

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/CCD01711.fsa Feb 1 11:36:03 2022

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Pavo_muticus	-RAALSCAPALPRALRSHVLRSSRRGRSCRNRRKQSEKPGVRGGWGGAAAYFLLGSNGRAAL	59
Pavo_cristatus	-RAALSCAPALPRALRSHVLRSSRRGRSCRNRRKQSEKPGVRGGWGGAAAYFLLGSNGRAAL	59
Gallus_gallus	MRGSLPPCAGIARAVRSHALRSIRGRSCRNRRKQSEKPGKRAGWGGAFFLPGCNGRAAL	60
Chelonia_mydas	-----	
Mus_musculus	-----	
Rattus_norvegicus	-----	
Homo_sapiens	-----	
Pan_troglodytes	-----	
Macaca_mulatta	-----	
Callithrix_jacchus	-----	
Canis_lupus_familiaris	-----	
Equus_caballus	-----	
Bos_taurus	-----	
Heterocephalus_glaber	-----	
Rhinatrema_bivittatum	-----	
Xenopus_tropicalis	-----	
	1.....10.....20.....30.....40.....50.....60	

Pavo_muticus	TAWRGFNVFILWKRVNSEVSQLKTFIVEDHVVHSTELVDLKSVMIDMMNLSSPVSHVDHEA	119
Pavo_cristatus	TAWRGFNVFILWKRVNSEVSQLKTFIVEDHVVHSTELVDLKSVMIDMMNLSSPVSHVDHEA	119
Gallus_gallus	ERCEGFNVFILWKRVNFEASQLEAFIVEDDVHSTELLDLKSVMIDMMNLSSPVSHVDHEA	120
Chelonia_mydas	-----MNSTPPIISYTIPEI	14
Mus_musculus	-----MSLNTSSNATPGDT	14
Rattus_norvegicus	-----MSLSTSSNATAGDT	14
Homo_sapiens	-----MNLNTSSN--TGDT	12
Pan_troglodytes	-----MNLNTSSN--TGDT	12
Macaca_mulatta	-----MNLNTLSNG-TGDT	13
Callithrix_jacchus	-----MNLNASSNG-AGDT	13
Canis_lupus_familiaris	-----MSLNSSSNA-PGDT	13
Equus_caballus	-----MSLNTSSNA-TGDT	13
Bos_taurus	-----MRRLPSSAAQLRGPGSSNP-SPAF	24
Heterocephalus_glaber	-----MNINTSHNA-IGDT	13
Rhinatrema_bivittatum	-----MTSMFPKSSANEVKKRLQ	17
Xenopus_tropicalis	-----	
70.....80.....90.....100.....110.....120	

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Pavo_muticus	KRLCSAKSGSQLLQNSSASELD-LAEDLKRKLCQAKEEKVDIIKHNQELRDYEQIVKL	178
Pavo_cristatus	KRLCSAKSGSQLLQNSSASELD-LAEDLKRKLCQAKEEKVDIIKHNQELRDYEQIVKL	178
Gallus_gallus	KRLCSAKSGSQLLHNSASELD-VAEDLKRKLCQAKEEKVDIIKHNQELRDYEQIVKL	179
Chelonia_mydas	KRLHCIQSEMRLQNSSQSELD-VTEDLRRKLHQAKKEKLDITTKHNQDLSNYESQIARL	73
Mus_musculus	QRLKNASLDVKQMLKN-ETESD-IIADLRKKLHRAKKEKLEMTTKHNAELSSYESQIARL	72
Rattus_norvegicus	QRVKSASLDVKQMLKN-ETESD-IIADLRKKLHRAKKEKLEMTTKHNAELSSYESQIARL	72
Homo_sapiens	QRLKIASLDVKQILKN-ETELD-ITDNLRRKLHWAKKEKLEITTKHNAELASYEQIAKL	70
Pan_troglodytes	QRLKNASLDVKQILKN-ETELD-ITDNLRRKLHWAKKEKLEITTKHNAELASYEQIAKL	70
Macaca_mulatta	QRLKNASSDVKQILKI-ETELD-ITADLRKKLHRAKKEKLEITTKHNAELASYEQIAKL	71
Callithrix_jacchus	QRLKNASSDVKQILKI-ETELD-ITADLRKKLHRAKKEKLEITTKHNAELACFESQIAKL	71
Canis_lupus_familiaris	QRLKNASSDVKQMFKS-ETDLD-ITADLRKKLHRAKKEKLEITTKHNAELTSYESQIAKL	71
Equus_caballus	QRLKNASSDVKQMLKS-ETDLD-VTADLRKKLHRAKKEKLEITTKHNAELASYEQIAKL	71
Bos_taurus	SELKNASSDIKQIVKS-ETDLD-ITADLRKKLHRAKKEKLEITTKHNAELASYEQIAKL	82
Heterocephalus_glaber	QRLKNPSSDVKQILKN-ETDLD-ITADLRKKLHWAKKEKLEMTTKHNAELSSYESQIAKL	71
Rhinatrema_bivittatum	KIIQDLQSEIKNLQNSCRTEGE-NTTELRRKFNQCEKEKLDITTKHNEEVFKCESEMTKY	76
Xenopus_tropicalis	-----MSLLEKEGHTELSSTVADLRRLNSAKKEIVELVAKHNEELCSYENQFAKL	51
130.....140.....150.....160.....170.....180	

File: /media/morpheus/disk1/fst/pep_msa/CCD171.pse **Date: Feb 1 11:36:03 2022**
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Pavo_muticus	EKTFHIAQOKWKEQ	QORLAS---	EKDDILRTHKDEYE	EFLLKERGELES	SVLQK-----	287
Pavo_cristatus	EKTFHIAQOKWKEQ	QORLAS---	EKDDILRTHKDEYE	EFLLKERGELES	SVLQK-----	287
Gallus_gallus	EKTFHIAQOKWKEQ	QORLAS---	EKDDILRTHKDEYE	ELLKERGELES	ILQK-----	288
Chelonia_mydas	EKVFHISQGNWKEQ	QORLTS	DLEEDN	ILKTCN	SEYELLKERTKLE	NVIOETLEHHKEQ
Mus_musculus	EKTFQISQEKWREE	CRRFEH	DLEERD	NIQCN	QEYESILMOE	KTRLOKTLQEILEKHEQE
Rattus_norvegicus	EKTLQTSQEKWKEE	CRRFEH	DLEERD	NIQCN	HEYELLMOE	KNRLOKTLQEALEKHQOE
Homo_sapiens	EKAFQTSQOKWKEE	CRRFEH	DLEERD	NMIQCN	REYDLLMKEK	SRLEKTLQEALEKHORE
Pan_troglodytes	EKAFQTSQOKWKEE	CRRFEH	DLEERD	NMIQCN	REYDLLMKEK	SRLEKTLQEALEKHORE
Macaca_mulatta	EEAFQTSQOKWKEE	CRRFEH	DLEERD	NMIQCN	REYDLLTKEK	SRLEKTLQEALEKHQOE
Callithrix_jacchus	EKEFQTSQOKWKEE	CRRFEH	DLEERD	NMIQCN	REYDLLMKEK	SRLEKTLQEALEKHQOE
Canis_lupus_familiaris	EKAFQTSQLKWKEE	CRFEH	DLEERD	NIQCN	REYDLLMKEK	SRLEKTLQEALEKHQOE
Equus_caballus	EKVFQTSQOKWKEE	CRRFER	DLEERD	NIQCN	REYDLLVKEK	SRLEKTLQEALEKHQOE
Bos_taurus	EKAFQISQOKWKEE	CRRFEH	DLEERD	NIQCN	QEYDLLTKEK	SRLEKTLQEALEKHQOE
Heterocephalus_glaber	EKVFQTSQOKWKEE	CRRFER	DLEERD	NIQCN	QEYDLLMKEK	SRLEKTLQEVLEKHQLE
Rhinatrema_bivittatum	EEIFRSSQHNWQER	HOKIESE	LEEK	KSITQ	SNIESELLMVE	KYRLETTLKD-----
Xenopus_tropicalis	ENVFQAQLGWQER	QKMFES	DLRND	NIQCN	MYKQESLVLEK	NNLTYLQK-----
250.....260.....270.....280.....290.....300

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Pavo_muticus	-----	QNSAL	QNL	SKKMK	MDME	LEHRDCSE	311					
Pavo_cristatus	-----	QNSAL	QNL	SKKMK	MDME	LEHRDCSE	311					
Gallus_gallus	-----	QNSAL	QNL	SKKMK	MDME	LEHRDCSD	312					
Chelonia_mydas	RNMLESQIRE	TALKEFR	FOLEQCEA	ERREFOF	MLQERN	NALNMHKKI	QDLELEHNNCTD	253				
Mus_musculus	KTELESRV	RETALGE	FRLOTE	EWEAER	RELQ	LIVQEQDS	SAVQSMQKKVEQLEAEHMD	252				
Rattus_norvegicus	KDEMEAHV	KETALDD	FRLOAEQ	WEAER	RELQ	LIVQEQDS	SAVQNMQKKVEQLEAEHMD	252				
Homo_sapiens	KNEMESH	IRETAL	EEFRLO	EEQWEA	ERRELQ	FIVQEQD	TAVQNMHKKVEKLETEHMD	250				
Pan_troglodytes	KNEMESH	IRETAL	EEFRLO	EEQWEA	ERRELQ	FIVQEQD	TAVQNMHKKVEKLETEHMD	250				
Macaca_mulatta	KNEMESH	IRETAL	EEFRLO	EEQWEA	ERRELQ	FIVQEQD	TAVQNMHKKVEKLETEHMD	251				
Callithrix_jacchus	KSEMESH	IRETAL	EEFRLO	EEQWEA	ERRELQ	FIVQEQD	TAVQNMHKKVEKLETEHMD	251				
Canis_lupus_familiaris	KNEMESH	SRETAL	EEFRLO	AEQWDA	ERRELQ	FIVQEQD	NAVQNMHKKVEKLEAEHMD	251				
Equus_caballus	KNEMESH	VRETAL	EEFRLO	AEQWEA	ERRELQ	FIVQEQD	NAVQSMHKKVEKLEAEHMD	251				
Bos_taurus	KNEMESH	IRETAL	EELRLQ	AEQWEA	ERRELQ	FIVQEQD	NAVQNMHKKVEKLEAEHMEC	262				
Heterocephalus_glaber	KSKMESH	VRETAL	EEFRLO	AEQWDV	ERRELQ	FIVQEQD	SAVQNMHKKVEQLEREHMEC	251				
Rhinatrema_bivittatum	-----	QDKTLQ	ESH	RKLQ	ELETER	NNR	IE	212				
Xenopus_tropicalis	-----	EKLNVQ	EQQTLL	QMETE	HSRN	LE		187				
	310	320	330	340	350	360

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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Pavo_muticus      LLTRQVHKLEYGAEQEERLKKLEAATDRIKOLEENIEAERA AHLKSKFNLEIAQMRIRE 371
Pavo_cristatus    LLTRQVHKLEYGAEQEERLKKLEAATDRIKOLEENIEAERA AHLKSKFNLEIAQMRIRE 371
Gallus_gallus     LLTRQVHKLEYSAEQEERLKKLEAATDRIKOLEENFEAERA AHLKSKFNLEITQMRIRE 372
Chelonia_mydas    ILRRQASELEYSTEREERLKKDLEAATVRVKKLEENIEAERA AHLKSKFNSEITQLRIRD 313
Mus_musculus      LLRRQTSELEFSTQREERLRKEFEATTLRVKLEENIEAERA AHLKSKFNSEITQLRIRD 312
Rattus_norvegicus LLRRQTSELEFSTQREERLRKEFEATTLRVKLEESIEAERA AHLKSKFNSEITQLRIRD 312
Homo_sapiens      LLRRQTSELEFSTQREERLRKEFEATTLRVKLEENIEAERA AHLKSKFNSEITQLRIRD 310
Pan_troglodytes   LLRRQTSELEFSTQREERLRKEFEATTLRVKLEENIEAERA AHLKSKFNSEITQLRIRD 310
Macaca_mulatta    LLRRQTSELEFSTQREERLRKEFEATTLRVKLEENIEAERA AHLKSKFNSEITQLRIRD 311
Callithrix_jacchus LLQRQTNELEFSTQREELLRKEFEATTLRVKLEENIEAERA AHLKSKFNSEITQLRIRD 311
Canis_lupus_familiaris LLRRQTSELEFSTQREERLRKEFEATTLRVKLEENIEAERA AHLKSKFNSEITQLRIRD 311
Equus_caballus    LLRRQTNELEFSTQREERLRKEFEATTLRVKLEENIEAERA AHLKSKFNSEITQLRIRD 311
Bos_taurus        LLRRQTSELEFSTQREERLRKEFEATTLRVKLEENIEAERA AHLKSKFNSEITQLRIRD 322
Heterocephalus_glaber LLQRQTSELEFSTQREECLRKEFEATTLRVKLEENIEVERA AHLKSKFNSEITQLRIRD 311
Rhinatrema_bivittatum TLEQQANELEYLRERENRLKQDVETAERVKKLEENIEAERA AHLKSKFNSEITQLRIRD 272
Xenopus_tropicalis TLKEQKNELSYSREKEERLQELKEAKQRIKDLEENVEAERATHLESKFNSEVIQLRMYD 247
.....370.....380.....390.....400.....410.....420

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      ** :*::*...: *.. :.....: * *** ** ** ::: *.. *::: : :
Pavo_muticus      LERALQMEKVSQAEALSDLEMIRKEFKEVENAYEREKQNAQENLEKVNRLEREYISTNKKQ 431
Pavo_cristatus    LERALQMEKVSQAEALSDLEMIRKEFKEVENAYEREKQNAQENLEKVNRLEREYISTNKKQ 431
Gallus_gallus     LEGALQMEKVSQAEALSDLEMIRKEFKEVENAYEREKQKQNAQENLEKVNRLEREYISTNKKQ 432
Chelonia_mydas    LEGALQVEKASQAEALSDLEMIRKEFKEVENAYEREKHNAQESLEKLNIFEREYFSTNKKQ 373
Mus_musculus      LEGALQVEKASQAEAVADLEMIKNEFKEVESAYEREKQNTQESCAKLNLLEREYFSQNKK 372
Rattus_norvegicus LEGALQVEKASQAEAVADLEMIKNEFKEVESAYEREKHNAQESCAKLNLLEREYFSQNK 372
Homo_sapiens      LEGALQVEKASQAEAVADLEI IKNEFKEVESAYEREKHNAQESFAKLNLLEREYFSQNK 370
Pan_troglodytes   LEGALQVEKASQAEAVADLEI IKNEFKEVESAYEREKHNAQESFAKLNLLEREYFSQNK 370
Macaca_mulatta    LEGALQVEKASQAEAVADLEMIKNEFKEVESAYEREKHNAQESFAKLNLLEREYFSQNK 371
Callithrix_jacchus LEGALQVEKASQAEAVADLEMIKNEFKEVESAYEREKHNAQESLAKLNLLEREYFSQNK 371
Canis_lupus_familiaris LEGALQVEKASQAEAVADLEMIKNEFKEVESAYEREKHNAQESFAKLNLLEREYFSQNK 371
Equus_caballus    LEGALQVEKASQAEAVADLEMIKNEFKEVESAYEREKHNAQETFAKLSLLEREYFSQNK 371
Bos_taurus        LEGALQVEKASQAEAVADLEMIKNEFKEVESAYEREKHNAQESFAKLVNLEREYFSQNK 382
Heterocephalus_glaber LEGALQVEKASQAEAVADLEMIKNEFKEVESAYEREKHNAQKSFELKNLLEREYFSQNK 371
Rhinatrema_bivittatum LEGSLQVETASHAEVASHMDLLKHQFREVEHAYEREKTRADETSKLLKLEQDYSLTMKH 332
Xenopus_tropicalis LERALEVEKATLAQTLSELDMMRKQFCEVEAAVYSEKNSAEQLTEKLKKSEQDFCMLVNQ 307
.....430.....440.....450.....460.....470.....480

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Pavo_muticus      MNEKIEEKKEVIKDLSERLRENDKTHRELQDKLAMAKKHQVFVTETETENNMIELKLLLD 491
Pavo_cristatus    MNEKIEEKKEVIKDLSERLRENDKTHRELQDKLAMAKKHQVFVTETETENNMIELKLLLD 491
Gallus_gallus     MNEKIEEKKEI IKDLSERLQENEKI HRELQDKLATAKKHQVFVTETETENNMIELKLLLD 492
Chelonia_mydas    LNEEIEEKKKVITDLSERLQDNEKSCRELQEELAKAKKQAFVLTETCENNVRLELLLD 433
Mus_musculus      LNEEIEDQKKVIIDLSKRLQYNEKSCGELQEELVMAKKHQAFVLTETCENNVRLESILGS 432
Rattus_norvegicus LNEEIEDQKKVIIDLSKRLQYNEKSCSELQEELVLAKKHQAFVLTETCENNVRLESILGS 432
Homo_sapiens      LNEDIEEQKKVIIDLSKRLQYNEKSCSELQEELVMAKKHQAFVLTETCENNVRLESILDS 430
Pan_troglodytes   LNEDIEEQKKVIIDLSKRLQYNEKSCSELQEELVMAKKHQAFVLTETCENNVRLESILDS 430
Macaca_mulatta    LNEEIEEQKKVIIDLSKRLQYNEKSCSELQEELVMAKKHQAFVLTETCENNVRLESILDS 431
Callithrix_jacchus LNEEIEEQKKVIIDLSKRLQYNEKSCSELQEELVMAKKHQAFVLTETCENNVRLESILDS 431
Canis_lupus_familiaris LNEEIEEQKKVIIDLSKRLQYNEKSCSELQEELVMAKKHQAFVLTETCENNVRLESILDS 431
Equus_caballus    LNEEIEEQKKVIIDLSKRLQYNEKSCSELQEELVMAKKHQAFVLTETCENNVRLESILDS 431
Bos_taurus        LNEEIEEQKKVILDLSKRLQYNEKSCSELQEELVMAKKHQAFVLTETCENNVRLESILDS 442
Heterocephalus_glaber LNEEIEEQKQVIIDLSKRLQYNEKSCSELQEELVMAKKHQAFVLTETCENNVRLESILDS 431
Rhinatrema_bivittatum LTEQLEERNKISDFSVRFKSNEKNCMELOEELLMAKKQADAEQIHEGTMRDLELLAS 392
Xenopus_tropicalis LKSDIEQKNNLIAELTGKQKSIEGSCITMEEDLAITKKQLVSLLEAHKDNLGQLQSVVDN 367
.....490.....500.....510.....520.....530.....540

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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Pavo_muticus      FAMSGQRTAGTCKDKDKPPSSLS-VLETLRCTLTAYQNKLEDTSNELKKMNTLCENTTKEL 550
Pavo_cristatus    FAMSGQRTAGTCKDKDKPPSSLS-VLETLRCTLTAYQNKLEDTSNELKKMNTLCENTTKEL 550
Gallus_gallus     FAMSGQRTAGTCKDKDKPPSSLS-VLETLRCTLTAYQNKLEDTSNELKKMNTLCENTTKEL 551
Chelonia_mydas    FTMSSQWTAGSRKDKDKPPSSLSVSVLETLRNTLTDYQNKLEDTSNELKKTKASCEKMTKEI 493
Mus_musculus      FSVSAQWTSQVHKDKDKPPSSFSVSVLETLRRLTLDYQNKLEDASNELNNINDAKEKTSNEL 492
Rattus_norvegicus FSVSAQWTSQVHKDKDKPPSSFSVSVLETLRRLTLDYQNKLEDASNELNNINEAKEKTSNEL 492
Homo_sapiens      FTVSGQWTSQVHKDKDKPPSSFSVSVLETLRLTLDYQNKLEDASNE-----EKACNEL 482
Pan_troglodytes   FTVSGQWTSQVHKDKDKPPSSFSVSVLETLRRLTLDYQNKLEDASNELNSMNDVKEKACNEL 490
Macaca_mulatta    FTVSGQWTSQVHKDKDKPPSSFSVSVLETLRRLTLDYQNKLEDASNELNSMNDAREKACNEL 491
Callithrix_jacchus FTVSGQWTSQVHKDKDKPPSSFSVSVLEMLRCTLTDYQNKLEDASNELNSMNDAKEKACNEL 491
Canis_lupus_familiaris FTVSGQWTSQVHKDKDKPPSSFSVSVLETLRRLTLDYQNKLEDASNELNSVNDADKASNEL 491
Equus_caballus    FTVSGQWTSQVHKDKDKPPSSFSVSVLETLRRLTLDYQNKLEDASNELKSMNDAKEKTSNEL 491
Bos_taurus        FSVSGQWTSQVHKDKDKPPSSFSVSVLETLRRLTLDYQNKLEASNELSNMNAKEKASNEL 502
Heterocephalus_glaber FTVSGQWTSQVHKDKDKPPSSFSVSVLETLRCTLTLDYQNKLEDASNELNSMNDAKEKASNEL 491
Rhinatrema_bivittatum FTMS-----GIHKMDNPPRPALLLETLRHLLTLDYQNKQEDTSNEFEKMKQSHKKLSKEL 447
Xenopus_tropicalis FIPS---HHEACNETVKPAGFSVLETLKHILTDNKNRFKDLNKLKLEAGSYAYTRITEEM 424
.....550.....560.....570.....580.....590.....600

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Pavo_muticus      EISKDEMYVLSQDLKEARDKLADASKELNHLHTECADRTALIGTLQMELONVQQCWEEKEK 610
Pavo_cristatus    EISKDEMYVLSQDLKEARDKLADASKELNHLHTECADRTALIGTLQMELONVQQCWEEKEK 610
Gallus_gallus     EISRDKMVCVLSQDLKEARDKLANANKELNHLHTECADKAALIGTLQMELONVQQRWEEKEK 611
Chelonia_mydas    DSSKQKIRSQSDDLKEVDNLDADANEELNHLRTKCADREALTGTILKMELONVLHCWEKEK 553
Mus_musculus      DSTKQKIETHIKNTKELQDKLTEVHKELSHLRKACDREALITSLKVELQNVLHCWEKEK 552
Rattus_norvegicus DSTKQKIESHIKNTKELQDRLTEVHKELSHLRKACDREALITSLKVELQNVLHCWEKEK 552
Homo_sapiens      DSTKQKIDSHTKNIKELQDKLADVKNELSHLHTKCADREALISTLKVELQNVLHCWEKEK 542
Pan_troglodytes   DSTKQKIDSHTKNIKELQDKLADVKNELSHLHTKCADREALISTLKVELQNVLHCWEKEK 550
Macaca_mulatta    DSTKQKIDSHTKNIKELQDKLADVKNELSHLHTKCADREALISTLKVELQNVLHCWEKEK 551
Callithrix_jacchus DSTKQKIDSHTKNIKELQDKLADVKNELSHLHTKCADREALINTLKVELQNVLHCWEKEK 551
Canis_lupus_familiaris DSTKQKIESHTKNIKDLQDKLADVSKELSHLRTKCADREALVSTLKVELQNVLHCWEKEK 551
Equus_caballus    DSTKQKIESHTKNIKDLQDKLADVKNELSHLRTKCADREALISTLKVELQNVLHCWEKEK 551
Bos_taurus        DSTKQKIESHTKNIKDLQDKLADVSKELSHLRTKCADREALINTLKVELQNVLHCWEKEK 562
Heterocephalus_glaber DSTKLKIEFHTKNIKELQDKLAEVRKELSHLRTKCADREALISTLKVELQNVLHCWEKEK 551
Rhinatrema_bivittatum DSSKQMIWVSLNKSQAFQKDSSEKLTFLHTLYQHLVAGCVLIKQPEGMLDKFVSWELCAV 507
Xenopus_tropicalis KSAKAMIQTLCHNLEKTDADLEAAERESHILHTRCTDQECQIAVLQMDLEKAQNGWEKAK 484
.....610.....620.....630.....640.....650.....660

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Pavo_muticus      VRAAESENEIQKLTRAYQKDVEEKLTFHLHGLYQHLVAGCVLIKQPEGILDRFSWSELCAV 670
Pavo_cristatus    VRAAESENEIQKLTRAYQKDVEEKLTFHLHGLYQHLVAGCVLIKQPEGILDRFSWSELCAV 670
Gallus_gallus     VRAAESENEIQKLTRAYQKDMEEKLTFLHGLYQHLVAGCVLIKQPEGILDRFSWSELCAV 671
Chelonia_mydas    VRATESENEIQKLTRAYQKDTTEKLTFLHTLYQHLVAGCVLIKQPEGILDKFVSWELCAV 613
Mus_musculus      ACAAQCESELQKLSQAFQKDSSEKLTFLHTLYQHLVAGCVLIKQPEGMLDKFVSWELCAV 612
Rattus_norvegicus TCRAQCESELQKLSQAFQKDTTEKLTFLHTLYQHLVAGCVLIKQPEGMLDKFVSWELCAV 612
Homo_sapiens      AQAAQSESELQKLSQAFHKDAEEKLTFLHTLYQHLVAGCVLIKQPEGMLDKFVSWELCAV 602
Pan_troglodytes   AQAAQSESELQKLSQAFHKDAEEKLTFLHTLYQHLVAGCVLIKQPEGMLDKFVSWELCAV 610
Macaca_mulatta    AQAAQSESELQKLSQAFHKDAEEKLTFLHTLYQHLVAGCVLIKQPEGMLDKFVSWELCAV 611
Callithrix_jacchus ARAAQSESELQKISQAFHKDAEDKLTFLHTLYQHLVAGCVLIKQPEGMLDKFVSWELCAV 611
Canis_lupus_familiaris TRAAQSESELQKLAQAFHKDTEKLTFLHTLYQHLIAGCVLMKQPEGMLDKFVSWELCTV 611
Equus_caballus    ARAAQSESELQKLSQAVHKDTEKLTFLHTLYQHLIAGCVLMKQPEGMLDKFVSWELCAV 611
Bos_taurus        ARAAQSESELEKLSQAFHKDAEEKLTFLHTLYQHLIAGSVLIKQPEGMLDKFVSWELCAV 622
Heterocephalus_glaber SRAAQYSESELQKLSQAFHKDTEKLTFLHTLYQHLVAGCVLMKQPEGMLDKFVSWELCAV 611
Rhinatrema_bivittatum VRITSESEKQKLTAKHQKETEKLTFLYSLYQRLVAGCVLIKQPEGMLDKFVSWELCAV 567
Xenopus_tropicalis LRVLECDHERONLAKAYQKDIEEKLTFHLNLYQRLVAGCVLIKQSGSLEKFSVWELCTV 544
.....670.....680.....690.....700.....710.....720

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Pavo_muticus	QKKYLEQRYSVLLGEVHARAQEYQETAENKEKICVLERREQLALENLYVKNTLTQTQIK	790
Pavo_cristatus	QKKYLEQRYSVLLGEVHARAQEYQETAENKEKICVLERREQLALENLYVKNTLTQTQIK	790
Gallus_gallus	QKKYLEQQYSDLLGEVHARAQEKETAEKNKEKICVLEKRQEEALLENLYVKNTLTQTQIK	791
Chelonia_mydas	QKKGLEQQYSGLLGEVHARAQKYQETAEKAKERCVSIEKAREOLVHENSQLKSIILITQTK	733
Mus_musculus	QKKELEFOYSELILLEVORRAQKFQETAENNSEKLNRietsSHEQLVRENShfKTTLSRTQR	732
Rattus_norvegicus	QKKELEFOYSELILLEVORRAQKFQETAENMEKLNCTIENSHEKLVtenshfKTTLSRTQR	732
Homo_sapiens	QKKELELOYSELFLEVOKRAQKFQETAENMEKLNHIeKSHEQLVLENSHFkKLLSQTOR	722
Pan_troglodytes	QKKELELOYSELFLEVOKRAQKFQETAENMEKLNHIeKSHEQLVLENSHFkKLLSQTOR	730
Macaca_mulatta	QKKELELOYSELILLEVOKRAQKFQETAENMEKLNHIeKSHEQLVLENSHFkKLLSQTOR	731
Callithrix_jacchus	QKKELELOYSELILLEVOKRAQTFQETAENMEKLNHIeKSHEQLVLENSHFkKLLSQTOR	731
Canis_lupus_familiaris	QKKELELOYSELILLEVOKRAQKFQETAENMEKLNRIeKSHEQLVLENSRFknMlSQTOR	731
Equus_caballus	QKKELELOYSELILLEVOKRAQKFQETAENMEKLNRIeKSHEQLVLENSHFknVLSQTOR	731
Bos_taurus	QKKELELOYSELILLEVOKRAQKFQETAENMEKLNRIeKSHEQLVFENSHFknLlSQtkR	742
Heterocephalus_glaber	RKKELELOYSERLLKLQKRAQKFQETAENMDKLNyieKSHAQLiLENSqfkNVLSktQR	731
Rhinatrema_bivittatum	EKKELEQHYSALLAEVHAQAQKFGTAekAKEKMIDAEKVkdOMAFENshMKnLLIHtQN	687
Xenopus_tropicalis	QRDMEErfvKLTQETAKARKFQStAVSKDKIAvfEkTDQVALENvhikNLlitNEK	664
790.....800.....810.....820.....830.....840	

	.. ** .***. .** : *** * . : : * : .***. . . : : * . ** . . :	
Pavo_muticus	EHSSLLAACALLAGALYPLYGRSCAMSIORDLLQDVNIYELVNQIIRTLVHVLSGVEEE	850
Pavo_cristatus	EHSSLLAACALLAGALYPLYGRSCAMSIORDLLQDVNIYELVNQIIRTLVHVLSGVEEE	850
Gallus_gallus	EHSSLLAACALLAGALYPLYGRSCAMSIORDLLQDVNIYELVNQIIRTLVHVLSGVEEE	851
Chelonia_mydas	EHASLLAACALMGALYPLYSRLCALSTORDFLQDVHTYEVLFKQIRTLVNALSQVEEG	793
Mus_musculus	EQTCLLAACALMAGALCPLYSRSCALSTORDFLQEQVNSLELFKLEIRTLAQALSQVDEK	792
Rattus_norvegicus	EQTCLLAACALMAGALYPLYSRSCALSTORDFLQEQVNSLELFKLEIRTLAQALSQVDEK	792
Homo_sapiens	EQMSLLAACALMAGALYPLYSRSCALSTORDFLQEQVNTFELFKLEIRTLAQALSTVEEK	782
Pan_troglodytes	EQMSLLAACALMAGALYPLYSRSCALSTORDFLQEQVNTFELFKLEIRTLAQALSTVEEK	790
Macaca_mulatta	EQTSLLAACALMAGALYPLYSRSCALSTORDFLQEQVNTFELFKLEIRTLAQALSTVEEK	791
Callithrix_jacchus	EQTSLLAACALMAGALYPLYSRSCALSTORDFLQEQVKFELFKLEIRTLAQALSTVEEK	791
Canis_lupus_familiaris	EQRSLLAACALMAGALYPLYSRSCALSTORDFLQEQVNTFELFKLEVRTLAQALSQVEEK	791
Equus_caballus	EQTSLLAACALMAGALYPLYRRSCALSTORDFLQEQVNTFELFKLEVRTLAQALSQVEEK	791
Bos_taurus	EKTSLLVACALMAGAFYPLYSRSCALSTORDFLQEQVNTFELLKLEVRTLAQALSTVEEK	802
Heterocephalus_glaber	EQTSLLAACALMAGALYPLYSRSCALSTORDFLQEQVNTFELFKLEIRTLVEALSQVEEK	791
Rhinatrema_bivittatum	EHKSLLAACALLAGALYPLYSRSCALSAQKDFLDQDVNTYEVLFKQIRVLVQALSQAEKK	747
Xenopus_tropicalis	DHKSLLAACALLAGALYPLYSRCLLASQRHLLQHTTISVEVRNEIWLIIQLSETKEK	724
850.....860.....870.....880.....890.....900	

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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      ..: * : :      : :***: **::*:**::*: *::*  **:: :. :* *::** *
Pavo_muticus      KEDDAKIKKQKFKGLIRVFRRGVIAILAAANRLKVLAQSSSLFSLINGFKKGIGILVCAG 910
Pavo_cristatus    KEDDAKIKKQKFKGLIRVFRRGVIAILAAANRLKVLAQSSSLFSLINGFKKGIGILVCAG 910
Gallus_gallus     KEDDAKIKKHKFRGLIHVFRRGVIAVLAANRLKVLAQSSSLFSLINGFKKGIGILVCVG 911
Chelonia_mydas    RQDEVKIKKKHKFKGMHVFRKGVIAVLAAHRLQILGRSSSLFSLWVDGFKKGIGILVCIG 853
Mus_musculus      KQEEAKTKKKTKFKGLVFRVFRKGVIAILAAANRLKLLGQSCAFLEFTWMESCKEGIGMLVCTG 852
Rattus_norvegicus KHEEAKTKKKTKFKGLIRVFRKGVIAILAAANRLKLLGQSCAFLEFTWMESRKEGIGMLVCAG 852
Homo_sapiens      KQEEAKMKKKTKFKGLIRIFRKGVIAVLAAANRLKILGQSCASLFTWMESFKEGIGMLVCTG 842
Pan_troglodytes   KQEEAKMKKKTKFKGLIRIFRKGVIAILAAANRLKILGQSCVSLFTWMESFKEGIGMLVCTG 850
Macaca_mulatta    KQEEAKMKKKTKFKGLIRIFRKGVIAVLAAANRLKILGQSCASLFTWMESFKEGIGMLVCTG 851
Callithrix_jacchus KQEEAKMKKKTKFKGLIRIFRKGVIAILAAANRLKILGQSCASLFTWMESFKEGIGMLVCSG 851
Canis_lupus_familiaris KQEEAKLKKKPFKGLIRIFRKGVIAILAAANRLKILGQSCASLFTWMESFKEGIGMLVCTG 851
Equus_caballus    KQEEAKVKKKPFKGLIRVFRKAVIAILAAANRLRILGQSCASLFTWLESFKEGIGMLVCTG 851
Bos_taurus        KQEEAKMKKKTKFKGLIRVFRKGVIAVLAAANRLKILGQSCVSLFTWMESFKEGIGMLVCTG 862
Heterocephalus_glaber KQEEAKMKKKPFKGLIRVFRKGVIAVLAAANRLKILGQSCGSLFTWMESFKEGIGMLVCTG 851
Rhinatrema_bivittatum KODDDKINKKHFKGMIRVFRKGVIAVLAAANRLQCLGQSCNSLFTWMEGFKKGIGILVCSG 807
Xenopus_tropicalis IQSNTKTQCQCG----ILLFRRRAVIVLTVNRLHRLGRSCSLFTWTDNAWKGTGIMVCTG 780
      .....910.....920.....930.....940.....950.....960

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      :      : *      : : : * : * : * : : : : * : * : : : : :
Pavo_muticus      DSKGKHKSN-HNEEGIRCVEALNWF TSSDLLTAIISSVTELDVISKTDPKSCLSGRLLV 969
Pavo_cristatus    DSKGKHKSS-HNEEGIRCVEALNWF TSSDLLTAIISSVTELDVISKTDPKSCLSGRLLV 969
Gallus_gallus     DSKGKHNSRYNKEGIRCVEALNWF TSPDLLTAVISSVTELDVISKTDPKSCLSGRLLV 971
Chelonia_mydas    EAKGKHNLKSKHQKEQIHCLQALSWFTSSDLLAAIISSVAELQEVVSKTDPNSWLCGHFLI 913
Mus_musculus      EPKDKRQFPKHQREQLRCLQALSWLTSSDLLGTVISSMTELDVISKTDPNSTRICGHLLI 912
Rattus_norvegicus EPKDKRRFPKHQREQFRCLQALTWLTSSDLLGAISSMTELDVISKTDPNSTRICGHLLI 912
Homo_sapiens      EPQDKHKFPKHQKEQLRCLQALSWLTSSDLLAAIISSMAELQDVIGKADPNSTRICGHLLI 902
Pan_troglodytes   EPKDKHKFPKHQKEQLRCLQALSWLTSSDLLAAIISSMAELQDVIGKTDPNSTRICGHLLI 910
Macaca_mulatta    EPKDKHQFPKHQKEQLRCLQALSWLTSSDLLAAIISSMTELDVIGKTDPNSTRICGHLLI 911
Callithrix_jacchus EPKDKHKFPKHQKEQLRCLQALSWLTSSDLLAAIISSMAELQEVIGKTDPNSTRICGHLLI 911
Canis_lupus_familiaris EPKDKHKFPKHQKEQLRCLQALSWLTSSDLLAAIITSMAELQEVISKTDPNSTRICGHILI 911
Equus_caballus    EPKDKHKFPKHQKEQLRCVQALSWLTSSDLLAAIITSMAELQDIISKTDPNSTRICGHLLV 911
Bos_taurus        ELKDKHKFPKHQKEQLRCLQALSWLTSTDLLVAIISSMAEVQEAISKTDPNSTRICGHLLI 922
Heterocephalus_glaber EPKDKLKFPHQKEQLCCLQALSWLTSSDLLAAIISSMAELQEVISKTDPNSTRICGHLLI 911
Rhinatrema_bivittatum GSQRNHVLSRYQKEQSLGHETINWFTSSDLLAAIISSIADLQEVINKKDAHSRSCRHLVV 867
Xenopus_tropicalis GTQVMDRPTSKQDEQMRQEAVNWF TSSDLLTAVVASVSELLEVLNKIDPSVPSQVSLIQ 840
      .....970.....980.....990.....1000.....1010.....1020

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      *: ** : * : * : * : * : * : * : * : * : * : * : * : * : * : * :
Pavo_muticus      SAARNSFSKLMKDLNVIMETVPLDSSRSFTYVEKNSLIQRLAHGLHKINAQALEAGSCDR 1029
Pavo_cristatus    SAARNSFSKLMKDLNVIMETVPLDSSRSFTYVEKNSLIQRLAHGLHKINAQALEAGSCDR 1029
Gallus_gallus     SAARNSFSKLMKDLNVIMESVPLDSSRSVITYVEKNSLIQRLAHGLHRLINARALEAGSCDR 1031
Chelonia_mydas    SAARNSFSKLMKDLNVLMETIPVDSRTITYAEKDSLVRHLARGHLHKINAQALKSGLGDR 973
Mus_musculus      GAAKNSFAKLMDKLSAMASIPHLSSRSITYVEKDSLVRQLARGHLHKVNTLALKYGLCSH 972
Rattus_norvegicus GAAKNSFAKLMDKISLAMESIPLRSSRSITYVDKDSLVRQLARGHLHKVNTLALKYGLSSH 972
Homo_sapiens      GAAKNSFAKLMDKISLVMCEIPLHSSRSITYVEKDSLVRQLAHGLHKVNTLALKYGLRGH 962
Pan_troglodytes   GAAKNSFAKLMDKISLVMCEIPLHSSRSITYVEKDSLVRQLAHGLHKVNTLALKYGLRGH 970
Macaca_mulatta    GAAKNSFAKLMDKISLVMCEIPLHSSRSITYVEKDSLVRQLAHGLHKVNTLALKYGLRGH 971
Callithrix_jacchus GAAKNSFAKLMEKISLVMCEIPLHSSRSITYVEKDSLVRQLAHGLHKVNTLALKYGLCGH 971
Canis_lupus_familiaris GAAKNSFAKLMDKISLAMESIPLHSSRSITYVEKDSLVRQLARGHLHKVNTLALKYGLRGH 971
Equus_caballus    GAAKNSFAKLMDKISLAMESIPLHSSWSITYVEKDSLVRQLARGHLHKVNTLALKYGLRGY 971
Bos_taurus        GAAKNSFAKLMDKISLAMDTMPLHNNRSITYVEKDSLVRQLARGHLHKVNTLALKYGLQGH 982
Heterocephalus_glaber STAKNSFAKLMDKISLAMESIPLHSSRSITYVEKDSLVRQLTRGLHKVNTLAPKYGLRGH 971
Rhinatrema_bivittatum TGAKSSFSKLMDKLSVLMONVPVGNQFTGYGEKNSLAQRLTRGLHKVNSQALKVGLQVQ 927
Xenopus_tropicalis NAARNSFSKLMKKIAIQMESTAVPSDSGASGDADSLFHLALGLQRIHSGKARGIQETNS 900
      .....1030.....1040.....1050.....1060.....1070.....1080

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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*:*      *:::*  * **** .***** *: *::: * . ::::*: *
Pavo_muticus      RPIMKSIASLQKHIFEFTQRLHTVEVERRSLRLELAELKLNFSKMKQEANKAQSILKEQLS 1089
Pavo_cristatus    RPIMKSIASLQKHIFEFTQRLHTVEVERRSLRLELAELKLNFSKMKQEANKAQSILKEQLS 1089
Gallus_gallus     RPIMKSIASLQKQIAEFTQRLHTVEVERCSLRRELAEFKLNFSKMKQEADKAQSILKEQLS 1091
Chelonia_mydas    IPVTKSIASLQKQIFEFTQRLHTAEVERRSLRLELSEFKRNLNEMKKEADKAQSILKEQLN 1033
Mus_musculus      IPIMKSTASLQKQIFGFTQRLHAAEVERRSRLRLEVTEYKRTVHEMKKELDKSQSLSLTQLN 1032
Rattus_norvegicus MPIMKSTASLQKQIFGFTQRLHAAEVERRSRLRLEVTEYKRTMHEMKKELDKSQSLSLTQLN 1032
Homo_sapiens      VPITKSTASLQKQILGFTQRLHAAEVERRSRLRLEVTEFKRSVNEMKKELDKAAGLQMQLN 1022
Pan_troglodytes   VPITKSTASLQKQILGFTQRLHAAEVERRSRLRLEVTEFKRSVNEMKKELDKAAGLQMQLN 1030
Macaca_mulatta    VPIMKSTASLQKQIFGFTQRLHAAEVERRSRLRLEVTEFKRSVNEMKKELDKAAGLQMQLN 1031
Callithrix_jacchus VPIMKGTASLHKQIFGFTQRLHAAEVERRSRLRLEVTEFKRSVNEMKKELDKAHGLQMQLN 1031
Canis_lupus_familiaris VPILKTTASLQKQIFGFTQRLHAAEVERRSRLRLEVTEFKRNVNEMKKEIDKAAGLQMQLN 1031
Equus_caballus    VPILKSTASLQKQIFGFTQRLHAAEVERRSRLRLEVTEFKRNVNEMKKELDKAAGLQMQLN 1031
Bos_taurus        VPILKSTASLQKQIFGFTQRLHAAEVERRSRLRLEVTEFKRNVNEMKKELDKAAGLQMQLN 1042
Heterocephalus_glaber VPIMKSIASLQKQIFGFTQRLHAAEVERRSRLRLEVSEFKRNTNEMKKELDKIRGLQMQLN 1031
Rhinatrema_bivittatum VPIMKSLASLQKQIFEFTQRLHMTVEVERRSLRMELAEKANVKNFKMETEKVQQLQEQIQ 987
Xenopus_tropicalis SPVMKSTEILKSQINEFIQRLHKAEVERRSMLRLELAQLKQIFMLETNTDSAEIRLNSQNR 960
.....1090.....1100.....1110.....1120.....1130.....1140

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*::      * ::::*  *::*:** *::*:** *::*:** *::*:** *::*:**
Pavo_muticus      LFKRS-----KLIHAKRFESACEELNNALHWEHQAOVLLNEQAQQLQELNNKLELYS 1141
Pavo_cristatus    LFKRS-----KLIHAKRFESACEELNNALHWEHQAOVLLNEQAQQLQELNNKLELYS 1141
Gallus_gallus     LFKQS-----KLIHAKRFESACEELNNALHWEHQAOVLLNEQAQQLQELNNKLELYS 1143
Chelonia_mydas    AFKQSNNTIYFLYQKLIHTERFESACEELNNALHREQEAQMLLNEQAQQLQELNYKLELHS 1093
Mus_musculus      EFKHS-----KLITHEKFESACEELNNALLREQQAQMLLNEQAQQLQELNYRLELHS 1084
Rattus_norvegicus EFKHS-----KLITHEKFESACEELNNALLREQQAQMLLNEQAQQLQELNYRLELHS 1084
Homo_sapiens      EFKQS-----KLITHEKFESACEELNNALLREEQAQMLLNEQAQQLQELNYKLELHS 1074
Pan_troglodytes   EFKQS-----KLITHEKFESACEELNNALLREQQAQMLLNEQAQQLQELNYRLELHS 1082
Macaca_mulatta    EFKQS-----KLITHEKFESACEELNNALLREQQAQMLLNEQAQQLQELNYRLELHS 1083
Callithrix_jacchus EFKQS-----KLITHEKFESACEELNNALLREQQAQMLLNEQAQQLQELNYRLELHS 1083
Canis_lupus_familiaris EFKQS-----KLITHEKFESACEELNNALLREQQAQMLLNEQAQQLQELNYRLELHS 1083
Equus_caballus    EFKQT-----KLITHEKFESACEELNNALLREQQAQMLLNEQAQQLQELNYRLELHS 1083
Bos_taurus        EFKQS-----KLITHEKFESACEELNNALLREQQAQMLLNEQAQQLQELNYRLELHS 1094
Heterocephalus_glaber DCKHS-----KLITHEKFESACEELNNALLREQQAQMLLNEQAQQLQELNCRLELHS 1083
Rhinatrema_bivittatum ALKQS-----KSVFEEKFGTACEELNSALYREQQAQILLIEQAQQLQKLNRYLELNS 1039
Xenopus_tropicalis KSKQT-----KAVSYEKFKMCDLKNALLREQQAQMLLNEQSQQLQELSYRIELHS 1012
.....1150.....1160.....1170.....1180.....1190.....1200

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::*:**:*  *::* *****:*.**.*.*:***: : :***** *:*.**:* **
Pavo_muticus      SEEADKNQVLSETVKSLSEAKMELRRKDQSLRQLNRLLTQLEQDKRRRLKESIHDAESALC 1201
Pavo_cristatus    SEEADKNQVLSETVKRLSEAKMELRRKDQSLRQLNRLLTQLEQDKRRRLKESIHDAESALC 1201
Gallus_gallus     SEEADKNQVLSETVKRLSEAKMELRRKDQSLRQLNRLLTQLEQDKRRRLKESIHDAESALC 1203
Chelonia_mydas    SEEADKNQTLSEAVKSLSEAKMELRRKDQSLRQLNKHLLTQLEQDKRRLEESIHDAESALR 1153
Mus_musculus      SEEADKNQTLGEAVKSLSEAKMELRRKDQSLRQLNRHLTQLEQDKRRLEENIRDAESALR 1144
Rattus_norvegicus SEEADKNQTLGEAVKSLSEAKMELRRKDQSLRQLNRHLTQLEQDKRRLEENIRDAESALR 1144
Homo_sapiens      SEEADKNQTLGEAVKSLSEAKMELRRKDQSLRQLNRHLTQLEQDKRRLEENIHDAESALR 1134
Pan_troglodytes   SEEADKNQTLGEAVKSLSEAKMELRRKDQSLRQLNRHLTQLEQDKRRLEENIHDAESALR 1142
Macaca_mulatta    SEEADKNQTLGEAVKSLSEAKMELRRKDQSLRQLNRHLTQLEQDKRRLEENIHDAESALR 1143
Callithrix_jacchus SEEADKNQTLGEAVKSLSEAKMELRRKDQSLRQLNRHLTQLEQDKRRLEENIHDAESALR 1143
Canis_lupus_familiaris SEEADKNQTLGEAVKSLSEAKMELRRKDQSLRQLNRHLTQLEQDKRRLEENIHDAESALR 1143
Equus_caballus    SEEADKNQTLGEAVKSLSEAKMELRRKDQSLRQLNRHLTQLEQDKRRLEENIHDAESALR 1143
Bos_taurus        SEEADKNQTLGEAVKSLSEAKMELRRKDQSLRQLNRHLTQLEQDKRRLEENIHDAESALR 1154
Heterocephalus_glaber SEEADKNQTLGEAVKSLSEAKMELRRKDQSLRQLNRHLTQLEQDKRRLEENIRDAESALR 1143
Rhinatrema_bivittatum TQGAEKDQTLTEAVKSLSEAKMELRRKDQSLRQLNRHFTQLEQDKRRLEESIHDAEALC 1099
Xenopus_tropicalis AEEAEKDQTLTEAVKSLSEAKLELERKGQCLHQLNRQLERMEQDKLRLEQIRDAENALW 1072
.....1210.....1220.....1230.....1240.....1250.....1260

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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*  ***:*  :  **:  :  ..*****  *  .  .::*:  *  **:*  *  ::  .  *
Pavo_muticus      MAAKDRELIINQMKSVEATLHTVRDQTLTLLSWTAATRNDFTLQPKLHLETFAVEGLKGGP 1261
Pavo_cristatus    MAAKDRELIINQMKSVEATLHTVRDQTLTLLSWTAATRNDFTLQPKLHLETFAVEGLKGGP 1261
Gallus_gallus     MAAKDRELIINQMKSVEATLHTVRDQTLTLLSWTAATRNDFTLQPKLHLETFAVEGLKGGP 1263
Chelonia_mydas    MAAKDKEFIASHMKSVEATLQKVRDQISLSRTAATRNDFTLQPKLHLETFAMEGLKGGP 1213
Mus_musculus      MAAKDKECVANHMRTIENMLHKVRDQISLSRTAATRNDFTLQPKLHLETFAMEGLKGGP 1204
Rattus_norvegicus MAAKDKECVANHMRTIENMLHKVRDQISLSRTAATRNDFTLQPKLHLETFAMEGLKGGP 1204
Homo_sapiens      MAAKDKECVANHMRAVENTLHKVRDQISLSWSAASRNDFTLQPKLHLETFAMEGLKGGP 1194
Pan_troglodytes   MAAKDKECVANHMRAVENTLHKVRDQISLSWSAASRNDFTLQPKLHLETFAMEGLKGGP 1202
Macaca_mulatta    MAAKDKECVANHMRAIENTLHKVRDQISLSWSAASRNDFTLQPKLHLETFAMEGLKGGP 1203
Callithrix_jacchus MAAKDKECVANHMRAVENTLHKVRDQISLSWSAASRNDFTLQPKLHLETFAMEGLKGGP 1203
Canis_lupus_familiaris MAAKDKECVANHMRTVENMLHKVRDQISLSRTAASRNDFTLQPKLHLETFAMEGLKGGP 1203
Equus_caballus    MAAKDKECVANHMRTVENMLHKVRDQISLSRTAASRNDFTLQPKLHLETFAMEGLKGGP 1203
Bos_taurus        MAAKDKECVANHMRTVENMLHKVRDQISLSRTAASRNDFTLQPKLHLETFAMEGLKGGP 1214
Heterocephalus_glaber MAAKDKECVVYHMRVTGSMRLKVRDQISLSRSASRNDFTLQPKLHLETFAMEGLKGGP 1203
Rhinatrema_bivittatum MAAKDKEKITSHMKCVETMFHKVRDQISLSWTAATKNEFTLLLPKLLPETFTMKGQLSGP 1159
Xenopus_tropicalis MIAKDREILVKHMKSVDSVFVKVRDQMSLG--CSSRNDIILQPKLHLEMLPILLEHSGRP 1130
.....1270.....1280.....1290.....1300.....1310.....1320

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*..*  *  :*  **::*:  :  .:::  *  :*  *  :  *  *  :*:****:*.  :
Pavo_muticus      EVVAFQAMIKSFMDVYQLASSRIDILVKETTPHHLHTAAPMSKLQTACLHSEILQL--- 1318
Pavo_cristatus    EVVAFQAMIKSFMDVYQLASSRIDILVKETTPHHLHTAAPMSKLQTACLHSEILQL--- 1318
Gallus_gallus     EVVAFQAMIKSFMDVYQLASSRIDILVKETAPHQLHTAAPMSKLQTACLHSEILQLAGR 1323
Chelonia_mydas    EVVAFQALIIISFMDVYQLASSRVATLEREIASHRHHIAALKSELQACLRENESLOSISR 1273
Mus_musculus      EVVACQAMIKSFMDVYQLASARISTLEKEMTSRSHIATLTKSELHTACLRENESLOSISMG 1263
Rattus_norvegicus EVVACQAMIKSFMDVYQLASTRISTLEKEMTSRSHIATLTKSELHTACLRENESLOSISIT 1264
Homo_sapiens      EVVACQAMIKSFMDVYQLASTRIMTLEKEMTSRSHIATLTKSELHTACLRENASLOSISIG 1253
Pan_troglodytes   EVVACQAMIKSFMDVYQLASTRIMTLEKEMTSRSHIATLTKSELHTACLRENASLOSISIG 1261
Macaca_mulatta    EVVACQAMIKSFMDVYQLASTRITLLEKEMTSRSHIATLTKSELHTACLRENASLOSISIG 1262
Callithrix_jacchus EVVACQAMIKSFMDVYQLASTRITLLEKEMTSRSHIATLTKSELHTACLRENASLOSISIG 1262
Canis_lupus_familiaris EVVACQAMIKSFMDVYQLASARIATLEKEMTSRSHIATLTKSELHTACLRENESLOSISIG 1262
Equus_caballus    EVVACQAMIKSFMDVYQLASARIATLEKEMTSRSHIATLTKSELHTACLRENESLOSISIG 1262
Bos_taurus        EVVACQAMIKSFMDVYQLASARIATLEKEMTSRSHIATLTKSELHTACLRENASLOSISIG 1273
Heterocephalus_glaber EVVACQAMIKSFMDVYQLASARIATLEKEMTSRSHIATLTKSELHTACLRENESLOSISIG 1262
Rhinatrema_bivittatum EVLACQNMIKSFVDIYQLICSRITLEREIASHKKHIAALKSELQACLRENESLOSISIG 1218
Xenopus_tropicalis EFFACQNMIKSFMDVYDFACTKLTTLEREIECHONHIAELKSELKTAACLRENENFPLTR- 1189
.....1330.....1340.....1350.....1360.....1370.....1380

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Pavo_muticus      ----- 1318
Pavo_cristatus    ----- 1318
Gallus_gallus     KCLRWWRRWRQAAAPPGAE-----RQAGRHSPPRSEPWCPCKADQELQQLV 1371
Chelonia_mydas    -----DSSNPVPMAS-----RSALQPDQSCIPDFLPLQAEADTSYRSI 1310
Mus_musculus      -----SRD-HSNLSVPS-----RAAAPMDTVGDLPLQAEALDIT 1296
Rattus_norvegicus -----NRDGRRLKRPSPGVFWLLPSSGQRTQMRPHHVSFEIVGLHTGFGSNP 1313
Homo_sapiens      -----SRD-HSNLSIPS-----RAPLPADTTGIGDFLPLKAEALDIT 1288
Pan_troglodytes   -----SRD-HSNLSIPS-----RAPLPADTTGIGDFLPLKAEALDIT 1296
Macaca_mulatta    -----SRD-HSNLSIPS-----RAPLPADTTGIGDFLPLKAEALDIT 1297
Callithrix_jacchus -----SRD-HSNLSIPS-----RAAVPADTTGVGDFLPLKAEALDIT 1297
Canis_lupus_familiaris -----SRD-HSNLSIPS-----RAALPADTVSVGDFLPLKAEALDIT 1297
Equus_caballus    -----SRD-HSNLSIPS-----RAALPGDTIVVGDFLPLKAEALDIT 1297
Bos_taurus        -----SRD-HSNLSIPS-----RAALPADTIDVGDFLPLKAEALDIT 1308
Heterocephalus_glaber -----SRN-HSNLSIPS-----RAALPADTVGVNDFLPLKAEALDIT 1297
Rhinatrema_bivittatum -----QEHTKFSMMS-----GTTFELEQKKLPDFLPLQAEALDIT 1252
Xenopus_tropicalis -----YNDNIKEVT-----KAEYLSDKTNGQDFLPLQAEALDIT 1222
.....1390.....1400.....1410.....1420.....1430.....1440

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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Pavo_muticus      ----- 1318
Pavo_cristatus    ----- 1318
Gallus_gallus     LSGLPGCRPVLGPDFWQAARDLEELVEQNSLSCHCCSSREGQAEARRHPGKKQODHOGH 1431
Chelonia_mydas    HN-----RSHSQSSSYSSALNISASTKRTIONGF----- 1339
Mus_musculus      -----YTFLKETFVNTAPHSLSQSSSPGVPTNA-KRPSQ-IGL----- 1332
Rattus_norvegicus -----GTRLPEISWFHGRLLLEHQGGRDETEPSPLGVSNPA-ADPQTNIGQRLRTPA 1363
Homo_sapiens      -----YTFLKETFINTVPHALTSSHSSPVTMSANANRPTQIGL----- 1326
Pan_troglodytes   -----YTFLKETFINTVPHALTSSHSSPVTMSANANRPTQIGL----- 1334
Macaca_mulatta    -----YTFLKETFINTVPHALTSSHSSPVTMSANANRPTQIGL----- 1335
Callithrix_jacchus -----YTFLKETFINTVPHALTSSHSSPVTMSANAKRPTQIGL----- 1335
Canis_lupus_familiaris -----YTFLKETFLN--PLTSS--HSSSVTMSANAKRPTQIG----- 1330
Equus_caballus     -----YAFLKETFVNPAPLTSS--QSSPVTMSANAKRPTQIGL----- 1333
Bos_taurus        -----YTFLKETLINSVPLASSS-NSSPVTMSATAKRPAQIGL----- 1345
Heterocephalus_glaber -----YAFLKETFINTAPHALTSRPSFFVTMSASVKGPQIGL----- 1335
Rhinatrema_bivittatum -----YSFLKDALG---SNRPRSPLLAIMNTTASSKRAIQSGF----- 1287
Xenopus_tropicalis -----HSQVKNGLESSEFHLPLTEASSVVYYSILPQRRLEPTS----- 1260
.....1450.....1460.....1470.....1480.....1490.....1500

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Pavo_muticus      ----- 1318
Pavo_cristatus    ----- 1318
Gallus_gallus     PKESAKIPLPLGAAPKETQRPAAAAALPGPARATLRKDEGAQTDTSDLLLADAEATGRQC 1491
Chelonia_mydas    ----- 1339
Mus_musculus      ----- 1332
Rattus_norvegicus KEFRRRIEDPOGDGNHIERPTVSTNLDPWEFPETKPKGLI----- 1403
Homo_sapiens      ----- 1326
Pan_troglodytes   ----- 1334
Macaca_mulatta    ----- 1335
Callithrix_jacchus ----- 1335
Canis_lupus_familiaris ----- 1330
Equus_caballus     ----- 1333
Bos_taurus        ----- 1345
Heterocephalus_glaber ----- 1335
Rhinatrema_bivittatum ----- 1287
Xenopus_tropicalis ----- 1260
.....1510.....1520.....1530.....1540.....1550.....1560

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Pavo_muticus      ----- 1318
Pavo_cristatus    ----- 1318
Gallus_gallus     HCAVPDSSSKPQLGQMSCKMVSMTARKCLDVLHVFPETVRRPTELLQHPQPTHGAPVS 1551
Chelonia_mydas    ----- 1339
Mus_musculus      ----- 1332
Rattus_norvegicus ----- 1403
Homo_sapiens      ----- 1326
Pan_troglodytes   ----- 1334
Macaca_mulatta    ----- 1335
Callithrix_jacchus ----- 1335
Canis_lupus_familiaris ----- 1330
Equus_caballus     ----- 1333
Bos_taurus        ----- 1345
Heterocephalus_glaber ----- 1335
Rhinatrema_bivittatum ----- 1287
Xenopus_tropicalis ----- 1260
.....1570.....1580.....1590.....1600.....1610.....1620

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/CCD171.fasta Date: Tue Feb 1 11:36:03 2022

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Pavo_muticus	-----	1318
Pavo_cristatus	-----	1318
Gallus_gallus	TLKRKCPLHPDQVPRQOHGARA PGCHRAPTYFC SREAWFLPEEEREALHTCSMKQKHP	1611
Chelonia_mydas	-----	1339
Mus_musculus	-----	1332
Rattus_norvegicus	-----	1403
Homo_sapiens	-----	1326
Pan_troglodytes	-----	1334
Macaca_mulatta	-----	1335
Callithrix_jacchus	-----	1335
Canis_lupus_familiaris	-----	1330
Equus_caballus	-----	1333
Bos_taurus	-----	1345
Heterocephalus_glaber	-----	1335
Rhinatrema_bivittatum	-----	1287
Xenopus_tropicalis	-----	1260
1630.....1640.....1650.....1660.....1670.....1680	

Pavo_muticus	-----	1318
Pavo_cristatus	-----	1318
Gallus_gallus	GNQPAASWEKESTSTYKTAPSEADWAEAGAKGHRWPWCKNCPGRGESTWSTKAERSSSP	1671
Chelonia_mydas	-----	1339
Mus_musculus	-----	1332
Rattus_norvegicus	-----	1403
Homo_sapiens	-----	1326
Pan_troglodytes	-----	1334
Macaca_mulatta	-----	1335
Callithrix_jacchus	-----	1335
Canis_lupus_familiaris	-----	1330
Equus_caballus	-----	1333
Bos_taurus	-----	1345
Heterocephalus_glaber	-----	1335
Rhinatrema_bivittatum	-----	1287
Xenopus_tropicalis	-----	1260
1690.....1700.....1710.....1720.....1730.....1740	

Pavo_muticus	-----	1318
Pavo_cristatus	-----	1318
Gallus_gallus	PGSVTF	1677
Chelonia_mydas	-----	1339
Mus_musculus	-----	1332
Rattus_norvegicus	-----	1403
Homo_sapiens	-----	1326
Pan_troglodytes	-----	1334
Macaca_mulatta	-----	1335
Callithrix_jacchus	-----	1335
Canis_lupus_familiaris	-----	1330
Equus_caballus	-----	1333
Bos_taurus	-----	1345
Heterocephalus_glaber	-----	1335
Rhinatrema_bivittatum	-----	1287
Xenopus_tropicalis	-----	1260
	