKKTTSKEAVGV
AFDMFNFLASKHRQPPEYNPNDEEEEEVQLKSARRATSMDLPMMPMRFRHLKKTTSKEAVGV
AFDMFNFLASKHRQPPEYNPNDEEEEEVQLKSARRATSMDLPMMPMRFRHLKKTTSKEAVGV
AFDMFNFLASKHRQPPEYNPNDEEEEEVQLKSARRATSMDLPMMPMRFRHLKKTTSKEAVGV
AFDMFNFLASKHRQPPEYNPNDEEEEEVQLKSARRATSMDLPMMPMRFRHLKKTTSKEAVGV
AFDMFNFLASKHRQPPEYNPNDEEEEEVQLKSARRATSMDLPMMPMRFRHLKKTTSKEAVGV
AFDMFNFLASKHRQPPEYNPNDEEEEEVQLKSARRATSMDLPMMPMRFRHLKKTTSKEAVGV
AFDMFNFLASKHRQPPEYNPNDEEEEEVQLKSARRATSMDLPMMPMRFRHLKKTTSKEAVGV
AFDMFNFLASKHRQPPEYNPNDEEEEEVQLKSARRATSMDLPMMPMRFRHLKKTTSKEAVGV
AFDMFNFLASKHRQPPEYNPNDEEEEEVQLKSARRATSMDLPMMPMRFRHLKKTTSKEAVGV
AFDMFNFLASKHRQPPEYNPNDEEEEEVQLKSARRATSMDLPMMPMRFRHLKKTTSKEAVGV
AFDMFNFLASKHRQPPEYNPNDEEEEEVQLKSARRATSMDLPMMPMRFRHLKKTTSKEAVGV
AFDMFNFLASKHRQPPEYNPNDEEEEEVQLKSARRATSMDLPMMPMRFRHLKKTTSKEAVGV
AFDMFNFLASKHRQPPEYKPNDEEEEEVQLKSARRATSMDLPMMPMRFRHLKKTTSKEAVGV
.....4030.....4040.....4050.....4060.....4070.....4080
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*****.******.****** *****.******.******

YRSP^{PIHGRGLFCKRNIDAGEMVIEYSGNVIRSILTDKREKYD}SKGIGCYMFRIDDSEVV
YRSP^{PIHGRGLFCKRNIDAGEMVIEYSGNVIRSILTDKREKYD}SKGIGCYMFRIDDSEVV
YRSP^{PIHGRGLFCKRNIDAGEMVIEYSGNVIRSILTDKREKYD}SKGIGCYMFRIDDSEVV
YRSP^{PIHGRGLFCKRNIDAGEMVIEYSGNVIRSILTDKREKYD}SKGIGCYMFRIDDSEVV
YRSP^{PIHGRGLFCKRNIDAGEMVIEYAGNVIRSIQTDKREKYD}SKGIGCYMFRIDDSEVV
YRSP^{PIHGRGLFCKRNIDAGEMVIEYAGNVIRSIQTDKREKYD}SKGIGCYMFRIDDSEVV
YRSP^{PIHGRGLFCKRNIDAGEMVIEYAGNVIRSIQTDKREKYD}SKGIGCYMFRIDDSEVV
YRSP^{PIHGRGLFCKRNIDAGEMVIEYAGNVIRSIQTDKREKYD}SKGIGCYMFRIDDSEVV
YRSP^{PIHGRGLFCKRNIDAGEMVIEYAGNVIRSIQTDKREKYD}SKGIGCYMFRIDDSEVV
YRSP^{PIHGRGLFCKRNIDAGEMVIEYAGNVIRSIQTDKREKYD}SKGIGCYMFRIDDSEVV
YRSP^{PIHGRGLFCKRNIDAGEMVIEYAGNVIRSIQTDKREKYD}SKGIGCYMFRIDDSEVV
YRSP^{PIHGRGLFCKRNIDAGEMVIEYAGNVIRSIQTDKREKYD}SKGIGCYMFRIDDSEVV
YRSP^{PIHGRGLFCKRNIDAGEMVIEYAGNVIRSIQTDKREKYD}SKGIGCYMFRIDDSEVV
YRSP^{PIHGRGLFCKRNIDAGEMVIEYAGNVIRSIQTDKREKYD}SKGIGCYMFRIDDSEVV
YRSP^{PIHGRGLFCRRNIDAGEMVIEYSGNVIRSLTLDKREKYD}SKGIGCYMFRIDDSEVV
YRSP^{PIHGRGLFCRRNIDAGEMVIEYSGNVIRSLTLDKREKYD}GKGIGCYMFRIDDSEVV
.....4090.....4100.....4110.....4120.....4130.....4140

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/KMT2A.pst Tue Feb 1 13:52:23 2022

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Pavo_muticus      DATMHGNAARFINHSCEPNCYSRVINIDGQKHIVIFAMRKIYRGEELTYDYKFPIEDASN 3908
Pavo_cristatus    DATMHGNAARFINHSCEPNCYSRVINIDGQKHIVIFAMRKIYRGEELTYDYKFPIEDASN 3908
Gallus_gallus     DATMHGNAARFINHSCEPNCYSRVINIDGQKHIVIFAMRKIYRGEELTYDYKFPIEDASN 3948
Chelonia_mydas    DATMHGNAARFINHSCEPNCYSRVINIDGQKHIVIFAMRKIYRGEELTYDYKFPIEDASN 3985
Mus_musculus      DATMHGNAARFINHSCEPNCYSRVINIDGQKHIVIFAMRKIYRGEELTYDYKFPIEDASN 3950
Rattus_norvegicus DATMHGNAARFINHSCEPNCYSRVINIDGQKHIVIFAMRKIYRGEELTYDYKFPIEDASN 3970
Homo_sapiens      DATMHGNAARFINHSCEPNCYSRVINIDGQKHIVIFAMRKIYRGEELTYDYKFPIEDASN 3956
Pan_troglodytes   DATMHGNAARFINHSCEPNCYSRVINIDGQKHIVIFAMRKIYRGEELTYDYKFPIEDASN 3989
Macaca_mulatta    DATMHGNAARFINHSCEPNCYSRVINIDGQKHIVIFAMRKIYRGEELTYDYKFPIEDASN 3985
Callithrix_jacchus DATMHGNAARFINHSCEPNCYSRVINIDGQKHIVIFAMRKIYRGEELTYDYKFPIEDASN 3988
Equus_caballus    DATMHGNAARFINHSCEPNCYSRVINIDGQKHIVIFAMRKIYRGEELTYDYKFPIEDASN 3985
Bos_taurus        DATMHGNAARFINHSCEPNCYSRVINIDGQKHIVIFAMRKIYRGEELTYDYKFPIEDASN 3985
Canis_lupus_familiaris DATMHGNAARFINHSCEPNCYSRVINIDGQKHIVIFAMRKIYRGEELTYDYKFPIEDASN 3983
Rhinatrema_bivittatum DATMHGNAARFINHSCEPNCYSRVINIDGQKHIVIFAMRKIYRGEELTYDYKFPIEDASN 3953
Xenopus_tropicalis DATMHGNAARFINHSCEPNCYSRVIPIDGQKHIVIFAMRKIYRGEELTYDYKFPIEDANN 3832
.....4150.....4160.....4170.....4180.....4190.....4200
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.**:****:***

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Pavo_muticus      KLPCNCGAKKCRKFLN 3924
Pavo_cristatus    KLPCNCGAKKCRKFLN 3924
Gallus_gallus     KLPCNCGAKKCRKFLN 3964
Chelonia_mydas    KLPCNCGAKKCRKFLN 4001
Mus_musculus      KLPCNCGAKKCRKFLN 3966
Rattus_norvegicus KLPCNCGAKKCRKFLN 3986
Homo_sapiens      KLPCNCGAKKCRKFLN 3972
Pan_troglodytes   KLPCNCGAKKCRKFLN 4005
Macaca_mulatta    KLPCNCGAKKCRKFLN 4001
Callithrix_jacchus KLPCNCGAKKCRKFLN 4004
Equus_caballus    KLPCNCGAKKCRKFLN 4001
Bos_taurus        KLPCNCGAKKCRKFLN 4001
Canis_lupus_familiaris KLPCNCGAKKCRKFLN 3999
Rhinatrema_bivittatum KLPCNCGAKKCRKFLN 3969
Xenopus_tropicalis KLACNCGTKKCRKFLN 3848
.....4210.....
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