

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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Pavo_muticus	MYRSGSGRSGPSSSYSHRLKESGSAGSRASRSTSGPGPGRSRPPPPSP--TATGASP	58
Pavo_cristatus	MYRSGSGRSGPSSSYSHRLKESGSAGSRASRSTSGPGPGRSRPPPPSP--TATGASP	58
Gallus_gallus	MYRSGSGRSGPSSSYSHRLKESGSAGSRTSRSTSGPGPGRGRPPPPSPATAAATGASP	60
Mus_musculus	MYRSGS-----RSSVSSHRSKDGASGPPPGRPVGASSGPTR-RPSSPPPPSCSSL-RLP	53
Rattus_norvegicus	MYRSGS-----RSSVSSHHPKDDGGGPRSGRSGSSSGPAR-RPSSPPP-SCSSL-RLP	52
Homo_sapiens	MYRSGS-----RSSVSSHHPKDDGGGPRSGRSGSSSGPAR-RSSPPPPPSGSSS-RTP	53
Pan_troglodytes	MYRSGS-----RSSVSSHHPKDDGGGPRSGRSGSSSGPAR-RSSPPPPPSGSSS-RTP	53
Macaca_mulatta	MYRSGS-----RSSVSSHHPKDDGGGPRSGRSGSSSGPAR-RSSPPPPPSGSSS-RTP	53
Callithrix_jacchus	MYRSGS-----RSSVSSHHPKDDGGGPRSGRSGSSSGPAR-RSSPPPPPSGSSSRTP	54
Bos_taurus	MYRSGA-----RSSVSSHHPKESGGGDPRTGRSGSSSGPAR-RTSPP--SSCSSSRTP	52
Equus_caballus	MYRSGA-----RASVSSHHPKESGGGDPRTSRSGSSSGPAR-RASPP--PSCSSSRTP	52
Rhinatrema_bivittatum	-----MRGEWAWRLAVCAAASASRQAASVGAMYRVRLGRPRERERSSGSSGRRSP	50
Callorhinchus_milii	MYRNRAHRSGEKSRGWSGPGASGPGSQSRSDSGKWRERGSASSPPPPPHPLSSLSASSA	60
Xenopus_tropicalis	-----MSSRKRRKSEKRSLEERSRAVTMYRTPMRPRLSPDLSPEDITPRRES	45
Danio_rerio	-----MFRGTRPHRGGYRHPFPPSRGFGPRPGPHPPDRDPYRRPSPRRRYSF	47
	1.....10.....20.....30.....40.....50.....60	

Pavo_muticus	PRRHRSPPSGHR-----SASRR-----SPSPH	79
Pavo_cristatus	PRRHRSPPSGHR-----SASRR-----SPSPH	79
Gallus_gallus	PRRHRSPPSGHR-----GSSRR-----SPSPH	81
Mus_musculus	ARRHRSPPSGHRGRWASPPPRGRRGSPSPPRGRRASPSPTRGRRASPSPPRGRRGSPSP	113
Rattus_norvegicus	ARRHRSPPSGHRGRWASPPPRGRRGSPSPPRGRRASPSPPRGRRASPSPPRGRRVSPSP	112
Homo_sapiens	ARRPRSPSGHR-----GRRASPPPRGRR-----VSPSP	83
Pan_troglodytes	ARRPRSPSGHR-----GRRASPPPRGRR-----VSPSP	83
Macaca_mulatta	ARRPRSPSGHR-----GRRASPPPRGRR-----VSPSP	83
Callithrix_jacchus	ARRPRSPSGHR-----GRRASPPPRGRR-----VSPSP	84
Bos_taurus	ARRPRSPSGHR-----GRRASPPPRGRRASPSPPRGRRASPSPPRGRRGSPSP	102
Equus_caballus	ARRPRSPSGHR-----GRRASPPPRGRRGSPSPPRGRRASPSPPRPRRVSPSP	102
Rhinatrema_bivittatum	ALSPVRESRGR-----E	62
Callorhinchus_milii	LPSSSSSSSS-----SRRRSKSP-----GSASSY	85
Xenopus_tropicalis	SPDRSSRSWSR-----G	57
Danio_rerio	PDPADRYRGR-----PQR	61
	.....70.....80.....90.....100.....110.....120	

Pavo_muticus	RSRR-PPSPPGG-----AGSSGTRGR-----RGSEHGDSS-SRRRSPSLRSE	119
Pavo_cristatus	RSRR-PPSPPGG-----AGSSGTRGR-----RGSEHGDSS-SRRRSPSLRSE	119
Gallus_gallus	RSRR-PSSPPGG-----TGSGGTRSR-----RGSEHGDSS-SRRRSPSLRSE	121
Mus_musculus	RARRGSPSPPRSRRHYPPLGGFRGSIrgESRADFARDGRGDHPGGGGGSRRRSPGLCSD	173
Rattus_norvegicus	RARRGSPSPPRSRRHYPPLGGFRGSIrgESRADFARDGRGDHPGDSG-SRRRSPLGLCSD	171
Homo_sapiens	RARRGSPSPPRGRRLFPFPGAGFRGSSRGESRADYARDGRGDHPGDSG-SRRRSPLGLCSD	142
Pan_troglodytes	RARRGSPSPPRGRRLFPFPGAGFRGSSRGESRADYARDGRGDHPGDSG-SRRRSPLGLRSD	142
Macaca_mulatta	RARRGSPSPPRGRRLFPFPGAGFRGSSRGESRADYARDGRGDHPGDSG-SRRRSPLGLRSD	142
Callithrix_jacchus	RARRGSPSPPRGRRLFPFPGAGFRGSSRGESRADYARDGRGDHPGDSG-SRRRSPLGLRSD	143
Bos_taurus	RARRGSPSPPRGRRLFPFPGAGFRGSSRGESRADFARDGRGDHPGDSG-SRRRSPLGLRSD	161
Equus_caballus	RARRGSPSPPRGRRLFPFPGAGFRGSSRGESRADFTDRGDHPGDSG-SRRRSPLGLHSD	161
Rhinatrema_bivittatum	RERERQSPPRRRRSHSRPRPRIDSPVR-----SGTGGGRRCSPPSLHTD	107
Callorhinchus_milii	RRGEGGDRGGGGGWRQSSPPPPPTSRRYTTPPPDTGGLGPDYGPYSSHGDNRRRSPDYPPK	145
Xenopus_tropicalis	RSPGRRRSRSRGRSRSRPRRSRSRSR-----SRGRSHRSGRS	96
Danio_rerio	GYGRYSPPPRGGGLPVDHSLVITVG-----NELNSPSSFKG	98
130.....140.....150.....160.....170.....180	

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Pavo_muticus	SSLEQSLRITVGNDRYCIGTPERRR--LPDRLGSPIDNLS--DRDDMADGPIFTR--GLSG	174
Pavo_cristatus	SSLEQSLRITVGNDRYCIGTPERRR--LPDRLGSPIDNLS--DRDDMADGPIFTR--GPSG	174
Gallus_gallus	SSLEQSLRITVGNDRYCIGTPERRR--LPDRLGSPIDNLS--DRDDMADGPIFTR--GLSC	176
Mus_musculus	SSLEESLRITVGNDFHFCVSTPERRR--LSDRLGSPVDGLQDMRDDLTDSDVFTR--SSQC	230
Rattus_norvegicus	SSLEQSLRITVGNDFHFCVSTAERRR--LSDRLGSPVDGLEDMRDDLTDSDVFTR--SSQC	228
Homo_sapiens	S-LEKSLRITVGNDFHFCVSTPERRR--LSDRLGSPVDNLEDMDRDDLTDSDVFTR--SSQC	198
Pan_troglodytes	S-LEKSLRITVGNDFHFCVSTPERRR--LSDRLGSPVDNLEDMDRDDLTDSDVFTR--SSQC	198
Macaca_mulatta	S-LEKSLRITVGNDFHFCVSTPERRR--LSDRLGSPVDNLEDVDRDDLTDSDVFTR--SSQC	198
Callithrix_jacchus	S-LEQSLRITVGNDFHFCVSTPERRR--LSDRLGSPVDNLEDMDRDDLTDSDVFTR--SSQC	199
Bos_taurus	SSLEQSLRITVGNDFHFCVGIPERRR--LSDRLGSPVENLEDADRDDLTDSDVFTR--SSQC	218
Equus_caballus	SSLEQSLRITVGNDFHFCVGLPERRR--LSDRLGSPVDNLEDVDRDDLTDSDVFTR--SSQC	218
Rhinatrema_bivittatum	T--DQNSRRSRGNDQYLHSSS-----DSLNDQDRDDIADGPIFTR--SLS-	148
Callorhinchus_milii	SAIDRLRITVGNDRYCISPDRRHPSVLDRLGSPVDALYDAARDEMADGPIYTNPMQGS	205
Xenopus_tropicalis	RSRPRRSRSPYSRRRSPSPYSRR-----GHESQSHSYKYERESSDLRRYSP--SYRS	148
Danio_rerio	TDAPYVRDYAAGDSQYKKSYYSPRR-----SSYDEHGDKGSKRRSVSR--GR	143
	.....190.....200.....210.....220.....230.....240	

Pavo_muticus	PRGLERYLSHEDQPSGPFSPMRHEDDYR----NRDVFLHRSDYSSHYGR--REELPRGSDRD	229
Pavo_cristatus	PRGLERYLSHEDQPSGPFSPMRHEDDYR----NRDVFLHRSDYSSHYGR--REELPRGSDRD	229
Gallus_gallus	PRGLERYLSHEDQPSGPFSPMRHEDDYR----NRDVFLHRSDYSSHYGR--REDLSRGSDRD	231
Mus_musculus	SRGLERYISREEGPLSPFLGQLDEDYR----TRETFLHRPEFSPQSSC--HDELLRGTERN	285
Rattus_norvegicus	SRGLERYISREEGPLSPFLGQLDEDYR----TRETFLNRSEYSPQSRC--HDELLRGTERN	283
Homo_sapiens	SRGLERYISQEEGPLSPFLGQLDEDYR----TKETFLHRSDYSPHISC--HDELLRGTERN	253
Pan_troglodytes	SRGLERYISQEEGPLSPFLGQLDEDYR----TKETFLHRSDYSPHISC--HDELLRGTERN	253
Macaca_mulatta	SRGLERYISQEEGPLSPFLGQLDEDYR----TKETFLHRSDYSPHISC--HDELLRGTERN	253
Callithrix_jacchus	SRGLERYISQEEGPLSPFLGQLDEDYR----TKETFLHRSDYSPHISC--HDELLRGTERN	254
Bos_taurus	SRGLERYISREEAPLSPFLGQLDEDYR----ARETFVHRSDYSPHISC--HDDLLRGTERN	273
Equus_caballus	SRGLERYISREEGPLSPFLGQLDEDYR----ARETFVHRSDYSPHISC--HDELLRGTERN	273
Rhinatrema_bivittatum	-----SREEQPSSPYSLRHEDDYR----RSHSSLPDRDID-----	179
Callorhinchus_milii	THMQTMYPSPRDQAQGSQYTSRPREDYRGMPPPGDSFRRRPDYGSHYSSEREDGRRSSEPD	265
Xenopus_tropicalis	DKGADIPSSRADPLQLPPEHPSLTSLR----ATEGRRSSAERSPDIRG-----	192
Danio_rerio	SRGRSRSPGYGRSKSRPSRSRSRSYS----RGRSRGRSPE-----	180
	.....250.....260.....270.....280.....290.....300	

Pavo_muticus	GDKFRKSFYPS-----RPEERGREIKRPRYEKDEKLHCMSGEHQGFSSGTRNYRRRSR	282
Pavo_cristatus	GDKFRKSFYPS-----RPEERGREIKRPRYEKDEKLHCMSGEHQGFSSGTRNYRRRSR	282
Gallus_gallus	GDKFRKSFYPS-----RPEERAREIKRPRYEKDEKLHCMSGEHQGFSSAARNYRRRSR	284
Mus_musculus	RDCLKSSSYSI-----RSEERSREAKRPRYDDTEKVHSSGGDHSSFTSGTRNYRQRRS	338
Rattus_norvegicus	RDCLKSSSYSV-----RSEERSREAKRPRYDDNLEKAHSTGGDHSGFTSGTRNYRQRRS	336
Homo_sapiens	REKLKG--YSI-----RSEERSREAKRPRYDDTVKINSMGGDHPSTSGTRNYRQRRR	304
Pan_troglodytes	REKLKG--YSI-----RSEERSREAKRPRYDDTVKINSMGGDHPSTSGTRNYRQRRR	304
Macaca_mulatta	REKLKG--YSI-----RSEERNREAKRPRYDDTVKINSMGGDHPNFTSGTRNYRQRRR	304
Callithrix_jacchus	REKLKG--YSI-----RSEERSREAKRPRYDDTEKIHSMGGDHPSTTGTTRNYRQRRR	305
Bos_taurus	RDCLKGS--YSI-----RPEERSREAKRPRYDDTEKMHNMGSDHPSFTSGTRNYRQRRR	325
Equus_caballus	RDCLKGS--YSI-----RPEERSREAKRPRYDDTEKIHSMGGDHPSTSGTRNYRQRRR	325
Rhinatrema_bivittatum	-----RPRVDSYPSKRPRYEEQQAQSLTSDYKGYGSGSHVYRRSPS	221
Callorhinchus_milii	LDKLKASYSYSHSRCDDRSRELDRGRDTKRARLEHRSHSRDRSHSHERRSPERHRRNYSRNP	325
Xenopus_tropicalis	-----LGSGNVDPDNKMGIIYQGTITDSQLRPGYAQTIPGLQEELSELRR	234
Danio_rerio	-----RAKSRRGRSKSRPRGRSYSRSRSRSRSRDKSRRARSRRSRKS	222
310.....320.....330.....340.....350.....360	

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Pavo_muticus      S-----LSRSRSPSPSYLNEEFRELDLARRKREEEEE-RNRNLN---HDV 322
Pavo_cristatus    S-----LSRSRSPSPSYLNEEFRELDLARRKREEEEE-RNRNLN---HDV 322
Gallus_gallus     SR-----SLRSRSPSPSYLNEEFRELDLARRKREEEEE-RNRNLN---HDV 326
Mus_musculus      S-----PSPRFLDPEFRELDLARRKREEEEEEQSRSLs---QEL 373
Rattus_norvegicus S-----PSPRFLDPEFRELDLARRKREEEEEEQSKSLs---QEL 371
Homo_sapiens      S-----PSPRFLDPEFRELDLARRKREEEEEERSRSLs---QEL 339
Pan_troglodytes   S-----PSPRFLDPEFRELDLARRKREEEEEERSRSLs---QEL 339
Macaca_mulatta    S-----PSPRFLDPEFRELDLARRKREEEEEERSRSLs---QEL 340
Callithrix_jacchus S-----PSPRFLDPEFRELDLARRKREEEEEERSRSLs---QEM 360
Bos_taurus        S-----PSPRFLDPEFRELDLARRKREEEEEERSRSLs---QEL 360
Equus_caballus    S-----PSPRFLDPEFRELDLARRKREEEEEERSRSLs---QEL 360
Rhinatrema_bivittatum P-----SLYRREELWEQELTTRKRGQEE-RNRVLS---HES 253
Callorhinchus_milii ERDRSLSPAPKPSNSHAQDHSYQKDVSKNNEFEIARRRKEQERIKAEMLPTPRYE 385
Xenopus_tropicalis P-----LLEPLMPKKSILKKRADPEQATGDPK----- 261
Danio_rerio       R-----PRSRSRERSRSRGRSRGRSRARSRSSSSS----- 252
.....370.....380.....390.....400.....410.....420

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Pavo_muticus      S-----DSGYVIPGLTNTLQTSPEPTY-RPEEIPSPMPKKSILKKRVEME--VESPIQLE 374
Pavo_cristatus    S-----DSGYVIPGLTNTLQTSPEPTY-RPEEIPSPMPKKSILKKRVEME--VESPIQLE 374
Gallus_gallus     S-----DSGYVIPGLTNTLQTSPEPTY-RPEEIPSPMPKKSILKKRVEME--VESPVQPE 378
Mus_musculus      VGVGDDQIGCSIPGLAGVLTASEPGYSLQRPEEVPMMPKKSILKKRIEAD--MKPSLQLE 431
Rattus_norvegicus VGVDDGQIGCSIPGLSGVLTASEPGYSLHRSEIIPVMPKKSILKKRIEVD--MKPSLQLE 429
Homo_sapiens      VGVDDGGTIGCSIPGLSGVLTASEPGYSLHRPEEVSVMPKKSILKKRIEVDI-MEPSMQLE 398
Pan_troglodytes   VGVDDGGTIGCSIPGLSGVLTASEPGYSLHRPEEVSVMPKKSILKKRIEVDI-MEPSMQLE 398
Macaca_mulatta    VGVDDGGTIGCSIPGLSGVLTASEPGYSLHRPEEVSVMPKKSILKKRIEVDI-MEPSMQLE 398
Callithrix_jacchus VGVDDSGTIGCSIPGLSGVLTASEPGYSLHRPEEVSVMPKKSILKKRIEVDI-MEPSMQLE 399
Bos_taurus        VGVDSGGTISCPPIGLSGVLTASEPGYSLHRPEEVSVMPKKSILKKRIEVD--MEPSLQLE 418
Equus_caballus    VGVDDGGTISCPPIGLSGVLTASEPGYSLHRPEEVSVMPKKSILKKRIEVD--MEPSMQLE 418
Rhinatrema_bivittatum SGPDFKLSGSVNP-----LGSFLRQQQDEEVQVPVKKSILKKRLEPEPETPVPVKRE 304
Callorhinchus_milii LNSYGLPEHYDKGLMGVTQSSDSGYVLHRPDEAPPMPKKSILKKRTETGFEPsATMQFD 445
Xenopus_tropicalis -----QAAGYLNNKDIPMLGFSFSSEPSGDSAGRPPVVPQGAIGKP-----IQSD 305
Danio_rerio       -----SSGSSRSRHSVSRRRSKSGKFQSEQEDFSELEKARRRKEIQDMLIKPAKSILKK 306
.....430.....440.....450.....460.....470.....480

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Pavo_muticus      EFSSSPAPSKDLPILLSHSSLPQSNSTAPFSSEVENFLKQFNKDSVMESANKELHDGLYE 434
Pavo_cristatus    EFSSSPAPSKDLPILLSHSSLPQSNSTAPFSSEVENFLKQFNKDSVMESANKELHDGLYE 434
Gallus_gallus     EFASSPAPSKDLPILLSHSSLPQSNNTAPFSSEVENFLKQFNKDSVMESANKELHDGLYE 438
Mus_musculus      SFSSGASSGEDHPLYSEHSPLPLSGAIAAFTSEIEN-----KGTTV EADLKEPQSNLYQ 485
Rattus_norvegicus SFSSGTSSCEDRPLYSEHSPLPLSGAIAAFTSEIEN-----KGTTV EADLKEPQSNLYQ 483
Homo_sapiens      SFSSSTSSSQDHPLYSGHPSLPLSGAIAAFASEIEN-----KGTMTVETALKEPQGNLYQ 452
Pan_troglodytes   SFSSSTSSSQDHPLYSGHPSLPLSGAIAAFASEIEN-----KGTMTVETALKEPQGNLYQ 452
Macaca_mulatta    SFSSSTSSSQDHPLYSGHPSLPLSGAIAAFASEIEN-----KGTMTVETALKEPQGNLYQ 452
Callithrix_jacchus SFSSSTSSSQDHPLYSGHPSLPLSGAIAAFASEIEN-----KGTMTVETALKEPQGNLYQ 453
Bos_taurus        SFPSSTSSSQDHPLYSGHSSPLPLSGAIAAFASEVENN----KGTMTVETTLKESQGNLYQ 473
Equus_caballus    SFSGSTGSSQDHSLSYSGHPSLPLSGAIAAFASEIENN----KGTMTVETTLKEPQGNLYQ 473
Rhinatrema_bivittatum DFGSSSVSNKE-----LASRAPAPQISKPFTEIEKFLNRFTKGATAGTIYQKPAS---- 355
Callorhinchus_milii EYRVGTSSQNTHEQESYLPSONYMRLPQHEPSFPKIEP-----FSYTDSDREREIHVAV 500
Xenopus_tropicalis SLSTNRMNIPTVAPTGSNSGPSLSENKASGLGNKNG-----SQLSHGHKMEDFLFS 356
Danio_rerio       RVDSSSETDSPMLMQISDSPRNSDGGLSHEAEQLLCALS-----KTMDPSVLSSMLGKSSD 362
.....490.....500.....510.....520.....530.....540

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                                * :. * :
Pavo_muticus      WNPLSVAPKDTFTY-----EEKFGSFLSHEEKIEPKSEPADRHTDFLLPHERASQDGS GF 489
Pavo_cristatus    WNPLSVAPKDTFTY-----EEKFGSFLSHEEKIEPKSEPADRHTDFLLPHERASQDGS GF 489
Gallus_gallus     WNPLSVAPKDTFTY-----EEKFGSFLSHEEKIEPKSEPADRHTDFLLPHERASQDGS GF 493
Mus_musculus      WGPLREIPKDNS-----EKFDSFLGFKEKLDLKAEGLEQQTDFFLLPHERASQDGS GF 537
Rattus_norvegicus WGPLREIPKDNS-----EKFDSFLCFKEKLDLKAEGLEQQTDFFLLPHERASQDGS GF 535
Homo_sapiens      WGPLPGIPKDNSPL----REKFGSFLCHKDNLDLKAEGPERHTDFLLPHERASQDGS GF 507
Pan_troglodytes   WGPLPGIPKDNSPL----REKFGSFLCHKDNLDLKAEGPERHTDFLLPHERASQDGS GF 507
Macaca_mulatta    WGPLPGIPKDNSPL----REKFGSFLCHKDNLDLKAEGPERHTDFLLPHERASQDGS GF 507
Callithrix_jacchus WGPLPGIPKDNSPL----REKFGSFLCHKDNLDLKAEGPERHTDFLLPHERASQDGS GF 508
Bos_taurus        WGPLPGIPKDNSPL----REKFGSFLCHKDNLDMKAEGPERHTDFLLPHERASQDGS GF 528
Equus_caballus    WGPLPGIPKDNSPL----REKFGSFLSHKEKLDLDMKAEGPERHTDFLLPHERASQDGS GF 528
Rhinatrema_bivittatum -TPQSGVPGDSFQVNKAAG-----KPEPKQEAADRQSDFFLLPHERASQDGS GF 402
Callorhinchus_milii QGILPCLTNTNFSY----ERSLVAKYCGKSEIELGPEENVDRVSDFFLPHERATQDAGGF 555
Xenopus_tropicalis SDAMKLFSDAANSY-----KTAERKDSFLPYEPPKQAKTL 392
Danio_rerio       GNVLEELISKIHPS-----REDLGDLFLAREKGRQ-TSDL 396
.....550.....560.....570.....580.....590.....600

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      . . : :      . . : : *** : :
Pavo_muticus      SRILGMMADSV--SAQEKRRRSFPDIEDEEKFLYGDEDE-DTKTESHLVQKPPVS----- 541
Pavo_cristatus    SRILGMMADSV--SAQEKRRRSFPDIEDEEKFLYGDEDE-DTKTESHLVQKPPVS----- 541
Gallus_gallus     SRILGMMADSV--SAQEKRRRSFPDIEDEEKFLYGDEDE-DAKTESHLVQNPVS----- 545
Mus_musculus      SRILSMLADPT--ITQEKRRRSFPDIEDEEKFLYGDEEE-DIKSES--PLKSLED----- 587
Rattus_norvegicus SRILSMLADPT--STQEKRRRSFPDIEDEEKFLYGDEEEEDIKSES--PPKSLED----- 586
Homo_sapiens      SRILSMLADST--STQEKRRRSFPDIEDEEKFLYGDEEE-DLKAES--VPKPLGS----- 557
Pan_troglodytes   SRILSMLADST--STQEKRRRSFPDIEDEEKFLYGDEEE-DLKAES--LPKPLGS----- 557
Macaca_mulatta    SRILSMLADST--STQEKRRRSFPDIEDEEKFLYGDEEE-DLKAES--LPKPLGS----- 557
Callithrix_jacchus SRILSMLADST--STQEKRRRSFPDIEDEEKFLYGDEEE-DLKVES--LPKPLGS----- 558
Bos_taurus        SCILSMLADST--STQEKRRRSFPDIEDEEKFLYGDEEE-DLKAES--PPKPLGS----- 578
Equus_caballus    SRILSMLADST--STQEKRRRSFPDIEDEEKFLYGDEEE-DLKVDS--PPKPLGG----- 578
Rhinatrema_bivittatum SRILGLMADST--SVPVKKPSTVKEIEDEEKFLYGDEEE-EVKPKAPPPPPQQQQQP-- 457
Callorhinchus_milii SRVLGLLTEAENC SLQERRKRSFPDIEDEEKFLYGDEDE--EKTEPVKYKKAEP-- 608
Xenopus_tropicalis FVPVDPKVKEPM---AGPKNQRLSEVDDEELFLYGDEEV----- 428
Danio_rerio       TEFLGMIAEVA---QQHNPKKS LTEIEDEEKFLYGDELEADEVTPAKEIATDSSYPDTRE 453
.....610.....620.....630.....640.....650.....660

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      :.      .      *: : : : ***
Pavo_muticus      --CSSEVINQKVS LPPSPAPAVKLDPLEEPNA-----EYAKIHDLLK 582
Pavo_cristatus    --CSSEVINQKVS LPPSPAPAVKLDPLEEPNA-----EYAKIHDLLK 582
Gallus_gallus     --CSSEVINQKVS LPPSPAPAVKLDPLEEPNA-----EYAKIHDLLK 586
Mus_musculus      --PESAGTROKANS L--STPAVKLESLEESNP-----EYAKIHNLK 626
Rattus_norvegicus --AESTGTROKNS L--STPAVKLESLEESNP-----EYAKIHDLLK 625
Homo_sapiens      --SESEVMROKASS LPS-SAPAVKLESLEETNP-----EYAKIHDLLK 597
Pan_troglodytes   --SESEVMROKASS LPS-SAPAVKLESLEETNP-----EYAKIHDLLK 597
Macaca_mulatta    --SESEVTROKASS LPS-SAPAVKLESLEETNP-----EYAKIHDLLK 597
Callithrix_jacchus --SESEVMROKASS LPS-SAPAVKLESLEETNP-----EYAKIHDLLK 598
Bos_taurus        --SESEVMROKASS LPS-SAPTVKLESLEETNP-----EYAKIHDLLK 618
Equus_caballus    --SESEVMROKASS LPS-SAPAVKLESLEETNP-----EYAKIHDLLK 618
Rhinatrema_bivittatum PPSSAPHTITQCLPASRATQAPVVPAPVPEESSNSQ-----EYEQIHDLLK 503
Callorhinchus_milii ---EFKPV PANRNV LPIRQSSLPAGASTAASVKPDE-----EYAKIHDLLK 651
Xenopus_tropicalis ---KKPNEVSSKTAPAKTPPTIPANNSTQ-----EFEKIHDLLK 465
Danio_rerio       HGTAPYSFTRTVENVPSRSATPEVHAEEEPHDFPPGVGPQDVTVRSEVEEYEQIHDLLK 513
.....670.....680.....690.....700.....710.....720

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*****:**:**:** *****. :
Pavo_muticus      TIGLDIGVAEIGRLAIRTQERLHGKKLAS--RSPDRRSSDT----- 621
Pavo_cristatus    TIGLDIGVAEIGRLAIRTQERLHGKKLAS--RSPDRRSSDT----- 621
Gallus_gallus     TIGLDIGVAEIGRLAIRTQERLHGKKLAS--RSPDRRSSDT----- 625
Mus_musculus      TIGLDIGVAEIGKLAARTQERLHGKKPSSR--PSADRRLSADRHLSGDRHFSADRCSSVEH 685
Rattus_norvegicus TIGLDIGVAEIGKLAARTQERLHGKKPSSR--SSADRRSSAD-----RHFSADRCSSVDH 678
Homo_sapiens      TIGLDIGVAEISQLAARTQERLHGKKPSLR--SSADRRSSVD-----RYFSADHCSSVDH 650
Pan_troglodytes   TIGLDIGVAEISQLAARTQERLHGKKPSLR--SSADRRSSVD-----RYFSADHCSSVDH 650
Macaca_mulatta    TIGLDIGVAEISQLAARTQERLHGKKPSLR--SSADRRSSVD-----QYFSADRCSSVDH 650
Callithrix_jacchus TIGLDIGVAEISQLAARTQERLHGKKPSLR--SSADRRSSVD-----RYFSADRCSSVDH 651
Bos_taurus        TIGLDIGVAEISKLAARTQERLHGKKPSG--SSADRRSSAD-----RHFSADRCSSVDH 670
Equus_caballus    TIGLDIGVAEISKLAARTQERLHGKKPSR--SSADRRSSVD-----RHFSADRCSSVER 670
Rhinatrema_bivittatum TIGLDIGVAEIGKLAVRTQERLHGKKPTS--RSPDRHALDS----- 542
Callorhinchus_milii TIGLDIGVSEISKLAARTQERLHGKKPSTRSPDRTSEAQ----- 690
Xenopus_tropicalis TIGLDIGVAEIGKLAVRTQERLHGKKPAPPSAQPVSKQPPQAGASKQLPQAASKQSPVATS 525
Danio_rerio       TIGLDIGVAEISKMAARTQERLHGKVPAAKK--TPVRRQSDR----- 552
.....730.....740.....750.....760.....770.....780

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Pavo_muticus      -----RRIDPWLRR--SRSDTRSPESGQQHSASPPFSFQQSKDPS 660
Pavo_cristatus    -----RRIDPWLRR--SRSDTRSPESGQQHSASPPFSFQQSKDPS 660
Gallus_gallus     -----RRIDPWLRR--SRSDTRSPESGQQHSASPPFSFQQSKDPS 664
Mus_musculus      SFTAD-----WRSSDPHRPESRETHHSNTQSPEVSHPHPASPVDPYLLRTKNP 733
Rattus_norvegicus SFTTD-----WHSSDPHRPESREAHHSNTQSPEVSHPHPASLVDLYLRTKNP 726
Homo_sapiens      RFSADRCSSVDHCFSSADRRSSDPHRLESREAHHSNTHSPEVSHPHPPSPVDPYLLTKNSP 710
Pan_troglodytes   RFSADRCSSVDHCFSSADRRSSDPHRLESREAHHSNTHSPEVSHPHPPSPVDPYLLTKNSP 710
Macaca_mulatta    RFSADRCSSVDHCFSSADRRSSDPHRLESREAHHSNTHSPEVSHPHPPSPVDPYLLTKNSP 710
Callithrix_jacchus RFSTDRCSSVDHCFSSADRRSSDPHRLESREAHHSNTHSPEVSHPHPPSPVDPYLLTKNSP 711
Bos_taurus        RFSAD-----RRSADPHRLESVEVHHSNTHSPEVSRPHQVSPVDPYLLTKNSP 718
Equus_caballus    RFSAD-----RRSADPHRLESVEVHHSNTHSPEVSRPHQVSPVDPYLLTKNSP 718
Rhinatrema_bivittatum -----RRQESWESRR--SRSDTRSPESSHKRSESPKGSSQASRDNA 581
Callorhinchus_milii -----KISSNKRRTIRSETKSEPHPRPVGKSFTPEISG 724
Xenopus_tropicalis NQPPQTASQQPLQPVPSQPSKQPPVSHQLAQKPSLPAPPOKPELQHSFADSGSKTAVSV 585
Danio_rerio       -----KHSRSRSSSSSSSGSGSRSSSRSSQSSSRSSSRSS 587
.....790.....800.....810.....820.....830.....840

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Pavo_muticus      SLQKSEYMKNKLGQDIPPCAPDQPLPSISLIPSVPPAPASLPAPTISVSQYQIPNYSQF 720
Pavo_cristatus    SLQKSEYMKNKPGGQDIPPCAPDQPLPSVSLIPSVPPAPASLPAPTISVSQYQIPNYSQF 720
Gallus_gallus     SLQKSEYTKNKGQDIPPCAPDQPLPSVSLIPSVPPAPASLPAPTISVSQYQIPNYSQF 724
Mus_musculus      PFLKSDHPVCHVSGPEVVGSGFQSSVAVRCMLPSAPSTPIRLP-HSAALSQFHIPRASQF 792
Rattus_norvegicus PFLKSDHPVGHVSGAEVVGSGFQSSVAVRCMLPSAPSTPIRLP-HSAALSQFHIPRASQF 785
Homo_sapiens      PFLKSDHPVGHISGPEVVGSGFQSSVAVRCMLPSAPSTPIRLP-HTAALSQFHMPPRASQF 769
Pan_troglodytes   PFLKSDHPVGHISGPEVVGSGFQSSVAVRCMLPSAPSTPIRLP-HTAALSQFHMPPRASQF 769
Macaca_mulatta    PFLKSDHPVGHISGPEVVGSGFQSSVAVRCMLPSAPSTPIRLP-HTAALSQFHMPPRASQF 769
Callithrix_jacchus PFLKSDHPMGHISGPEVVGSGFQSSVAVRCMLPSAPSTPIRLP-HSAALSQFHMPPRASQF 770
Bos_taurus        PFLKSDHPMGHIVGPEVVGSGFQSSVAVRCMLPSAPSTPIRLP-HPASLSQFHVPPRASQF 777
Equus_caballus    PFLKSDHPVGHISGPEVVGSGFQSSVAVRCMLPSAPSTPIRLP-HPASLSQFHMPPRASQF 777
Rhinatrema_bivittatum AYSSSKYGKRSTEPGTDMGQAVPSAGLEKSVHTVPSTSPVLP--PTSGTIPYQIPNYAQY 639
Callorhinchus_milii PYSRVMETKEESFQHEIIVTPSEPERMTPOASAVSSSLRRPPLLRTPAPGSCIVPPFGQY 784
Xenopus_tropicalis PGAKVNEREPQSPRKTNQVPMPIPVVKEKAPPVPAPKVEIPVPATTANLQPEPAPPPISP 645
Danio_rerio       RSGSLNHTSSRSKKKSVSEKASPHVHSQSKKDTQPAVPESNWPPTPTPAQSYPSRPGVL 647
.....850.....860.....870.....880.....890.....900

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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Pavo_muticus	TTTQV-----	PPNY	PPPTLAPPGYDAYGHY	MAY	AAPGWTMY	PPTQQPNPAL	PE	768			
Pavo_cristatus	TTTQV-----	PPNY	PPPTLAPPGYDAYGHY	MAY	AAPGWTMY	PPTQQPNPAL	PE	768			
Gallus_gallus	TTTQM-----	PPNY	PPPTLAPPGYDAYGHY	MAY	AAPGWTMY	PPTQQPNPAL	PE	772			
Mus_musculus	AAARI-----	PPNY	QGSVIPASFDAYRHY	MAY	AASRWPMY	PASQPPSHPL	SD	840			
Rattus_norvegicus	AAARI-----	SPNY	QGTVIPASFDAYRHY	MAY	AASRWPMY	PASQPPSHPL	SD	833			
Homo_sapiens	AAARI-----	PPNY	QGAIPASFDAYRHY	MAY	AASRWPMY	PTSQPSNH	VP	817			
Pan_troglodytes	AAARI-----	PPNY	QGAIPASFDAYRHY	MAY	AASRWPMY	PTSQPSNH	VP	817			
Macaca_mulatta	AAARI-----	PPNY	QGAIPASFDAYRHY	MAY	AASRWPMY	PTSQPSNH	VP	817			
Callithrix_jacchus	AAARI-----	PPSY	QGAIPASFDAYRHY	MAY	AASRWPMY	PTSQPSNH	VP	818			
Bos_taurus	AAARI-----	PPNY	QGAIPASFDAYRHY	MAY	AASRWPMY	PASQPSNH	PLPD	825			
Equus_caballus	AAARI-----	PPNY	QSAIPASFDAYRHY	MAY	AASRWPMY	PTSQPANH	PLPE	825			
Rhinatrema_bivittatum	PGVQM-----	PPNY	GHLSPVPPGFDYGHY	LAY	ASQTWPMY	PSSQQPSIKLP	Q	688			
Callorhinchus_milii	PIRVINY-----	PP	-----	TAPLPNFNQYGRY	MSCPATTAWPM	FPPMPLAEPYVQ	PE	830			
Xenopus_tropicalis	SPITMSPYPPPAQMVP	PGYGMPPSVPPPN	YNYPSPYVAY	PTSSWSMYQ	QIHAP	AAHIPP		703			
Danio_rerio	PHPPYPGP-----	PPREIMPPDYRTHGY	GAYGNYPY	MPPGWPMY	PPTGMP	-----	VP	695			
910.....920.....930.....940.....950.....960					

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Pavo_muticus	THGLLT	MAMS	AN	TR	PN	LR	VI	ETVSMRKDAADV
Pavo_cristatus	THGLLT	MAMS	AN	TR	PN	LR	VI	ETVSMRKDAADV
Gallus_gallus	AHGLLT	MAMS	AN	TR	PN	LR	VI	ETVSMRKDAADV
Mus_musculus	PHRLLP	VT	KQ	AARS	SR	PN	LR	VIPTVTP---
Rattus_norvegicus	PHRLIP	VT	KQ	ATRS	SR	PN	LR	VIPTVTP---
Homo_sapiens	PHRIMP	IT	KQ	ATRS	SR	PN	LR	VIPTVTP---
Pan_troglodytes	PHRIMP	IT	KQ	ATRS	SR	PN	LR	VIPTVTP---
Macaca_mulatta	PHRIMP	IT	KQ	ATRS	SR	PN	LR	VIPTVTP---
Callithrix_jacchus	PHRIMP	IT	KQ	ATRS	SR	PN	LR	VIPTVTP---
Bos_taurus	SHRT	VP	VS	KQ	ATRS	SR	PN	LRVIPTVTP---
Equus_caballus	PHRVMP	VS	KQ	ATRS	SR	PN	LR	VIPTVTP---
Rhinatrema_bivittatum	PP	-----	NS	TR	PN	LR	VI	QPV
Callorhinchus_milii	PIS	PV	IL	AQ	Q	PK	VAR	PNLRVIETTDG-----
Xenopus_tropicalis	PSHMV	VP	PI	PN	LR	GN	LR	IIETKGDIX--
Danio_rerio	PPSQID	PI	YS	LN	ME	RP	FL	KTIKNVTSESKADNTKKAPSKLDAVASKAITTDHFQRK----
	970.....	980.....	990.....	1000.....	1010.....	1020	

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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Pavo_muticus      RREKDGHKDPLLVEVNRLOENIMKEISELHKESDAADKKQSELDKVAQILGINIFEKPRK 948
Pavo_cristatus    RREKDGHKDPLLVEVNRLOENIMKEISELHKESDAADKKQSELDKVAQILGINIFEKPRK 948
Gallus_gallus     RREKDGHKDPLLVEVNRLOENIMKEISELHKESDAADKKQSELDKVAQILGINIFEKPRK 952
Mus_musculus      RREKDGHKDPLLMEVSRLODSIMKIDIAELHKETEEAEKKQSELDKVAQILGIDIFDKSLK 1013
Rattus_norvegicus RREKDGHKDPLLMEVSRLOEGIMKIDIAELHKETEEAGKKQSELDKVAQILGIDIFDKSLK 1006
Homo_sapiens      RREKDGHKDPLLVEVSRLODNIMKIDIAELRQEAEEAEKKQSELDKVAQILGINIFDKSQK 990
Pan_troglodytes   RREKDGHKDPLLVEVSRLODNIMKIDIAELRQEAEEAEKKQSELDKVAQILGINIFDKSQK 990
Macaca_mulatta    RREKDGHKDPLLVEVSRLODNIMKIDIAELRREAEAEKKQSELDKVAQILGINIFDKSQK 990
Callithrix_jacchus RREKDGHKDPLLVEVSRLODNIMKIDIAELRQEAEEAEKKQSELDKVAQILGINIFDKSQK 991
Bos_taurus        RREKDGHKDPLLVEVSRLODNIMKIDIAELRQEAEEAEKKQSELDKVAQILGINISDKSQK 998
Equus_caballus    RREKDGHKDPLLVEVSRLODNIVKDMAELRQEAEEAEKKQSELDKVAQILGINVLDKSQK 998
Rhinatrema_bivittatum RREKDGHKDPLLVEVNRLODNIIKEITELRKMSEISEKKQTELDKIAQILGISIPEKVRK 847
Callorhinchus_milii RREKDGHKDPLLVEVNGKLOEDITRQMAVVVRQAEETAKKLSLDKVAQILGALIHITOP 1003
Xenopus_tropicalis QREKYGHKDPLLVEELNSVLDSAQKQIKALDLEIAEANKKQQQLSKVAEILGIKPPDLAEK 868
Danio_rerio       RREKDGHKDPLLVELGRLOEDAMAQISKLRSEQKEADQKHEELVKVALILGIDKEWKISS 864
.....1090.....1100.....1110.....1120.....1130.....1140

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Pavo_muticus      ----- 948
Pavo_cristatus    ----- 948
Gallus_gallus     ----- 952
Mus_musculus      ----- 1013
Rattus_norvegicus ----- 1006
Homo_sapiens      ----- 990
Pan_troglodytes   ----- 990
Macaca_mulatta    ----- 990
Callithrix_jacchus ----- 991
Bos_taurus        ----- 998
Equus_caballus    ----- 998
Rhinatrema_bivittatum ----- 847
Callorhinchus_milii N----- 1004
Xenopus_tropicalis HSSEKTFITKKEKSRSPSPSPARSKGSDSDPKSTSDSKGSSSKTSSDPPTKDWEKHSSDVGV 928
Danio_rerio       ----- 864
.....1150.....1160.....1170.....1180.....1190.....1200

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Pavo_muticus      -----PSVETKDSSEKNSKSENTKGLEKTTSSN-----KESKPTNEK 985
Pavo_cristatus    -----PSVETKDSSEKNSKSENTKGLEKTTSSN-----KESKPTNEK 985
Gallus_gallus     -----PSVETKDSSEKNSKSENTKGLEKATSSN-----KESKPTNEK 989
Mus_musculus      -----SSNDSKESTEKP-EKEKSKSPEKELSPSNSSSNKESKMN-EK 1054
Rattus_norvegicus -----SANDSKESTEKP-EKEKSKSPEKELSPSNPSSNNKESKVN-EK 1047
Homo_sapiens      -----SLSDSREPTTEKPGKAEKSKSPEKVSSFSNSSSN-KESKVNNEK 1032
Pan_troglodytes   -----SLSDSREPTTEKPGKAEKSKSPEKVSSFSNSSSN-KESKVNNEK 1032
Macaca_mulatta    -----SLSDSKEPTEKPGKAEKSKSPEKVSSFSNSSSN-KESKVNNEK 1032
Callithrix_jacchus -----SLSDSKEPTEKPGKAEKSKSPEKGSSFSNSSSN-KESKVNNEK 1033
Bos_taurus        -----SSSDSREPTTEKPGKAEKSKSPEKVSSSNSSSNCKESKVNSEN 1041
Equus_caballus    -----SSNDSKEATEKPGKAEKSKSPEKVSSSNSSSNKESKINNEN 1041
Rhinatrema_bivittatum -----IDT-KELPVEKNSRLEKTRSPKSAVLP-----KDSKLSLEK 883
Callorhinchus_milii -----ISVRSKEDSEEILSQKAEKSP-----SSKESST 1032
Xenopus_tropicalis KYKDVKHSSSESRRSGSSSSSSSGKADRHSHKRRSSSPRSSDRHGSESKKSSQSRSGEK 988
Danio_rerio       -----AHSQQQSKDSARSPEKSVAKTNTSYN-----KVASLK 896
.....1210.....1220.....1230.....1240.....1250.....1260

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/ZNF188.pst Tue Feb 1 14:57:14 2022

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	. * :. . . **** :	. : * :*:***:* .:~*:~*:. .	
Pavo_muticus	KKHRQTLD PYN-RPWASKTQSE TKQDS	IKRIDKITVPAKGS EFLIPITGYYCQLCHEFFG	1099
Pavo_cristatus	KKHRQTLD PYN-RPWASKTQSE TKQDS	IKRIDKITVPAKGS EFLIPITGYYCQLCHEFFG	1099
Gallus_gallus	KKHRQTLD PYN-RPWASKTQSE TKQDS	IKRIDKITVPAKGS EFLIPITGYYCQLCHEFFG	1103
Mus_musculus	KKHTQTLD PYN-RPWASKTQSE AKQDTV KRTDKIT	VPAKGS EFLIPVTGFY CQLCEEFLG	1168
Rattus_norvegicus	KKHTQTLD PYN-RPWASKTQSE AKQDTV KRTDKIT	VPAKGS EFLIPITGFY CQLCEEFLG	1161
Homo_sapiens	KKHTQTLD PYN-RPWASKTQSE AKQDAIKRTDKIT	VPAKGS EFLVPI SGFY CQLCEEFLG	1146
Pan_troglodytes	KKHTQTLD PYN-RPWASKTQSE AKQDAIKRTDKIT	VPAKGS EFLVPI SGFY CQLCEEFLG	1146
Macaca_mulatta	KKHTQTLD PYN-RPWASKTQSE AKQDAIKRTDKIT	VPAKGS EFLVPI SGFY CQLCEEFLG	1146
Callithrix_jacchus	KKHTQTLD PYN-RPWASKTQSE AKQDVVKRTDKIT	VPAKGS EFLVPI SGFY CQLCEEFLG	1147
Bos_taurus	KKHTQTLD PYN-RPWASKTQSE AKQDAVKRTDKIT	VPAKGS EFLIPITGYY CQLCEEFLG	1154
Equus_caballus	KKHTQTLD PYN-RPWASKTQSE AKQDAL KRTDKIT	VPAKGS EFLIPITGYY CQLCEEFLG	1155
Rhinatrema_bivittatum	KKHRQTLD PYK-RPWAVKSQ KEVKG-TFKPIDRL	VPAKGS EFLIPITGYFCQLCEEFFG	996
Callorhinchus_milii	KRHRQTLD PYD-RPWATKQPNEDKNSV KRT	TEKITLPAKGS EFLMPVTGFY CQLCQFYG	1146
Xenopus_tropicalis	TKHAEASGKKEKRPWAKD SAPKRKQ---	RGKQTI SLPFRGTEFLLP TNAYYC ELCDELFA	1105
Danio_rerio	KTRHKTLD PYD-RPWAKTESEKKG P---	AGKKT SKPAKGS EFLVPI VRGFFCQLCEEFFG	1006
	.....1330.....1340.....1350.....1360.....1370.....1380		

	*	.	*	*	:	.	*	*	:	**	:	**	:	**	*	*	.	.	*	.	*	:	:	:	.	:
Pavo_muticus	DQISAEQHVKSHPHNEKYKKYIDENPHYE	---	ERRNLDROAGLAVVLETERRRQNELKRR	1156																						
Pavo_cristatus	DQISAEQHVKSHPHNEKYKKYIDENPHYE	---	ERRNLDROAGLAVVLETERRRQNELKRR	1156																						
Gallus_gallus	DQISAEQHVKSHPHNEKYKKYIDENPLYE	---	ERRNLDROAGLAVVLETERRRQNELKRR	1160																						
Mus_musculus	DPISGEQHVKGQHNEKYKKYVEENPLYE	---	ERRNLDROAGLAVVLETERRRQNELKRR	1225																						
Rattus_norvegicus	DPISGEQHVKGQHNEKYKKYVEENPLYE	---	ERRNLDROAGLAVVLETERRRQNELKRR	1218																						
Homo_sapiens	DPISGEQHVKGQHNEKYKKYVDENPLYE	---	ERRNLDROAGLAVVLETERRRQSELKRR	1203																						
Pan_troglodytes	DPISGEQHVKGQHNEKYKKYVDENPLYE	---	ERRNLDROAGLAVVLETERRRQSELKRR	1203																						
Macaca_mulatta	DPISGEQHVKGQHNEKYKKYVDENPLYE	---	ERRNLDROAGLAVVLETERRRQSELKRR	1203																						
Callithrix_jacchus	DPISGEQHVKGQHNEKYKKYVDENPLYE	---	ERRNLDROAGLAVVLETERRRQSELKRR	1204																						
Bos_taurus	DPISGEQHVKGQHNEKYKKYVVENPLYE	---	ERRNLDROAGLAVVLETERRRQSELKRR	1211																						
Equus_caballus	DPISGEQHVKGQHNEKYKKYVVENPLYE	---	ERRNLDROAGLAVVLETERRRQSELKRR	1212																						
Rhinatrema_bivittatum	DQICAEQHVKCYNHNKAKYKKYVDENPLYE	---	ARRSLDHQAGLAVIVEVDRRRQSELKRR	1053																						
Callorhinchus_milii	DQICGEDHVKS HGHNDKYKEFLEENPVYE	---	QRRNLDROAGLAVIMETDRRRQAGLKRK	1203																						
Xenopus_tropicalis	DQGAVEGHKISFGHNKYYKKHTEDNPTYERV	---	QEMKKTSLASLAATQETERKQQIEPKRK	1165																						
Danio_rerio	DPICAEHVTCHTHNEKYKAKLYENPLYE	---	QRRKLDROAGLESQKSSVLKRKHEDDDQ	1063																						
1390.....1400.....1410.....1420.....1430.....1440																									

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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		..	:	.*	*	
Pavo_muticus	KEDKKEEKKEESKKES	---	PSQTSFGKFSWKKAE	-----	-----	1243
Pavo_cristatus	KEDKKEEKKEESKKES	---	PSQTSFGKFSWKKAE	-----	-----	1243
Gallus_gallus	KEDKREEKKEESKKEP	---	PSQTSFGKFSWKKAE	-----	-----	1248
Mus_musculus	NASLRPQVKKEEVKKEPSVA	---	ASIAASFGKFSWKKPE	-----	-----	1307
Rattus_norvegicus	NASLRPQVKKEEVKKE	---	SSTASFGKFSWKKPE	-----	-----	1296
Homo_sapiens	NTGIKQLKKEEVKKES	---	PTSSSFGKFSWKKPE	-----	-----	1282
Pan_troglodytes	NTGIKQLKKEEVKKES	---	PTSSSFGKFSWKKPE	-----	-----	1282
Macaca_mulatta	NTGIKQLKKEEVKKES	---	PTSSSFGKFSWKKPE	-----	-----	1282
Callithrix_jacchus	NTGIKQLKKEEVKKES	---	PTSSSFGKFSWKKPE	-----	-----	1283
Bos_taurus	RPSIKQLKKEEIKKEP	---	PISSSFGKFSWKKPE	-----	-----	1290
Equus_caballus	KASIKQLKKEEVKKES	---	PASSSFGKFSWKKPE	-----	-----	1291
Rhinatrema_bivittatum	EEKKEEKEDRSSKKEP	---	VTTSSFGKFTWKKKEEDKRRGVVAASTKWDSTGGNKLEKDK	-----	-----	1159
Callorhinchus_milii	KLMLKKDEPEEKKEDEHTCS	---	SASSCFGKFSWKRNE	-----	-----	1297
Xenopus_tropicalis	-----SAKPEKEIP	---	AKTPTFGKFTWKAPECKS	-----	-----	1231
Danio_rerio	KEEEDERARIKKEEKEESRYKKDDERNRYKKEEES	---	RRRYRK	-----	-----	1160
	.....1510.....1520.....1530.....1540.....1550.....1560					

Species	Sequence	Position
Pavo_muticus	REDKAPGVAIP--KEESVEGNKEENKFQSGKL	1273
Pavo_cristatus	REDKAPGVAIP--KEESVEGNKEENKFQSGKL	1273
Gallus_gallus	REDKAPGVAIP--KEESMEGNKEENKFQSGKL	1278
Mus_musculus	KEEEKGSVVTPGAPKEDTIVETSKDRDDGKAIEVG	1340
Rattus_norvegicus	KEEEKNSLVTPGAPKEDTIVETNKDRDEGKAIEVG	1329
Homo_sapiens	KEEEKSSLVTPSISKEEILESSKDKEDGKTEAG	1315
Pan_troglodytes	KEEEKSSVVTPSISKEEIVESSKDKEDGKTEAG	1315
Macaca_mulatta	KEEEKSSVVTPSISKEEIVESSKDKEDGKAIEAG	1315
Callithrix_jacchus	KEEEKSSVVTPSISKEEIIESSKDKEDGKAIEAG	1316
Bos_taurus	KEEEKS-LVIPSIPKEEIVESSKDKEDGKADPG	1322
Equus_caballus	KEEEKS-SVAPSIPKEEIVESSKDKEDGRAIEAG	1323
Rhinatrema_bivittatum	EKAKEERAKEEKLREERAREERAKEEKAREERAREERVKESEKEEKGKEDKAKDENKVQSG	1219
Callorhinchus_milii	KEEEKSSTLAG--MKEENGES-SKEKDDGKTQSG	1328
Xenopus_tropicalis	QTSTASASASTASKVESPVIIQEKPKKEESNGP	1264
Danio_rerio	REGESSRYEEDHYNRDDDDDEYHRYKDDDRYRYRKDDRGGRYSR	1207

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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      : . * :
Pavo_muticus      H-----AKSIEIKLSGKTVIPHTSPWTP---VAYTSTQS-----KILPNLPVPTMIF 1317
Pavo_cristatus    H-----AKSIEIKLSGKTVIPHTSPWTP---VAYTSTQS-----KILPNLPVPTMIF 1317
Gallus_gallus     H-----AKSIEIKLSGKTVIPHTSPWTP---VAYTSTQS-----KVLPNLPVPTMIF 1322
Mus_musculus      K-----AKPIKIKLSGKTVIAHTSPWTP---VVTSTQT-----KIRPNLPPISTVL 1384
Rattus_norvegicus K-----AKPIKIKLSGKTVVAHTSPWTP---VVTSAQT-----KIRPNLPPISTAL 1373
Homo_sapiens      K-----AKPIKIKLSGKTVVAHTSPWMP---VVTSTQT-----KIRPNLPPISTVL 1359
Pan_troglodytes   K-----AKPIKIKLSGKTVVAHTSPWMP---VVTSTQT-----KIRPNLPPISTVL 1359
Macaca_mulatta    K-----AKPIKIKLSGKTVVAHTSPWMP---VVTSTQT-----KIRPNLPPISTVL 1360
Bos_taurus        K-----TKPIKIKLSGKTVVAHTSPWMP---VVTSTQT-----KIRPNLPPISTVL 1366
Equus_caballus    K-----AKPIKIKLSGKTVVAHTSPWMP---VVTSTQT-----KIRPNLPPISTVL 1367
Rhinatrema_bivittatum K-----QKGIEIKLSGKTVISPTNSGKPCSPLPVSNPSQN-----KIRPNLPVPPSVL 1267
Callorhinchus_milii KSI----SKTIEIKLSGKTLIAHTSPWVP--FSSVTTITQA-----KIRPNLPVASMPL 1376
Xenopus_tropicalis PAK----QKAIEIKLLGKPATSQSGWPSSSSKLVTSTSPSITPGSLRPNLPPIPMAVL 1319
Danio_rerio       DEKPRYDKKEEDKRYKYTREVEEESKYKGENWGKWPKSKWDEEDQESGGKFDKKDDKTPYQK 1267
      .....1630.....1640.....1650.....1660.....1670.....1680

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      * . . * : : : . * : . . : . : * .
Pavo_muticus      RKST-TATVSKPAPLNTFLSIKSSGATTKPLPVVK-ETNADLLLPPDII SKAFGGGEEVIL 1375
Pavo_cristatus    RKST-TATVSKPAPLNTFLSIKSSGATTKPLPVVK-ETNADLLLPPDII SKAFGGGEEVIL 1375
Gallus_gallus     RKST-TATVSKPAPLNTFLSIKSSGATTKPLPVVK-ETNADLLLPPDII SKAFGGGEEVIL 1380
Mus_musculus      RKSG-SATVSKPAPLNTFLSIKSSGTS TKPLPVVK-ESSDLLLLPPDII SKAFGGGEEVIL 1442
Rattus_norvegicus RKSG-SATVSKPAPLNTFLSIKSSGASAKPLPVVK-ESSDLLLLPPDVISKAFGGGEEVIL 1431
Homo_sapiens      RKSC-SATMSKPAPLNTFLSIKSSGTTAKPLPVVK-ESSADLLLPPDII SKAFGGGEEVIL 1417
Pan_troglodytes   RKSC-SATMSKPAPLNTFLSIKSSGTTAKPLPVVK-ESSADLLLPPDII SKAFGGGEEVIL 1417
Macaca_mulatta    RKSC-SATMSKPAPLNTFLSIKSSGTTAKPLPVVK-ESSADLLLPPDII SKAFGGGEEVIL 1417
Callithrix_jacchus RKSC-SATMSKPAPLNTFLSIKSSGTTAKPLPVVK-ESSADLLLPPDII SKAFGGGEEVIL 1418
Bos_taurus        RKSG-SATVSKPAPLNTFLSIKSSGTTAKPLPVVK-ESSADLLLPPDII SKAFGGGEEVIL 1424
Equus_caballus    RKSG-SATVSKPAPLNTFLSIKSSGTTAKPLPVVK-ESSADLLLPPDII SKAFGGGEEVIL 1425
Rhinatrema_bivittatum RKSS-NTTANKPAPLNTFLSIQSTGATTKPLPVVK-EPK--TVLPDIDIVSKAFGGQEVTIL 1323
Callorhinchus_milii RKPS-VTSVSKPAPLNTFLSIKSSGTSNKPLPVVKAETKTEVLLAPEVISKAFGGGEEVIL 1435
Xenopus_tropicalis RKTSS-TAPVSKPAPLNTFLSIKSSSSSSKPLPVVK--SKPEGVLPQEVISKAFGGQOQVIL 1377
Danio_rerio       GKAGLFRDDKASAGMSNVKDVKTEPEKPIEPPKILCGPSALLAKLRKKNEEAAGRPPGFG 1327
      .....1690.....1700.....1710.....1720.....1730.....1740

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      : :
Pavo_muticus      KGS-EEDLKAPEKSESSPT-----SDIPP-----PPLPPP----- 1404
Pavo_cristatus    KGS-EEDLKAPEKSESSPT-----SDIPP-----PPLPPP----- 1404
Gallus_gallus     KGS-EEDLKAPEKSESSQT-----SDIPP-----PPPPPP----- 1409
Mus_musculus      KGSPEEKVELAEKNEPSQVPEQMLALLPPPPPPPP-----PPPPPPPPPPPP 1488
Rattus_norvegicus KGSPEEKVELAEKNEPSQIPEQMLALLPPPPPPPP-----PPPPPPPPPP-- 1475
Homo_sapiens      KGSPEEKVVLAEKSEPSHLPEQIL-----PPPPPP-----PPPPPPPPPP-- 1456
Pan_troglodytes   KGSPEEKVVLAEKSEPSHLPEQIL-----PPPPPP-----PPPPPPPPPP-- 1456
Macaca_mulatta    KGSPEEKVVLAEKNEPSHLPEQIL-----PPPPPP-----PPPPPPPPPP-- 1455
Callithrix_jacchus KGSPEEKVVLAEKNEPSHLPEQIL-----PPPPPP-----PPPPPPPPPP-- 1457
Bos_taurus        KGSPEEKVLAEKNEPSHIPEQML-----PPPPPP-----PPPPPPPPPP-- 1463
Equus_caballus    KGSPEEKVLAEKNEPSHIPEQML-----PPPPPP-----PPPPPPPPPP-- 1464
Rhinatrema_bivittatum KGTQGAATVQOKKEPVARPPPMVQTVTIQSDEVAPGVSVSDQAKLALRVPPRMPPLAV 1383
Callorhinchus_milii EGSVLDINKEIYPS-----PPPPPP-----PPPPPPPPPP-- 1449
Xenopus_tropicalis KETDNKQEENPNKSE-----PPPPPP-----PPPPPPPPPP-- 1392
Danio_rerio       KFSRKKPQKTALEKEAERMAAQLKEDEVEKEEEEE-----PPPPPP----- 1362
      .....1750.....1760.....1770.....1780.....1790.....1800

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Pavo_muticus	-----	1404
Pavo_cristatus	-----	1404
Gallus_gallus	-----	1409
Mus_musculus	-----	1488
Rattus_norvegicus	-----	1475
Homo_sapiens	-----	1456
Pan_troglodytes	-----	1456
Macaca_mulatta	-----	1455
Callithrix_jacchus	-----	1457
Bos_taurus	-----	1463
Equus_caballus	-----	1464
Rhinatrema_bivittatum	STDLTKEIIDKPKSCLATANAKDLYGIFYSNIGKCSSTDVRSINPNILGVYMSGIKNAGKTE	1443
Callorhinchus_milii	-----	1449
Xenopus_tropicalis	-----	1392
Danio_rerio	-----	1362
	.....1810.....1820.....1830.....1840.....1850.....1860	

Pavo_muticus	-----AVQPASVIPE	1414
Pavo_cristatus	-----AVQPASVIPE	1414
Gallus_gallus	-----AVQPTAVIPA	1419
Mus_musculus	QAVPQLSAPSPAQANVVLTPVKNSVVISQTFSLGFQGNILNPGLPVAFMASEQPTVIPS	1548
Rattus_norvegicus	LVVLPQLSAPSPAQANAVLTPVKNSVVSQTFSLGFQGNILNPGLPVAFMASEQPAAIPT	1535
Homo_sapiens	-VIPHPAAPSAAQANAILAPVKSNPVVSQTLSPGFVGNILNPVLPVAIMASQAQAAIPS	1515
Pan_troglodytes	-VIPHPAAPSAAQANAILAPVKSNPVVSQTLSPGFVGNILNPVLPVAIMASTQPAAIPT	1515
Macaca_mulatta	-IIPHPAAPSAAQANAILAPVKSNPIVSQTLSPGFVGNILNPVLPVAIMASQAQAAIPS	1514
Callithrix_jacchus	-VIPHPAASSPAPGNAILDPVKSNPTVSQTLSPGFVGNILNPVLPVAIMASQAQAAIPS	1516
Bos_taurus	-VIPHPASPSAAQANAILAPVKSNPAVSHIVIPGFLGNILNPVLPVAIMASQAQTAIPS	1522
Equus_caballus	-VIPHPAAPSPPQANAILTPVKSNLTVAHALSPGFLGNILNPVLPVAIMASQAQAAIPS	1523
Rhinatrema_bivittatum	KKVVAPAPAETETQKAIHAHSNSTGLQEGTESSMIASKGNVATAGSQAQEVSKQSQNAPG	1503
Callorhinchus_milii	-----T	1450
Xenopus_tropicalis	-----PETKKA	1398
Danio_rerio	-----LDPFSSKSVAAAKSIAIKLTGKAMIPPSGEWLAFNENKSNINLP	1405
	.....1870.....1880.....1890.....1900.....1910.....1920	

Pavo_muticus	DEVAPGVCESEQTMLTMP-----VKPPPPPPPPSTAFSEQAQKKIEKR	1455
Pavo_cristatus	DEVAPGVCESEQTMLTMP-----VKPPPPPPPPSTAFSEQAQKKIEKR	1455
Gallus_gallus	DEVAPGVSESEQTMLAMP-----VRPPPPPPPPSTAFSEQAQKKIEKR	1460
Mus_musculus	DETAPGVSESDWDQTLIS-----MLVRPPPPPLSSVFSEQAQKLEKR	1589
Rattus_norvegicus	DETAPGVSESDRDQTLIS-----MLVRPPPPPLSSVFSEQAQKLEKR	1576
Homo_sapiens	DETAPGVSESDRDQTLFS-----VLVRPPPPPLSSVFSEQAQKLEKR	1556
Pan_troglodytes	DETAPGVSESDRDQTLFS-----VLVRPPPPPLSSVFSEQAQKLEKR	1556
Macaca_mulatta	DETAPGVSESDRDQTLYS-----VLVRPPPPPLSSVFSEQAQKLEKR	1555
Callithrix_jacchus	DETAPGVSESDRDQTLFS-----VLVRPPPPPLSSVFSEQAQKLEKR	1557
Bos_taurus	DETAPGVSESDRDQTLFS-----VLVRPPPPPLSSVFSEQAQKLEKR	1563
Equus_caballus	DETAPGVSESDRDQTLFS-----VLVRPPPPPLSSVFSEQAQKLEKR	1564
Rhinatrema_bivittatum	ASILQGEASASKEMASVDSNSCKTEVESKALQLPDVKTEVSQKPQELQVDTENEKKTESV	1563
Callorhinchus_milii	EEPAPGVSEFEQPMPLAVP-----IRPPPPPPVTSQDSKKAQKP	1488
Xenopus_tropicalis	SEIIPDKNAENVKTPTSS-----NEKETPNLYDVFSNKPENPNSK	1438
Danio_rerio	PPLSPMVIRKSFSQVGNK-----PTPPALSDKFPAPLTGTQKG	1443
1930.....1940.....1950.....1960.....1970.....1980	

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      :
Pavo_muticus      NSCLATANAKDLYDIFYSSGG-----KGSADSKLASST-----LPNGENSNVAKP 1500
Pavo_cristatus    NSCLATANAKDLYDIFYSSGG-----KGSADSKLASST-----LPNGENSNVAKP 1500
Gallus_gallus     NSCLATANAKDLYDIFYSSGG-----KGSADSKLASST-----LPNGENSNLAKP 1505
Mus_musculus      NSCLATANAKDLYDIFYSSGG-----KGAHETKLSST-----LANGESSLSLRT 1634
Rattus_norvegicus NSCLATANAKDLYDIFYSSGG-----KGAHETKLSST-----LANGESSLSLRT 1621
Homo_sapiens      NSCLATANAKDLYDIFYSSGGKGAPEPKGAPETKLSGGP-----LANGENSLSLRT 1607
Pan_troglodytes   NSCLATANAKDLYDIFYSSGG-----KGAPETKLSGGP-----LANGENSLSLRT 1601
Macaca_mulatta    NSCLATANAKDLYDIFYSSGGKGGPETKGTSETKLSGGP-----LANGENSLSLRT 1606
Callithrix_jacchus NSCLATANAKDLYDIFYSSGG-----KGAPETKLSGGP-----LANGENSLSLRT 1602
Bos_taurus        NSCLATANAKDLYDIFYSSGG-----KGAPETKLSGGP-----LANGENR--AEN 1606
Equus_caballus    NSCLATANAKDLYDIFYSSGG-----KGAPETKLSGGP-----LANGEHSLSLRT 1609
Rhinatrema_bivittatum ESKVAGACSLDISVRDADAATNKPEVSEGNQTSQASVVPGEVQAMKPKMKNVATDKPEVS 1623
Callorhinchus_milii KTLCLAAANAKDLYGIFYSSG-----KGPTDSKLGLE-----QSARLGHSKN 1531
Xenopus_tropicalis KLVPPSPDRIDLKSIGPSNEQ-----KKVECPP-----ESSKTLVPE 1476
Danio_rerio       TALSADLISKAFSGEEVQLKQAKLLESPEIFNKPPPP-----FPTSPFISAP 1494
      .....1990.....2000.....2010.....2020.....2030.....2040

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      :
Pavo_muticus      ADFPANCRTVSSLSFFEEESQNVAAEVSAHAETGSVMEKTCFQETLMPDFEMIT---- 1556
Pavo_cristatus    ADFPANCRTVSSLSFFEEESQNVAAEVSAHAETGSVMEKTCFQETLMPDFEMIT---- 1556
Gallus_gallus     ADFPPNSRTVSSLSFFKEESQNVATEVSAAYLAESGSVMEKTCFQETLMSTFEMST---- 1561
Mus_musculus      ESSDFSSTCTILNSSMSSEDLPPQCSALVTATEISNLNPIISKGMESTGKWSVVDQID---- 1690
Rattus_norvegicus ESSDISSTSALKSSVSPEDLPQDVALATATEISNLNPIISKGVESIGKWSIVDQID---- 1677
Homo_sapiens      KSSDTSSSTPLNSSASQEELHQDEGLVAAPIVSNSEKPIAKTLVALGKWSVVEHVG---- 1663
Pan_troglodytes   KSSDTSSSTPLNSSASQEELHQDEGLVAAPIVSNSEKPIAKTLVALGKWSVVEHVD---- 1657
Macaca_mulatta    KSSDTSSSTPLNSSASQEELHQDEGLVTAPIVSNSEKPVAKTLVALGKWSAVEHVD---- 1662
Callithrix_jacchus KNSDTSS--SPLNSSASQEELHQDDGLVTAPIILSNSEKPIVKTILVALGKWSVIEHVD---- 1657
Bos_taurus        SDASSTS--TLNSSASQEELPSGRNLVSAPMVSSSEKPIISKPLVSLGRLSAVENVD---- 1660
Equus_caballus    ESSDTSS--TLNSSASQEELPPDRSLVSAPLVSNPEKPIAKPLVSLGKWSVVEHID---- 1663
Rhinatrema_bivittatum EGNQTSQASVVPGEVQAMKPKMKNVATDKPEVSEGNQTSQASVVPGEVQAMKPKMKNVAT 1683
Callorhinchus_milii IDNANLKPAGQVKSVDGNSAKEQVYCENITLVVSKTVVSEKGNKSLGQDAEDTQTN---- 1587
Xenopus_tropicalis KATGTSIGKTVPLSSSTSKDQNDPKMKDISLGSSEKPLVQVPSSVAAPSTTGNSN---- 1532
Danio_rerio       SPAPPSAPSPAPSSAPPLPSLSPAPSSAQLPAPASSSALSSTQSSAPSPAPPLVPSS---- 1550
      .....2050.....2060.....2070.....2080.....2090.....2100

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Pavo_muticus      -----DTESGIQRDVGQKFQALPTDIQIKLKDGDSQCNNQVMGSWILDESHTERNKKIF 1611
Pavo_cristatus    -----DTESGIQRDVGQKFQALPTDIQIKLKDGDSQCNNQVMGSWILDESHTERNKKIF 1611
Gallus_gallus     -----DTEGGIQKDVGPQKFQALPTDIQIKLKDGDSQCSNQVMGSWILDENHAERDKKIF 1616
Mus_musculus      -----PKSRDSTYSFLQPLRLYQNKPYEIVSPKDTILVMWTSGSSQNDTHKDRPPEGKI 1745
Rattus_norvegicus -----PKGRDSTFSFLQPLRLYQNRPYEMVSPKDTILAMWTSGSFQNDTDKDRPSEVKI 1732
Homo_sapiens      -----PKSTGSTYGFLQPLRLCQSRPYETITPKDTILAIWTSSSFQSDTSRDISPEK-S 1717
Pan_troglodytes   -----PKSTGSTYGFLQPLRLCQSRPYETITPKDTILAIWTSSSFQSDTSRDISPEKKS 1712
Macaca_mulatta    -----PKSTGSTYGFLQPLRLCQSRPYETITPKDTILAIWTSSSFQSDTCRDISPEKKS 1717
Callithrix_jacchus -----PKSTGSTYGFLQPLRLCQSRPYETITPKDTSLALWTSSSFQSDTSRDISPERKS 1712
Bos_taurus        -----SKNRGSSYGFLQPLRLCQNRPYETITPKTETLAKWASGSFQSDANKDVAPVRKI 1715
Equus_caballus    -----SKSGGSSYGFLQPLRLCQSRPYEAVTPKDTILAVWTSSSFQSDANRDMSSSEGI 1718
Rhinatrema_bivittatum DKPEVSKENKISQALVVPQIQAMKPKMKNVATGKPGVSKENKNGHAESQALKPPQMKKV 1743
Callorhinchus_milii -----QQTEPDSDLSTSTSAQDEHQEVNVFQKNSKTGSWKATAAQQSSESNLILNPT 1641
Xenopus_tropicalis -----TGKTEYKSVSGSSSAAKKADTPSAASKEKDVTPKPSSESKQSTFVPKSSTNPS 1585
Danio_rerio       -----TPPPILSPAPTLTAAPETIVKPSQLKPVLPQPERVVTLESQVAPGVPEQERKQTLVL 1606
      .....2110.....2120.....2130.....2140.....2150.....2160

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Pavo_muticus      QPQLSEMSVTE-----LLEAKPASHIQMPAEKGLVDVASRVQADNKEFCDLORTKIQG 1664
Pavo_cristatus    QPQLSEMSVTE-----LLEAKPASHIQMPAEKGLVDVASRVQADNKEFCDLORTKIQG 1664
Gallus_gallus     QPQLSEMSVTE-----LLEAKPASHIQMPAEKGLVDVGSRVQADNKEFCDLORTIEVQE 1669
Mus_musculus      RFDLGEPPGPPG-----TDSTSHLSDTIHCQTNGPQKLEINLIDNQKN---QEVYQSE 1795
Rattus_norvegicus KFDQGEPPAPPA-----TDSTSHPSDEHCQTNGSQKLVEINLMDNQDKN---QEVYQSE 1782
Homo_sapiens      ELDLGEPPGPPG-----VEPPPQLLDIQCK--ESQKLVEIHLRESVNQDKESQELRKSE 1768
Pan_troglodytes   ELDLGEPPGPPG-----VEPPPQLLDIQCK--ESQKLVEIHLRESVNQDKESQELRKSE 1763
Macaca_mulatta    ELDLGEPPGPPG-----VEPPPQLLDIQCK--ESQKLVEIHLRESVNQDKESQELRKSE 1768
Callithrix_jacchus ELDLEEPGPPG-----VEPPPQLLDIQCK--ESQKLVEIHLRESVHOGKKSQELHKSE 1763
Bos_taurus        ELDLGDPPGPPG-----VEPASELSDTKCHTMQSQKLVEIHLRESVHOGKKSQELHKSE 1766
Equus_caballus    ELDLGEPPGPPGREPEPPGVEPAPQLSDIHCHTMESQKLVEIHLRESVHOGKKSQELHKSE 1778
Rhinatrema_bivittatum KANVSGTSTRIVEMAVEIIIQPKVSQEPSQIQGGITLKMGRDPLTEVNACTSDVEKKSDPV 1803
Callorhinchus_milii VKPRNEEIEITP-----ILERATVPLQCKDDMGISSPVEATDLEEDAFIVDSTTHLNI 1694
Xenopus_tropicalis KPSDTKPSSAT-----V-----V-----V-----V-----V-----V----- 1596
Danio_rerio       RPPPPQHPSNVR-----AQPPEKMKPKTTLAAGKAKDLDFIFYSGGTTAKTSVSALVVK 1659
.....2170.....2180.....2190.....2200.....2210.....2220

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Pavo_muticus      KVGQEDANEIAVSNTINASGTLGKDKEMKGREIKAVKPELMLEQIEIQNLGDPHLVEENLS 1724
Pavo_cristatus    KVGQEDANEIAVSNTINASGTLGKDKEMKGREIKAVKPELMLEQIEIQNLGDPHLVEENLS 1724
Gallus_gallus     KVGQEDANEIAVSNTINASGTLGKDKEMKGREIKAVKPELMLEQIEIQNLGDPHLVEENLS 1729
Mus_musculus      GCRESEM----KRKTELKG----KVATEEEEEEEEEEGANSIEDSNSNHGNRNTWEGEIG 1846
Rattus_norvegicus DCRESEG----KRKTELKG----KVAAEEG---ANIGLOSIEDSNSNYGNRNTWE---G 1827
Homo_sapiens      DCRESEI----ETNTELKERVKELSEGIVDEGVSTSIGPHSIDDSNLNHGNRYMWEGEVK 1824
Pan_troglodytes   DCRESEI----EANTTELKERVKELSEGIVDEGVSTSIGPHSIDDSNLNHGNRYMWEGEVK 1819
Macaca_mulatta    DCRESEI----ETNTELKERVKELSEGIVDEGVSTSIGPHSIDDSNLNHGNRYMWEGEVK 1824
Callithrix_jacchus DCRESEI----ETNTELQGRAKELSEGIVDERAGTSIGPHSIDDSNLKHGNRYMWEGEVK 1819
Bos_taurus        DCGKSEV----ETSTELKEEGVKLSERTVREGTDINVGPNSIEDSNLNSGNRCMWEEVE 1822
Equus_caballus    DCGESDI----ETNTELKERRAQLSERMIGEGTGIVNGPSSREDSNFNGHSGRYTWEGEVE 1834
Rhinatrema_bivittatum TCAPSDISALEVAVKDSKTEDTSSGPPSSCDTSVTVDIFKSMVSKDSQDLQAPPIQEVQNR 1863
Callorhinchus_milii TSTDEKIEVLVSDSIEKLEQCIELNISKPFVEVVDEKNILESNRATAELEQCDELISISKFFE 1754
Xenopus_tropicalis -----V-----V-----V-----V-----V-----V----- 1596
Danio_rerio       QDPGFASNSGSGSTCKNSNNKDKKACDIFQCKVLP SNHGSQVTANEESLKNKEANVAERKD 1719
.....2230.....2240.....2250.....2260.....2270.....2280

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Pavo_muticus      DSCRTVSETDSP-----YLLSDSQNIAKEKALVAVMTEQNSIDAF 1764
Pavo_cristatus    DSCRTVSETDSP-----YLLSDSQNIAKEKALVAVMTEQNSIDAF 1764
Gallus_gallus     DSYRTVTETDSP-----HLLSDSQNISKEKALVAVMTEQNSIDAS 1769
Mus_musculus      QPKLSTVDKKG-----EQSSKLMTGHENTSKVVIELS-PSLP 1882
Rattus_norvegicus EPKLSTIDKEA-----EQSSRLMTGHENTSSIVIELS-QCLP 1863
Homo_sapiens      QPNLLMIDKEA-----EQSNKLMTGSETPSKVVIKLSPOACS 1861
Pan_troglodytes   QPNLLMIDKEA-----EQSNKLMTGSETPSKVVIKLSPOACS 1856
Macaca_mulatta    QPNLLMIDKEA-----EQSNKLMTGSETPSKVVIKLSPOACS 1861
Callithrix_jacchus QPNLLIIDKEA-----EQSNKLMTGSETPSKVVIKLSPOACS 1856
Bos_taurus        QPNLHRTDKKA-----EQSRKLITESTKQGVVPELKTQTVS 1859
Equus_caballus    QPKLQMTDKTA-----EQSKKLMTGSDTQSKVVIELSGPALS 1871
Rhinatrema_bivittatum SEITELSESKAEGDEINLASGQGDVSHGFONSETAEHLDKNQMPKADAPKQLDAEGSQLD 1923
Callorhinchus_milii EVRDVKVDAPILD-----STAEQSHHCDDDLKTSYLADQVGDKE 1793
Xenopus_tropicalis -----V-----V-----V-----V-----V-----V----- 1615
Danio_rerio       DNEDSKIAQNKESKNEDLN-----VVKSEESTNNEYSEVAQSKEPLNEDLDIE 1768
.....2290.....2300.....2310.....2320.....2330.....2340

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Pavo_muticus	LKDVKPNSVALEVPGLGKAPQISETQNKISEMTRSPAEDWASRTSNREEQVMATSYCSE	1824
Pavo_cristatus	LKDVKPNSVALEVPGLGKAPQISETQNKISEMTRSPAEDWASRTSNREEQVMATSYCSE	1824
Gallus_gallus	LKDVKPNSVVLVSGVLGKAPQNSSETQDKISELTRSPAEDWASRTSNREEQVMATSSCSE	1829
Mus_musculus	SKRTKIDLFP-----SLLQNPKS-----MPELLLLSPAGSGLCLK-----	1917
Rattus_norvegicus	SKRTKIDSFP-----SLLQNPKG-----MPELLLLSPAGSGMCLK-----	1898
Homo_sapiens	FTKAKLDSFLSEARSLN-PQDTPVKISAPPELLLHSPARSAMCLTGSPQEQGVSVVSEEG	1920
Pan_troglodytes	FTKAKLDSFLSEARSLN-PQDTPVKISAPPELLLHSPARSAMCLTGSPQEQGVSVVSEEG	1915
Macaca_mulatta	FTKAKLDSFLSEARSLN-PQDTPVKISAPPELLLQSPPRSACLVTGSPQEQGVSVIIEEG	1920
Callithrix_jacchus	STMAKLDSFSSEARSLPKNPQDIPVKISAPFLQ-SPARSACLVTGSPQEQGVSVS-EEG	1914
Bos_taurus	STKAKIDSFPSEVRSLQNPD--VKISAPPELLLQSPYRSDMCLKDHEQKQGVACSEEW	1917
Equus_caballus	STKAKIGSLPAEVTSLCQNPQDTPVKVSASELLLQSPARSDMCLKDSTQEQGVSTGSEEW	1931
Rhinatrema_bivittatum	ICTAHTKDEQTAVEDVHLKSSQDLSSGVENIKAPNPVEVETEVSQISDTSTTEVVGQVA	1983
Callorhinchus_milii	VDVSVLVSTSEQVRLCNKIPGVDFGNVDGRLLDSTVEQQRCDINFSIFDPLEDIGNVK	1853
Xenopus_tropicalis	ISTAP-----KMLPAKPGS-----	1629
Danio_rerio	SKESKSKNEDPKVTQSKESFNEEDSEVALSKDSSKSKHLKFSPCENSSVNEDSEVAQNEEG	1828
	.....2350.....2360.....2370.....2380.....2390.....2400	

Pavo_muticus	SDWKLSNTPNVEMKNGSNKISASELTEIEPETSLSNPKSRSSSTLEAQEKVRPELSGRAVL	1884
Pavo_cristatus	SDWKLSNTPNVEMKNGSNKISASELTEIEPETSLSNPKSRSSSTLEAQEKVRPELSGRAVL	1884
Gallus_gallus	SGWKLSNTPNVEMKNGSNKISASELTEIEQETSLSNPKSRSSSTLEAQEKVRPELSGRAVL	1889
Mus_musculus	-----RQEIWERPEKPGLEDV-----	1933
Rattus_norvegicus	-----RQETWERPEKPEVEAE-----	1914
Homo_sapiens	LENSAPESASRTSRYRSLKLRERSKDFQVKKIYELAVWDENKKRPETWESPEKPKTEAL	1980
Pan_troglodytes	LENSAPESASRTSRYRSLKLRERSKDFQVKKIYELAVWDENKKRPETWESPEKPKAEAL	1975
Macaca_mulatta	LGNAPESASRTSRYRSLKLRERSKDFQVKKIYELAVWDENKKRLETWESPEKPKAEAL	1980
Callithrix_jacchus	LKNSAPESASRTIPRYRRLKLRKRAEDFLVTKMYELAVWDENK-RPEAWESPEKPKVEAL	1973
Bos_taurus	LENSAPESASRTSRYRSLKLRERSKDLQGMKYKLTWDEN-KNPETWESPEKPKAEAL	1976
Equus_caballus	LENSAPESASRTSRYRSLKLRERSKDFHGKMICELAIWDENKKPETCETPEKTEAEAL	1991
Rhinatrema_bivittatum	LEQPLLESSQTLVEHSVTEVKMSKPLEMKDAGMLDTPFQKMNADLSEINPDTSDDTTGDT	2043
Callorhinchus_milii	MDVPVLGGAVEQSYETSLSPFVEEVSQVQVDTSLLPSTANEQCDDLSIFSLLEDVKDG	1913
Xenopus_tropicalis	-----	1629
Danio_rerio	LSNEDSEMAQSDSEPKNEDLSISQSEDSPTNENSEVAQSEEPLESLNEDSEVLQSDSEPPNV	1888
	.....2410.....2420.....2430.....2440.....2450.....2460	

Pavo_muticus	DKQTQRQEVAVLVNACSASIVELRSSVELVVEVEKKSLGHTGSDETLDLDDIFAKRDAKGVG	1944
Pavo_cristatus	DKQTQRQEVAVLVNACSASIVELRSSVELVVEVEKKSLGHTGSDETLDLDDIFAKRDAKGVG	1944
Gallus_gallus	DKQTQRQEVAVLVNACSASIVELRSSVELVVEVEKKSLGHTGSDETLDLDDIFAKRDEKGGG	1949
Mus_musculus	ELOGTRP-----ELTVTIESKVLENFDTTHLEVEGFASLRNLGDM	1973
Rattus_norvegicus	ELOGTRP-----EGTVKTESGESLDTTHVEVERFATLRNLGDT	1954
Homo_sapiens	ELQDVHP-----ELTVTIESKALEDFEATDLKVEELTALGNLGD	2020
Pan_troglodytes	ELQDVHP-----ELTVTIESKALEDFEATDLKVEELTALGNLGD	2015
Macaca_mulatta	ELQDVHP-----ELTVTIESKALEDFEATDLKVEELTALGNLGD	2020
Callithrix_jacchus	ELRDIHP-----ELPVTIESKALKDFEATDLKVEDLTALG---DM	2010
Bos_taurus	EPRDVHP-----ELTVTIESKALENFEVTDLKVEELAALGSLGDI	2016
Equus_caballus	EPRDVHP-----ELTVTIESKALEDFEVTNLKVEELAALGTLGD	2031
Rhinatrema_bivittatum	EEQVVLPAQLE--KSQELVDISLTVANNQVETPSSLVDNSADIKIAQLNSQDPLNIS	2101
Callorhinchus_milii	HLLVSAAEQQCN-----LGLSIPSAVEEVRDIQVDVPLSSNAELQCDLGLSIPN	1963
Xenopus_tropicalis	-----SYSSTTQLNQKFKRAPLSLPTSLFCHVSDFARN	1662
Danio_rerio	ELKVSESED-----SPMNEDSEIAQSEEPLESLNEDSEVQSDSESPQNV	1930
2470.....2480.....2490.....2500.....2510.....2520	

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Pavo_muticus      MAGFSR-----ACSDLVQGSVAVALSADFSQHLSEEAVNKOR 1980
Pavo_cristatus    MAGFSR-----ACSDLVQGSVAVALSADFSQHLSEEAVNKOR 1980
Gallus_gallus     MAGFSR-----ACSDIFQESAVALSADFDQHLSEEAVNKOT 1985
Mus_musculus      HANFHN-----SQIEQIRRSPTALSEKMSSEISVSSVM--- 2006
Rattus_norvegicus HAEFCN-----SQIEQIRRSPTALSQKISEENSVSVM--- 1987
Homo_sapiens      PVDFCT-----TRVSPAHRSPITVLCKQVCEENSVSPIG--- 2053
Pan_troglodytes   PVDFCT-----TRVSPAHRSPITVLCKQVCEENSVSPIG--- 2048
Macaca_mulatta    PVDLCS-----TRVSPAHRSPITALSQKVCEENSVSPIG--- 2053
Callithrix_jacchus PVDFCG-----SRVSPAPRSPITALSQKVCEENSILPIG--- 2043
Bos_taurus        GVDFCN-----TRVDPAHRSPVALSQKVCEENSVSPIG--- 2049
Equus_caballus    GIDFSN-----TRVDPARRSPITALSQKVCEENSILPIG--- 2064
Rhinatrema_bivittatum VAKINEQSGQNEVPDLTDKKETSKQVIDLKVQVEVSQKPQTGESLEV PDMVGGQLENTVE 2161
Callorhinchus_milii PTEVR-----DVQVDILDSNIDQLDWCNDELSPNPVEEVH 2000
Xenopus_tropicalis EIKITS-----TVAQHSAMKERSVKPPEPPT 1690
Danio_rerio       ELKVSE-----SEDSFVNEDSEVVSQSETLHKEDTEVSQSEES 1967
.....2530.....2540.....2550.....2560.....2570.....2580

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Pavo_muticus      KREAVRTSAANDFSLNTTRSGFNTKQSESLSPSVSE----- 2016
Pavo_cristatus    KREAVRTSAANDFSLNTTRSGFNTKQSESLSPSVSE----- 2016
Gallus_gallus     KCEAVRTSAVSDFSLNTTHSGFNTKQSESLSPSVSE----- 2021
Mus_musculus      ----CNPSSSSDIEPVPSFSGFPLESPKILVLNLFET----- 2038
Rattus_norvegicus ----CNPSSPSDVEPVPSFSGFPLESPKILVLNLFET----- 2019
Homo_sapiens      ----CNSSDPADFEPFPSFSGFPLDSPKILVLDFET----- 2085
Pan_troglodytes   ----CNSSDPTDFKPIPSFSGFPLDSPKILVLDFET----- 2080
Macaca_mulatta    ----RNSSTPTDFEPIPSFSGFPLDSPKILVLDFET----- 2085
Callithrix_jacchus ----CNSSPTNFEPFPSFSGFPLDSPKILVLDFET----- 2075
Bos_taurus        ----GNPSSLTDFEPIPSFSEFPLDSPKILVLNFGA----- 2081
Equus_caballus    ----CNSSTLTDFEPVTSFSEFPLESPKILVLNFGA----- 2096
Rhinatrema_bivittatum QCSNVQLIDLLENKVEIASETDLQLSEFIALKDSMEIGMMDVSSTQSKVESLDNVATECSV 2221
Callorhinchus_milii N----EKLDTHKLGTQAGTNLLQTERHVSCHLSTELS----- 2033
Xenopus_tropicalis QVK--KQPIAAAKPEVSKKLQDELDSYYKLIS----- 1720
Danio_rerio       PKNQDLNSESSENSPVNEDSEVPQSETLNKEDTEMAQ----- 2004
.....2590.....2600.....2610.....2620.....2630.....2640

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Pavo_muticus      -----DNKKDSLRSNTKRSETPSEKAELEFKSTG 2046
Pavo_cristatus    -----DNKKDSLRSNTKRSETPSEKAELEFKSTG 2046
Gallus_gallus     -----DNKKDSLRSNAKNETPSEKAELEFKSTD 2051
Mus_musculus      -----EGAHSSSNRNNGRIT-SNSLETGHPVENVG 2067
Rattus_norvegicus -----EGAHSSSNRNNGRIT-SNSLETGHPMENVD 2048
Homo_sapiens      -----EGERNSPNPRSVRIIPSPNILKTGL-TENV 2114
Pan_troglodytes   -----EGERNSPNPRSVRIIPSPNILKTGL-TENV 2109
Macaca_mulatta    -----EGERNSSNPRSVRIIPSPNILKTGL-KENV 2114
Callithrix_jacchus -----EGERNSSNPKSVRIIPSPNILKTGL-TENV 2104
Bos_taurus        -----EGEQNSSNPRTGRIA-PNILKTGLPIENVG 2110
Equus_caballus    -----EGEQNSSNPRSGRVT-PNILKSGLPIENV 2125
Rhinatrema_bivittatum ETIAKNLDTLSAGDMSTPATSDFDLPCLSAFNFEQPESSDDKDTLKATDIKLSDPGTLKKEVE 2281
Callorhinchus_milii -----SSQQTKEYAISAMGAPIIEEHDITYMSSSVQ 2063
Xenopus_tropicalis -----TEDDPEDLTISEDQDMVAMEEATVTPFPV 1749
Danio_rerio       -----SEESPKNQDLNASESEDSEVNEDSEIAQSDT 2035
.....2650.....2660.....2670.....2680.....2690.....2700

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Pavo_muticus      FNLGNTKAVHEDISILPAGLLNTNVKEVAKPETIASVKLKSNKLSKLGIGKTVDETEITD 2106
Pavo_cristatus    FNLGNTKAVHEDISILPAGLLNTNVKEVAKPETIASVKLKSNKLSKLGIGKTVDETEITD 2106
Gallus_gallus     FNLGNTKAVHEDISILPVGLLNMAKEVSKLETITSVKLESNKLSKLGIGKTMDETEITD 2111
Mus_musculus      HDLGG-ERTHQALDLLAGGMLSEEDVKETSPLQKD-LLRMESTTVSPSGLGPSPCLPDLVD 2125
Rattus_norvegicus HDLGG-ERTHQALDLLAGGMLSEEVKEPSPLQKD-LLRMESTTVSPSGHGPSPCLPDLVD 2106
Homo_sapiens      RGLGGLEGTHQALDLLAGGMPPEEVKESSQLDKQESLGLLELKTINSAGLGPSPCLPDLVD 2174
Pan_troglodytes   RGLGGLEGTHQALDLLAGGMPPEEVKESSQLDKQESLGLLELKTINSAGLGPSPCLPDLVD 2169
Macaca_mulatta    RGLGGLEGTHQALDLLAGGMPPEEVQESSQLDKQESLRLELKTINSVGLGPSPCLPDLVD 2174
Callithrix_jacchus RGLGGLEGTHQALDLLAGGMPPEEVEESSQLDKQESLRLELKEINSVGLGPSPCLPDLVD 2164
Bos_taurus        LGLGNLEGTHQALDLLAGGMPPEEIEETSKELEKQDSLRLSEETINPLCLGPSPCLPDLVD 2170
Equus_caballus    LGLGTLEGTHQALDLLAGGMPPEEVEETS-LEKQDSLRLSEETINPAGLGPSHSLPDLVD 2184
Rhinatrema_bivittatum FSLGDMFVDGEPLEKLSTEILADDVGNTPDLEGGIPIGLNNVADNALTIHPSVAESEIID 2341
Callorhinchus_milii KQPCGISVVITPDAGQGGSGESKAMSGSSKMNTSKQTKQCGDCETLKPAAQVAELEQLVL 2123
Xenopus_tropicalis KVEAPAKRVVSEIPKLTIVPTVTPAAEDVDDSDMGCEDAPEAPDSSSYPSSSIIPNPVYGHG 1809
Danio_rerio       PNNGDTEVVSQSEESPKNEDLNASESENSPVNEDSEVAQSDILNNEDEMAQSEEPKKNKD 2095
.....2710.....2720.....2730.....2740.....2750.....2760

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Pavo_muticus      FATILTSGGWEDKLCTQVSQTAASQLGLQPSNNDTMKAVVPVPEMQGISPMSEGLRQVEES 2166
Pavo_cristatus    FATILTSGGWEDKLCTQVSQTAASQLGLQPSNNDTMKAVVPVPEMQGISPMSEGLRQVEES 2166
Gallus_gallus     FAKLTAGSWEDKLCTQVSQTAASQLGLQPSNNDTMKAVMTVPPEMQGISPMSEGLRQVEES 2171
Mus_musculus      FVTRTPGVVPKQKPCSPLEPD-----FLKCSSLEMGSPPPEILSVSVSEVAVPQVSED 2179
Rattus_norvegicus FVTRTPGVVPKQKPCSPLEPD-----FLKCSSLEMGSPPPEILSVSVSEVAVPQASED 2160
Homo_sapiens      FVTRTSGVQKDKLCSPLSEPGD-----PSKCSSLELGPLQLEISNASTTEVAILQVDDD 2228
Pan_troglodytes   FVTRTSGVQKDKLCSPLSEPGD-----PSKCSSLELGPLQLEISNASTTEVAILQVDDD 2223
Macaca_mulatta    FVTRTSGVQKDKLCSPLSEPGD-----PSKCSSLELGPLQLEISNASTTEVAILQVDDD 2228
Callithrix_jacchus FVTRTSGVQKDKLCSPLSEPGD-----PSKCSSLEMGPLQLEIPNASITEVAILQVDDD 2218
Bos_taurus        FVTRTSGVQKEKICSPLSEPGD-----PPECSSLEMGLLQLEIPNASITEVAVPQVDEY 2224
Equus_caballus    FVTRTSGVQKEKICSPLSEPGD-----PPGCSSLEMGPLQLEIPNASTTEVVIQVDED 2238
Rhinatrema_bivittatum LGNQE---ADKLCMPTSGPNIP--SPASSDRAGGESTSVPEIQGTDIVISESPMQVEES 2395
Callorhinchus_milii LESIKLSALEPRVQKESSEPS-----LQPAVAAGTSEVSLLEKCKNTSDLRITSSRRAAQA 2179
Xenopus_tropicalis FSSFSYGARKPLMTATKYSKPK-----FYATGQLDKVPSNKNVDLPVVDCT 1854
Danio_rerio       LNASERENSPVNEDLEVAQSETLN--NEDTEVVQGEESPKNEDPNVEQSFPAILKPDIIQ 2152
.....2770.....2780.....2790.....2800.....2810.....2820

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Pavo_muticus      KGGAVEMLSLSCDGGSRQSQASGCVETFLPGLKETRGKEDGSGGKGLCAIQSKKTEQTET 2226
Pavo_cristatus    KGGAVEMLSLSCDGGSRQSQASGCVETFLPGLKETRGKEDGSGGKGLCAIQSKKTEQTET 2226
Gallus_gallus     KGDAAEMLSLSCDGGSRQSQASGCVETFLPGLKEAHGKEDGSGGKGLCAIQSKKTEQTET 2231
Mus_musculus      NDSALNLVKTPPSGSPSRDQVV-----GG-----NVSPREMPEQEA 2215
Rattus_norvegicus CDNALNLVKPPTS GSPSRGQVV-----GG-----SVSSQEMPEQEA 2196
Homo_sapiens      SGDPLNLVKAPVSRSPPREQVI-----ED-----NMVPQGMPEQET 2264
Pan_troglodytes   SGNPLNLVKAPVSRSPPREQVI-----ED-----NMVPQGMPEQET 2259
Macaca_mulatta    SADPLNLVKAPVSRSPPREQVV-----ED-----NMVPQGMPEQEA 2264
Callithrix_jacchus SGNPLNLVKPPVSRSPPREQVV-----ED-----NMVPQGMPEQEA 2254
Bos_taurus        SDNPLNLVVKSVASGSHTRERVA-----GG-----STIPOEIAAQEA 2260
Equus_caballus    TDNPLNLVKSLASGSPTRQVN-----GG-----NVVPQEIQAQEA 2274
Rhinatrema_bivittatum KGSSTNTVDMPALNYGEQVONLPVPEEVKVTAREE-----GSGEPCQOMAKVEANELKP 2449
Callorhinchus_milii AKGALQASNKSNEKRESDNPK-----AEPEA 2206
Xenopus_tropicalis TEEDLLTTCDSESD----- 1867
Danio_rerio       NENVDAKENLDDQQA FKSIDITMG-----DVTDMEVNSVDIT 2188
.....2830.....2840.....2850.....2860.....2870.....2880

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/ZNF188.pst Tue Feb 14 14:57:14 2022

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Pavo_muticus	TDSSLEATRNSGITESLAESPVG-----	2249
Pavo_cristatus	TDSSLEATRNSGITESLAESPVG-----	2249
Gallus_gallus	TDSSLEATTNSGITESLAESPVG-----	2254
Mus_musculus	AVDVIPDHTIRSNVYNSQDYLNG-----	2237
Rattus_norvegicus	AVDVIPDHRKSSVYNCQDYLNG-----	2218
Homo_sapiens	TVGAIQDHTIESSVHN-----	2279
Pan_troglodytes	TVGAIQDHTIESSVHN-----	2274
Macaca_mulatta	TVGAIQDHSESSVHN-----	2279
Callithrix_jacchus	TVGAIQDCTIESSVHNYE-----	2271
Bos_taurus	AVDALQDHTIESSVHS-----	2275
Equus_caballus	AVDAIQDHTIGSGVRD-----	2289
Rhinatrema_bivittatum	TIEMEENNLQDTSCLSIVPDATKDPPEQPMPEEPSCLDQ--	2489
Callorhinchus_milii	PTKQLRRRSARNLQSPK-----	2223
Xenopus_tropicalis	-----	1867
Danio_rerio	LLQTNNEELPLDSEEPMAFSPLPGSFTEQLNLDTFEFSFEPL	2230
	.....2890.....2900.....2910.....2920..	