

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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```

Mus_musculus      -----
Rattus_norvegicus -----
Homo_sapiens      -----
Macaca_mulatta    -----
Canis_lupus_familiaris -----
Felis_catus       -----
Equus_caballus    -----
Bos_taurus        -----
Orcinus_orca     -----
Pavo_muticus      -----
Pavo_cristatus    -----
Gallus_gallus     -----MASLPPTPTGPEPAGTHSHTPQPTMAPTPPPLGPS 35
Chelonia_mydas    -----MAQLPLAAAGPAGGGGLGLQAVTAPDERPARRGRP 35
Xenopus_tropicalis MDWKKYQQILDANLKQSAKKLKQGWLIQGTSGARTVRECVGKNQGEKETQKEEEQEVWG 60
Rhinatrema_bivittatum -----
1.....10.....20.....30.....40.....50.....60

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Mus_musculus      -----
Rattus_norvegicus -----
Homo_sapiens      -----
Macaca_mulatta    -----
Canis_lupus_familiaris -----
Felis_catus       -----
Equus_caballus    -----
Bos_taurus        -----
Orcinus_orca     -----
Pavo_muticus      -----
Pavo_cristatus    -----
Gallus_gallus     -----TSGKVEGQPNQDTIPAEQANPSDDTVAG-----AGSRNDQIVQKIEE 78
Chelonia_mydas    -----MAGGHKGTASAAGAGPWLLAVVHCGVVEDPRCGWRGSRVGLSWRLTSSRSFGPLWSASS 95
Xenopus_tropicalis AMATNIEQIFRSFVVNKFKEIQEELNSENSETSONGELTAQMSGNPSEETITGVQDKEQ 120
Rhinatrema_bivittatum -----
.....70.....80.....90.....100.....110.....120

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Mus_musculus      -----
Rattus_norvegicus -----
Homo_sapiens      -----
Macaca_mulatta    -----
Canis_lupus_familiaris -----
Felis_catus       -----
Equus_caballus    -----
Bos_taurus        -----
Orcinus_orca     -----
Pavo_muticus      -----
Pavo_cristatus    -----
Gallus_gallus     -----VLSGALDTELQSKSDVDKTTVSNSTQSTKRSSTAEGEDEIPRKKSKKNKKHKSKKKKKKK 138
Chelonia_mydas    -----GRSRRSRSSSSSWAGVEEDSVKNSSPCTIKRGPTDEVEDEIPRKKSKKNKKHKSKKKKKKK 155
Xenopus_tropicalis MQPESTQLEQPSLDLEGEPAKELKSGENSSSDEVKKDLSRKKSKKKKKHKSKKKKKKK 180
Rhinatrema_bivittatum -----
.....130.....140.....150.....160.....170.....180

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Mus_musculus      -----
Rattus_norvegicus -----
Homo_sapiens      -----
Macaca_mulatta    -----
Canis_lupus_familiaris -----
Felis_catus       -----
Equus_caballus    -----
Bos_taurus        -----
Orcinus_orca     -----
Pavo_muticus      -----
Pavo_cristatus    -----
Gallus_gallus     KK-RKKEKKHKKQPKESKLSARPGEHADSQPASHLIAEKSSSTLSVQHGGFGDANLAVR- 196
Chelonia_mydas    KKKRKKKEKKHKKHPKESKLSAQYGEHADLPASHSKTEKLGSKLITRHGGHADSDLAGQ- 214
Xenopus_tropicalis KKEKSEKRSRSVSSVEDQENAPEQKAVWKPAPFGTPEKEDRVNVSKAGNTAEENVGIVKS 240
Rhinatrema_bivittatum -----
                .....190.....200.....210.....220.....230.....240

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Mus_musculus      -----
Rattus_norvegicus -----
Homo_sapiens      -----
Macaca_mulatta    -----
Canis_lupus_familiaris -----
Felis_catus       -----
Equus_caballus    -----
Bos_taurus        -----
Orcinus_orca     -----
Pavo_muticus      -----
Pavo_cristatus    -----
Gallus_gallus     --IQPEELSLQANVELNRQALG-LASQLRTDSQPCMENLESEKGTLYATDPQFNLEGSQF 253
Chelonia_mydas    --MQPEELGTKLSAEYMGHSIKRLTPHLLSDSESSVEKLGSEKTNLALADTHSTFNSETG 272
Xenopus_tropicalis CGIVPEENMDSKINQTVKEKTYVDSEFFGPKCPNEIKDILSKKCSPLKEAVSNELLEAS 300
Rhinatrema_bivittatum -----
                .....250.....260.....270.....280.....290.....300

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Mus_musculus      -----
Rattus_norvegicus -----
Homo_sapiens      -----
Macaca_mulatta    -----
Canis_lupus_familiaris -----
Felis_catus       -----
Equus_caballus    -----
Bos_taurus        -----
Orcinus_orca     -----
Pavo_muticus      -----
Pavo_cristatus    -----
Gallus_gallus     TIQQN---ASMTQTEICTREGKIEQSHENVYPVAVNVSEKGDFFVTGSAVSTSIPT 306
Chelonia_mydas    KLDTQEENTSTMKIQEQANVKLLVNKTHESIYHIAFNMAKDEPLPVKDTENGTVSTNRT 332
Xenopus_tropicalis STHKSSDDSNLTKQDEETDKMDCTVNAHSLAKHISQSSSENELLLEQGNIT---V 353
Rhinatrema_bivittatum -----
                .....310.....320.....330.....340.....350.....360

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Mus_musculus      -----
Rattus_norvegicus -----
Homo_sapiens      -----
Macaca_mulatta    -----
Canis_lupus_familiaris -----
Felis_catus       -----
Equus_caballus    -----
Bos_taurus        -----
Orcinus_orca     -----
Pavo_muticus      -----
Pavo_cristatus    -----
Gallus_gallus     GVANKSELOKLVLPSE-----EVKTLDTSLASNTMEVLTYSET 344
Chelonia_mydas    GVAGKSEIEKDLEATPASEITEELKDSEATLESMGMVEVKELETTLESEITMAKIKCSEAI 392
Xenopus_tropicalis SQTKSVDLNNKKLDCIDGNLTPLSLAPANTVLHSSDKNKVKSRSRSPSISKQRSEERCSTS 413
Rhinatrema_bivittatum -----
.....370.....380.....390.....400.....410.....420

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Mus_musculus      -----
Rattus_norvegicus -----
Homo_sapiens      -----
Macaca_mulatta    -----
Canis_lupus_familiaris -----
Felis_catus       -----
Equus_caballus    -----
Bos_taurus        -----
Orcinus_orca     -----
Pavo_muticus      -----
Pavo_cristatus    -----
Gallus_gallus     LKSMALG-----GAKLETTSESMCLTSDVTAIPLKANQADLNTVKVNDTSMAI 393
Chelonia_mydas    LKSLTMTSEGLDAPLESVAIAELKATGESVAVINDLVMPSTVVVMEMKALEETAGSVVM 452
Xenopus_tropicalis SKSVTKKDKSKSKPTVKAPSKNVSSSSPGLGRQSRSSSLGRQRQRSSSSVGRKRYRSNS 473
Rhinatrema_bivittatum -----
.....430.....440.....450.....460.....470.....480

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Mus_musculus      -----
Rattus_norvegicus -----
Homo_sapiens      -----
Macaca_mulatta    -----
Canis_lupus_familiaris -----
Felis_catus       -----
Equus_caballus    -----
Bos_taurus        -----
Orcinus_orca     -----
Pavo_muticus      -----
Pavo_cristatus    -----
Gallus_gallus     GEVR-----IPGATELPVVCNLRVTQCSMEGSGILKATSESVVTMGD 437
Chelonia_mydas    TDMKGLETTLETVGVAEAKSLEGGLEFVTVPDDLVTSKSVAAEAVNDLEATPKSASMVE 512
Xenopus_tropicalis PVQKRKSRSSSTPARRSKSPIRKWWSKSIITKRERTVSIIPVRRRRSRTRSVARRRRSRTRS 533
Rhinatrema_bivittatum -----
.....490.....500.....510.....520.....530.....540

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Mus_musculus      -----
Rattus_norvegicus -----
Homo_sapiens      -----
Macaca_mulatta    -----
Canis_lupus_familiaris -----
Felis_catus       -----
Equus_caballus    -----
Bos_taurus        -----
Orcinus_orca     -----
Pavo_muticus      -----
Pavo_cristatus    -----
Gallus_gallus     VKNKEVDPAALQHSFKVPAETAVTQVQIVSAKTPLAPG-----TVEVKDIEP 485
Chelonia_mydas    VKGSEAALEPVAMQEAKDLERTLESVALGKGSQTILEPVGNAKDLEAALKLVVEMKDLEV 572
Xenopus_tropicalis TTRKHRSRTRSVARRRRSKTR--SVARRHKSGSRSSSSRRKSKSRSSASRRRRQRSSASR 591
Rhinatrema_bivittatum -----
                .....550.....560.....570.....580.....590.....600

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Mus_musculus      -----
Rattus_norvegicus -----
Homo_sapiens      -----
Macaca_mulatta    -----
Canis_lupus_familiaris -----
Felis_catus       -----
Equus_caballus    -----
Bos_taurus        -----
Orcinus_orca     -----
Pavo_muticus      -----
Pavo_cristatus    -----
Gallus_gallus     VRVSVHMGNVRLPEVLQPVVKPKTLEAVTVVKGASDS----- 523
Chelonia_mydas    TPESLHMEEVKGAEGALESVAMAIDLEGTLKLAPVAEAKDSAAASLSPOTEDMKDSKGF 632
Xenopus_tropicalis RRKSRSLSVSRRRRSQSRVARGEKSQSMSLTRRRRRSRSSAARRRKSKSASATRSRLR 651
Rhinatrema_bivittatum -----
                .....610.....620.....630.....640.....650.....660

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Mus_musculus      -----
Rattus_norvegicus -----
Homo_sapiens      -----
Macaca_mulatta    -----
Canis_lupus_familiaris -----
Felis_catus       -----
Equus_caballus    -----
Bos_taurus        -----
Orcinus_orca     -----
Pavo_muticus      -----
Pavo_cristatus    -----
Gallus_gallus     -----ATALDASEALLOCTFSKEMCSLTDVNVVAEAKGLOTTSEPVV 565
Chelonia_mydas    ESVAMTKGPETILDVGVGAEGLETILEPAEVAEEKDLEGIPESLHIQDMEDLEASLEPVV 692
Xenopus_tropicalis SASASRRRRSRSGSVRRQRSSRSGSAGRRRRRREGSAVRRRRSRSESASRRRRSRSGSAG 711
Rhinatrema_bivittatum -----
                .....670.....680.....690.....700.....710.....720

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Mus_musculus      -----
Rattus_norvegicus -----
Homo_sapiens      -----
Macaca_mulatta    -----
Canis_lupus_familiaris -----
Felis_catus       -----
Equus_caballus    -----
Bos_taurus        -----
Orcinus_orca     -----
Pavo_muticus      -----
Pavo_cristatus    -----
Gallus_gallus     QTL----- 568
Chelonia_mydas    MKTGLEVALEHVAVVKGVEATPLSMOMEVVDLEGLVESVAVTKGSEAALEHVVLAEKK 752
Xenopus_tropicalis RRRRSRSGSAGRRRQSRSGSPGRRRRSRSCSTGRRKRSSRSGSAVRRRRSRSGSAVRRRKS 771
Rhinatrema_bivittatum -----
                .....730.....740.....750.....760.....770.....780

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Mus_musculus      -----
Rattus_norvegicus -----
Homo_sapiens      -----
Macaca_mulatta    -----
Canis_lupus_familiaris -----
Felis_catus       -----
Equus_caballus    -----
Bos_taurus        -----
Orcinus_orca     -----
Pavo_muticus      -----
Pavo_cristatus    -----
Gallus_gallus     -----VPOAVPVALQLENSNVLRLGLEATP 592
Chelonia_mydas    SMEPTSLSLQMEDVKDSEGALESIVMEEGSEATQGPVTEAKDLEAILESVSEVRGSEAPAP 812
Xenopus_tropicalis RSGSAVRRRRSRSGSASRRRRSRASASRRRRSRASASRRRRSRSSVSAGRRWRSSRSGSA 831
Rhinatrema_bivittatum -----
                .....790.....800.....810.....820.....830.....840

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Mus_musculus      -----
Rattus_norvegicus -----
Homo_sapiens      -----
Macaca_mulatta    -----
Canis_lupus_familiaris -----
Felis_catus       -----
Equus_caballus    -----
Bos_taurus        -----
Orcinus_orca     -----
Pavo_muticus      -----
Pavo_cristatus    -----
Gallus_gallus     QSLQKEDMKR-----ATSVSSOMESVK----- 614
Chelonia_mydas    LSLQMEDVKGSEGGVKSLAMAKGSKPILKAVAVGEGRGSEATLLSLEMENVKDDSEALES 872
Xenopus_tropicalis ARRRRSRSGSAGRRHRTGSRSAARRRKSRSCSATSRSGSKRRSFSRSLAKRNRSSVSR 891
Rhinatrema_bivittatum -----
                .....850.....860.....870.....880.....890.....900

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Mus_musculus      -----
Rattus_norvegicus -----
Homo_sapiens      -----
Macaca_mulatta    -----
Canis_lupus_familiaris -----
Felis_catus       -----
Equus_caballus    -----
Bos_taurus        -----
Orcinus_orca     -----
Pavo_muticus      -----
Pavo_cristatus    -----
Gallus_gallus     -----
Chelonia_mydas    VARAIDSEPTLEPVAIVEAKGLEAVLSLOMENVKDSEGALESVAMAKDLEAPPEPVAEVK 614
Xenopus_tropicalis RRQRTSRSRSHAKRERSVSAAEKKKIESSTVAEKRIISRSRSSSQKQSESAAGSRRSRSTS 932
Rhinatrema_bivittatum ----- 951
                      .....910.....920.....930.....940.....950.....960

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Mus_musculus      -----
Rattus_norvegicus -----
Homo_sapiens      -----
Macaca_mulatta    -----
Canis_lupus_familiaris -----
Felis_catus       -----
Equus_caballus    -----
Bos_taurus        -----
Orcinus_orca     -----
Pavo_muticus      -----
Pavo_cristatus    -----
Gallus_gallus     -----
Chelonia_mydas    DSEAMLQSLQMEDVKEGLTLESVVVTKSLEAILGPVVEERGAEPTPLSLQIEDLTSEEG 632
Xenopus_tropicalis DDRNRKSRSRSAKKKSCERSPDGKVDNLELKTSSISDFKSKESTCQEQTIPINLISPKN 992
Rhinatrema_bivittatum ----- 1011
                      .....970.....980.....990.....1000.....1010.....1020

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Mus_musculus      -----
Rattus_norvegicus -----
Homo_sapiens      -----
Macaca_mulatta    -----
Canis_lupus_familiaris -----
Felis_catus       -----
Equus_caballus    -----
Bos_taurus        -----
Orcinus_orca     -----
Pavo_muticus      -----
Pavo_cristatus    -----
Gallus_gallus     LAEMMHLK-TTAERETAHMGTVPFFASKTESCVVSQPEIMTGMRLERKDFEVARS----- 687
Chelonia_mydas    VLESMSVV-KLKALEAAFESVVMVEVKDLKKPVQAESEVTAQFKDLETIPKFLCMEGDLV 1051
Xenopus_tropicalis ITDEQTVLGKSASLTECSEKDQPSWKEISTEPLKPSIDMGYHITDSDLVSDTTTRRPDPP 1071
Rhinatrema_bivittatum -----
                      .....1030.....1040.....1050.....1060.....1070.....1080

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Mus_musculus      -----
Rattus_norvegicus -----
Homo_sapiens      -----
Macaca_mulatta    -----
Canis_lupus_familiaris -----
Felis_catus       -----
Equus_caballus    -----
Bos_taurus        -----
Orcinus_orca     -----
Pavo_muticus      -----
Pavo_cristatus    -----
Gallus_gallus     -----
Chelonia_mydas    -----
Xenopus_tropicalis -----
Rhinatrema_bivittatum -----
                  -----STVAEVRGLDNLSEVKAVAEAREVETGSKTSCITEMKNLE 727
Chelonia_mydas    ITPSETTSEVKNLEIIGQSESLAEVKDLETTLESEAVAESKDSETTTESQVVMKVDLK 1111
Xenopus_tropicalis IESICDANDESNRMEVAMELDSCHSDSDKFSTTEECVLSDFKKVPDDFS SLKTFESYS 1131
Rhinatrema_bivittatum -----
                  .....1090.....1100.....1110.....1120.....1130.....1140

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```

Mus_musculus      -----
Rattus_norvegicus -----
Homo_sapiens      -----
Macaca_mulatta    -----
Canis_lupus_familiaris -----
Felis_catus       -----
Equus_caballus    -----
Bos_taurus        -----
Orcinus_orca     -----
Pavo_muticus      -----
Pavo_cristatus    -----
Gallus_gallus     -----
Chelonia_mydas    -----
Xenopus_tropicalis -----
Rhinatrema_bivittatum -----
                  -----IAVGSETRTQMOWGTTLISEAEDLNKAKVRSRETVLGPVQTVTVKTS 775
Chelonia_mydas    TIPRSQVMTEVSDLKISPRTEVIKGFETAIKSDATVMEVEDSESTLESRSVIEVKDPEAT 1171
Xenopus_tropicalis TSDTITQCFSEQEPDASQVYMSTNDRRFKPYLNADDPVNLYSKAEDKLFNPEMTVATTA 1191
Rhinatrema_bivittatum -----
                  .....1150.....1160.....1170.....1180.....1190.....1200

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```

Mus_musculus      -----
Rattus_norvegicus -----
Homo_sapiens      -----
Macaca_mulatta    -----
Canis_lupus_familiaris -----
Felis_catus       -----
Equus_caballus    -----
Bos_taurus        -----
Orcinus_orca     -----
Pavo_muticus      -----
Pavo_cristatus    -----
Gallus_gallus     -----
Chelonia_mydas    -----
Xenopus_tropicalis -----
Rhinatrema_bivittatum -----
                  -----PESEAITGIKYSKKILKSEATSELKHSEASPESLHSTDLKDSGKTPPEVILQMKDSKIT 1231
Chelonia_mydas    SVTVAGELAQSHIMLNAPPDFLOTPKSOTCSETNISDSRATAGDMYILPLDTRVQEIHPHQ 1251
Rhinatrema_bivittatum -----
                  .....1210.....1220.....1230.....1240.....1250.....1260

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Mus_musculus      -----
Rattus_norvegicus -----
Homo_sapiens      -----
Macaca_mulatta    -----
Canis_lupus_familiaris -----
Felis_catus       -----
Equus_caballus    -----
Bos_taurus        -----
Orcinus_orca     -----
Pavo_muticus      -----
Pavo_cristatus    -----
Gallus_gallus     -----
Chelonia_mydas    KKSEPIALVKDSEASRELLHIVVKDLQSTPESETVAVVKDLKETLECEMVVAKDLETTLK 1291
Xenopus_tropicalis SITYYKAENSDHETVTTLEKGVSYSTSCNLPTICNMIDSAVSKRQENLEKPNLKNQTSVV 1311
Rhinatrema_bivittatum -----
.....1270.....1280.....1290.....1300.....1310.....1320

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```

Mus_musculus      -----
Rattus_norvegicus -----
Homo_sapiens      -----
Macaca_mulatta    -----
Canis_lupus_familiaris -----
Felis_catus       -----
Equus_caballus    -----
Bos_taurus        -----
Orcinus_orca     -----
Pavo_muticus      -----
Pavo_cristatus    -----
Gallus_gallus     SKAVKVVEHSQTTPGQLQEQVVGNSEAVLES-FTR-----AEETVMEVRNLKETL 854
Chelonia_mydas    SEAIMDVKHSKAAPESLYKAKVKDSEAVPES-LYSSKVKVAELALELEAAAKVKDLKESL 1350
Xenopus_tropicalis SDTSADSVVRPAPEHSSGGTIQSASEMLLTDNSHSDMSPQTRLNTNALSKELYHQKEES 1371
Rhinatrema_bivittatum -----
.....1330.....1340.....1350.....1360.....1370.....1380

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Mus_musculus      -----
Rattus_norvegicus -----
Homo_sapiens      -----
Macaca_mulatta    -----
Canis_lupus_familiaris -----
Felis_catus       -----
Equus_caballus    -----
Bos_taurus        -----
Orcinus_orca     -----
Pavo_muticus      -----
Pavo_cristatus    -----
Gallus_gallus     QSEMLTDVITRGSGIVTIR----KTDREKTEFSPVVDVKGLEEASVIEKGMKAKYLEPAS 910
Chelonia_mydas    ESKVIVDVKDLEAASESVIRMKVKDLEEIPEHWQPDVKVLEASPESEKTMVKYSEATP 1410
Xenopus_tropicalis LHDLELSERNAATIQNSPKSFPADVSSSQPFQKGAVFSAADICTSGNIPNLKTIETETLS 1431
Rhinatrema_bivittatum -----
.....1390.....1400.....1410.....1420.....1430.....1440

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Mus_musculus      -----
Rattus_norvegicus -----
Homo_sapiens      -----
Macaca_mulatta    -----
Canis_lupus_familiaris -----
Felis_catus       -----
Equus_caballus    -----
Bos_taurus        -----
Orcinus_orca     -----
Pavo_muticus      -----
Pavo_cristatus    -----
Gallus_gallus     EAGEV-----RLESMEEAFAEVKGSETVREPEVHMDIODLETSTQTHGKVA 956
Chelonia_mydas    ETQMLTETKDLEETLESLYTAEVEELEKITESMPMVEVKESAEVMDLKFSATILKSEKTV 1470
Xenopus_tropicalis KEHLMESNKTIVTLTKDQKLADHKDMQSVKDDLILKPTPNILSFAEKAKPISASHSSDP 1491
Rhinatrema_bivittatum -----
.....1450.....1460.....1470.....1480.....1490.....1500

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```

Mus_musculus      -----
Rattus_norvegicus -----
Homo_sapiens      -----
Macaca_mulatta    -----
Canis_lupus_familiaris -----
Felis_catus       -----
Equus_caballus    -----
Bos_taurus        -----
Orcinus_orca     -----
Pavo_muticus      -----
Pavo_cristatus    -----
Gallus_gallus     EISILEDASEAFTITKQH-IESVPOYLHTEQDHAQTVLEAKSTAEWKSTEEAAEVWGAA 1015
Chelonia_mydas    EVKILEDTPESLTVEKIKNSKACLEFLHSEEMKDLEADVEAEASTALKDMEETILGTAQVK 1530
Xenopus_tropicalis VAENYSTENSVPKDIQLHDSIHITPVESKACAEQVSHSSLAALDKOPKNSHDLEITKSHS 1551
Rhinatrema_bivittatum -----
.....1510.....1520.....1530.....1540.....1550.....1560

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```

Mus_musculus      -----
Rattus_norvegicus -----
Homo_sapiens      -----
Macaca_mulatta    -----
Canis_lupus_familiaris -----
Felis_catus       -----
Equus_caballus    -----
Bos_taurus        -----
Orcinus_orca     -----
Pavo_muticus      -----
Pavo_cristatus    -----
Gallus_gallus     EIKSSEAVPKPEDRKDLGTVLREVAAEVQYSEGECCQMEDVSIPTLARECEIIAEKKD 1075
Chelonia_mydas    YSEAVLKSVGIAERKHLGTTVE-NRNAVLDLEPVSESCHAVDLKFPETPQIPELKVEVKD 1589
Xenopus_tropicalis AKYADVQDVSIQGRFKDSRTVFPPELSPVFNOQPLQIDSERKRKEGVSQNI GEYKNEVKT 1611
Rhinatrema_bivittatum -----
.....1570.....1580.....1590.....1600.....1610.....1620

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Mus_musculus      -----
Rattus_norvegicus -----
Homo_sapiens      -----
Macaca_mulatta    -----
Canis_lupus_familiaris -----
Felis_catus       -----
Equus_caballus    -----
Bos_taurus        -----
Orcinus_orca     -----
Pavo_muticus      -----
Pavo_cristatus    -----
Gallus_gallus     SEQALPLETFEALSNRRIATESGVLSETI-----LSSSHAAN----- 1112
Chelonia_mydas    SEAALESETITEVNDLQATPESVATVEVKNLKAVPDSLHTVHMNN----- 1634
Xenopus_tropicalis PILQVDIDKPNINPQVSITIQPTCLPPMHTELSVPKESVCLGKTSSTSFDPDTPDAHRIC 1671
Rhinatrema_bivittatum -----
.....1630.....1640.....1650.....1660.....1670.....1680

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Mus_musculus      -----
Rattus_norvegicus -----
Homo_sapiens      -----
Macaca_mulatta    -----
Canis_lupus_familiaris -----
Felis_catus       -----
Equus_caballus    -----
Bos_taurus        -----
Orcinus_orca     -----
Pavo_muticus      -----
Pavo_cristatus    -----
Gallus_gallus     ---VKDSTGTPSEIIRNAEHLLEPPSCIAETKGLEATHISETVVELKDTAAAEVEADT 1169
Chelonia_mydas    ---LEATPELVAAAEMKDLEAVPEVVVLAEVKDLEVVSDSLHTVSVKDLEAAPESVVAV 1691
Xenopus_tropicalis TPSDNTINSMLQSSSNVQFERTLKDRKLVDPVVDVKQFPQKQDELICIVTKGEPHVKSMI 1731
Rhinatrema_bivittatum -----
.....1690.....1700.....1710.....1720.....1730.....1740

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Mus_musculus      -----
Rattus_norvegicus -----
Homo_sapiens      -----
Macaca_mulatta    -----
Canis_lupus_familiaris -----
Felis_catus       -----
Equus_caballus    -----
Bos_taurus        -----
Orcinus_orca     -----
Pavo_muticus      -----
Pavo_cristatus    -----
Gallus_gallus     KDLEAAPVPETVTEVVPILVEASQLEAIPQAEADKEV-AAEEASETRDSETS DVQPDVA 1228
Chelonia_mydas    AEVKDLQAAPELAAVVKDLEAAPEYVVMLAEVKDSEVVPASLHTVDVKDFETTPESVVVA 1751
Xenopus_tropicalis SEHSSAESGTDKHKLVQKETETKELLYIAAEEKPSVSASAKEIPALMSETPNRKGAEIEIA 1791
Rhinatrema_bivittatum -----
.....1750.....1760.....1770.....1780.....1790.....1800

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Mus_musculus      -----
Rattus_norvegicus -----
Homo_sapiens      -----
Macaca_mulatta    -----
Canis_lupus_familiaris -----
Felis_catus       -----
Equus_caballus    -----
Bos_taurus        -----
Orcinus_orca     -----
Pavo_muticus      -----MMQRNKKGVGLSPSPGLGSG----- 20
Pavo_cristatus    -----MMQRNKKGVGLSPSPGLGSG----- 20
Gallus_gallus     ARMRETLMRLEKVIKSSHRSSEKSKH-----DAKKQKRSRSKSSQSRSRKRK----- 1275
Chelonia_mydas    EEVKDLEAAPESVVTAAKFKYSETTPESVVVLAEMKDLEAALKSVVVAEVKDLRAAPESL 1811
Xenopus_tropicalis DCGQLKTRREASFIEPPAEQISPKTSDPIFKKQKIADACKTISGNRMKQDFSGVESVMQP 1851
Rhinatrema_bivittatum -----
.....1810.....1820.....1830.....1840.....1850.....1860

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Mus_musculus      -----
Rattus_norvegicus -----
Homo_sapiens      -----
Macaca_mulatta    -----
Canis_lupus_familiaris -----
Felis_catus       -----
Equus_caballus    -----
Bos_taurus        -----
Orcinus_orca     -----
Pavo_muticus      -----KKSRSRSTSR----- 30
Pavo_cristatus    -----KKSRSRSTSR----- 30
Gallus_gallus     -----KKSRSRSTSR----- 1285
Chelonia_mydas    AAETDLEAVLDILHPVDVKDSETAPESVVVAEEVKDLEAVPDVLHVDVKDSETSTESL 1871
Xenopus_tropicalis LSDKSLDDKSSSASTEKVKESCSNVVSLHNSTLTSVKNPVPNISRSGHHTLESILPDI 1911
Rhinatrema_bivittatum -----
.....1870.....1880.....1890.....1900.....1910.....1920

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Mus_musculus      -----
Rattus_norvegicus -----
Homo_sapiens      -----
Macaca_mulatta    -----
Canis_lupus_familiaris -----
Felis_catus       -----
Equus_caballus    -----
Bos_taurus        -----
Orcinus_orca     -----
Pavo_muticus      RLTSKRARSRSR-----NYSDSRKK----- 50
Pavo_cristatus    RLTSKRARSRSR-----NYSDSRKK----- 50
Gallus_gallus     RLTSKRARSRSR-----NYSDSRKK----- 1305
Chelonia_mydas    LVSEVKDSETAPESVVIMAEVKYSETSPESVVATAEVKLEAVPESVAEMKDLESAPDA 1931
Xenopus_tropicalis CSSSRQSRSKPKCSTEETKTRGNQVQVSASSNHHELDSSKINQSNKYEATASNSKATDSQ 1971
Rhinatrema_bivittatum -----
.....1930.....1940.....1950.....1960.....1970.....1980

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Mus_musculus      -----
Rattus_norvegicus -----
Homo_sapiens      -----
Macaca_mulatta    -----
Canis_lupus_familiaris -----
Felis_catus       -----
Equus_caballus    -----
Bos_taurus        -----
Orcinus_orca     -----
Pavo_muticus      -----
Pavo_cristatus    -----
Gallus_gallus     -----
Chelonia_mydas    MVVVAEVKDLKASPESLAAVAAEVIDLEAAPDFLCIVDKDTGTTESVIAAAEEVIDLEA 1305
Xenopus_tropicalis STFCDNKVSTQGQSNSTGASTGQDIQSGEIVSQKVISLAPLN----- 1991
Rhinatrema_bivittatum ----- 2012
.....1990.....2000.....2010.....2020.....2030.....2040

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Mus_musculus      -----
Rattus_norvegicus -----
Homo_sapiens      -----
Macaca_mulatta    -----
Canis_lupus_familiaris -----
Felis_catus       -----
Equus_caballus    -----
Bos_taurus        -----
Orcinus_orca     -----
Pavo_muticus      -----
Pavo_cristatus    -----
Gallus_gallus     -----
Chelonia_mydas    APDFLCIVDKDTGTTESVIAAAEEVIDLEAAPDFLCIVDKDTGTTESVIAAAEEVIDL 2051
Xenopus_tropicalis ----- 2012
Rhinatrema_bivittatum -----
.....2050.....2060.....2070.....2080.....2090.....2100

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Mus_musculus      -----
Rattus_norvegicus -----
Homo_sapiens      -----
Macaca_mulatta    -----
Canis_lupus_familiaris -----
Felis_catus       -----
Equus_caballus    -----
Bos_taurus        -----
Orcinus_orca     -----
Pavo_muticus      -----
Pavo_cristatus    -----
Gallus_gallus     -----
Chelonia_mydas    EAAPDFLCIVDKDSERTPQSVVVAEMKDSVTPESVAEVKYSETSPFVVVAAEVKDL 2111
Xenopus_tropicalis ----- 2012
Rhinatrema_bivittatum -----
.....2110.....2120.....2130.....2140.....2150.....2160

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Mus_musculus      -----
Rattus_norvegicus -----
Homo_sapiens      -----
Macaca_mulatta    -----
Canis_lupus_familiaris -----
Felis_catus       -----
Equus_caballus    -----
Bos_taurus        -----
Orcinus_orca      -----
Pavo_muticus      -----
Pavo_cristatus    -----
Gallus_gallus     -----
Chelonia_mydas    KAAPESVVTIVTEVKDLQAVPVSLVSVADVEDSEGASESLHAVDMNDSAAAPKSVGLAAEM 1314
Xenopus_tropicalis -----
Rhinatrema_bivittatum -----
                   .....2170.....2180.....2190.....2200.....2210.....2220

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Mus_musculus      -----
Rattus_norvegicus -----
Homo_sapiens      -----
Macaca_mulatta    -----
Canis_lupus_familiaris -----
Felis_catus       -----
Equus_caballus    -----
Bos_taurus        -----
Orcinus_orca      -----
Pavo_muticus      -----
Pavo_cristatus    -----
Gallus_gallus     -----
Chelonia_mydas    KDLEEAPESVVAEAKNMEAPLDSWYTAYVKDSETTRESVAVTADVNDLEATPAFRAVA 2231
Xenopus_tropicalis -----
Rhinatrema_bivittatum -----
                   .....2230.....2240.....2250.....2260.....2270.....2280

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Mus_musculus      -----
Rattus_norvegicus -----
Homo_sapiens      -----
Macaca_mulatta    -----
Canis_lupus_familiaris -----
Felis_catus       -----
Equus_caballus    -----
Bos_taurus        -----
Orcinus_orca      -----
Pavo_muticus      -----
Pavo_cristatus    -----
Gallus_gallus     -----
Chelonia_mydas    AEAKDSEAASESVVIAAEGKDLQAPDSLVMFAVEDSEAASVSLHILTDVNDLEAVRESV 2291
Xenopus_tropicalis -----
Rhinatrema_bivittatum -----
                   .....2290.....2300.....2310.....2320.....2330.....2340

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Mus_musculus	-----	57
Rattus_norvegicus	-----	57
Homo_sapiens	-----	57
Macaca_mulatta	-----	57
Canis_lupus_familiaris	-----	57
Felis_catus	-----	57
Equus_caballus	-----	57
Bos_taurus	-----	57
Orcinus_orca	-----	57
Pavo_muticus	RSSDRYRSKSRS-----	142
Pavo_cristatus	RSSDRYRSKSRS-----	142
Gallus_gallus	RSSDRYRSKSRS-----	1397
Chelonia_mydas	EATAEVKNLEAAPDSLYTVYVKDSETTQEFVAVRAEVDLGAPELVAAVAAAKDLAAPP	2351
Xenopus_tropicalis	SKSRKRRSRKSLKG-----	2194
Rhinatrema_bivittatum	-----	
	.....2350.....2360.....2370.....2380.....2390.....2400	

Mus_musculus	-----NEEIVQKIEEVLSGVLDTEL	77
Rattus_norvegicus	-----NEEIVQKIEEVLSGVLDTEL	77
Homo_sapiens	-----NEEIVQKIEEVLSGVLDTEL	77
Macaca_mulatta	-----NEEIVQKIEEVLSGVLDTEL	77
Canis_lupus_familiaris	-----NEEIVQKIEEVLSGVLDTEL	77
Felis_catus	-----NEEIVQKIEEVLSGVLDTEL	77
Equus_caballus	-----NEEIVQKIEEVLSGVLDTEL	77
Bos_taurus	-----NEEIVQKIEEVLSGVLDTEL	77
Orcinus_orca	-----NEEIVQKIEEVLSGVLDTEL	77
Pavo_muticus	-----AGKRGSRLLSSRRSRRGRSRSSD	164
Pavo_cristatus	-----AGKRGSRLLSSRRSRRGRSRSSD	164
Gallus_gallus	-----AEKRGSRLLSSRRSRRGRSRSSD	1419
Chelonia_mydas	ELVAAVAAAKDLAAPPPELVAAVAAAKDLAAPPPELVAAVAAEAKDSRVAPGSAVVVKENDEED	2411
Xenopus_tropicalis	-----KHSSSSQGRKRRSPSKSKTRKRQSPSKSSS	2224
Rhinatrema_bivittatum	-----	
	.....2410.....2420.....2430.....2440.....2450.....2460	

Mus_musculus	RYKPDLEASRKSRCVSVQTDPTDEVPTKSKKKKKHKNNKKKKKKKEKEKKYKROPEESE	137
Rattus_norvegicus	RYKPDLEASRKSRCVSVQTDPTDEVPTKSKKKKKHKNNKKKKKKKEKEKKYKROPEESE	137
Homo_sapiens	RYKPDLEASRKSRCVSVQTDPTDEIPTKSKKKKKHKNNKKKKKKKEKEKKYKROPEESE	137
Macaca_mulatta	RYKPDLEASRKSRCVSVQTDPTDEIPTKSKKKKKHKNNKKKKKKKEKEKKYKROPEESE	137
Canis_lupus_familiaris	RYKPDLEASRKSRCVSVQTDPTDEIPTKSKKKKKHKNNKKKKKKKEKEKKYKROPEESE	137
Felis_catus	RYKPDLEASRKSRCVSVQTDPTDEIPTKSKKKKKHKNNKKKKKKKEKEKKYKROPEESE	137
Equus_caballus	RYKPDLEASRKSRCVSVQTDPTDEIPTKSKKKKKHKNNKKKKKKKEKEKKYKROPEESE	137
Bos_taurus	RYKPDLEASRKSRCVSVQTDPTDEIPTKSKKKKKHKNNKKKKKKKEKEKKYKROSEESE	137
Orcinus_orca	RYKPDLEASRKSRCVSVQTDPTDEIPTKSKKKKKHKNNKKKKKKKEKEKKYKROPEESE	137
Pavo_muticus	RYRSKRSRVEKTRRSRRRSRSSDRYR-SKRSRAEKTR-RSGRRRSRSSDRYRS-KSRSV	221
Pavo_cristatus	RYRSKRSRVEKTRRSRRRSRSSDRYR-SKRSRAEKTR-RSGRRRSRSSDRYRS-KSRSV	221
Gallus_gallus	RYRSKRSRVEKTRRSRRRSRSSDRYR-SKRSRAEKTR-RSGRRRSRSSDRYRS-KSRSV	1476
Chelonia_mydas	LFKKK-KAYEKSNGDKHKQDAKKLKRSKSKSLSRSRKRRKKSRSRSVSKHLK-CKRAR	2469
Xenopus_tropicalis	KRRSRSKSIKRHSRSQSRDKSRRSRSEKSTGRKKQLSSKSPTRKKRSHSRSDARKRHSR	2284
Rhinatrema_bivittatum	-----	
2470.....2480.....2490.....2500.....2510.....2520	

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Mus_musculus	SKLKSHHDG--NLESDSFLKFDSEPSAAALEHPVRAFGLSEASET--ALVLEPPVVSMEVQ	194
Rattus_norvegicus	SKLKSHHDGNVDLESDFSFLKFDSEPSALALEHPVRAFGLSEASET--PLVLEPPVVSMEVQ	196
Homo_sapiens	SKTKSHDDGNIDLESDFSFLKFDSEPSAAALEHPVRAFGLSEASET--PAVVLEPPVVSMEVS	197
Macaca_mulatta	AKTKSHHDGNIDLESDFSFLKFDSEPSAAALEHPVRAFGLSEASET--PAVVLEPPVVSMEVP	197
Canis_lupus_familiaris	SKVKSHHDGNIDLESDFSFLKFDSEPSAAALEHPVRAFGLSEASET--PAVVLEPPVVSMEIS	197
Felis_catus	SKAKSHHDGNIDLESDFSFLKFDSEPSAAALEHPVRAFGLSEASET--PAVVLEPPVVSMEVS	197
Equus_caballus	SKLKSHHDGNIDLESDFSFLKFDSEPSAAALEHPVRAFGLSEASET--SAVVLEPPVVSMEVS	197
Bos_taurus	SKPKSHHDG--NIESDFSFLKFDSEPSAAALEHPVRAFGLSEASET--PAVVLEPPVVSMEVS	195
Orcinus_orca	SKPKSHHDGNVDLESDFSFLKFDSEPSAAALEHPVRAFGLSEASET--PALVLEPPVVSMEVL	197
Pavo_muticus	EKTR-RSGRRRSRSDRYRSKSPSVEKRGSRSSWRSSRRRRSRSDHSSKSRSSRSEKRGG	280
Pavo_cristatus	EKTR-RSGRRRSRSDRYRSKSPSVEKRGSRSSWRSSRRRRSRSDHSSKSRSSRSEKRGG	280
Gallus_gallus	EKTR-RSGRRRSRSDRYRSKSPSVEKRGSRSSWRSSRRRRSRSDHSSKSRSSRSEKRGG	1535
Chelonia_mydas	SRSRNYSRKRKHSYDKSRSSRSEKRGSRSSWRSSRRRRSRSDGLKSRSSRSDKREG	2529
Xenopus_tropicalis	KNSRSKSPWNRNRSHSKSLSRSPSKSLSRHHHSKSRLLPKRYSRSGSRSSASPGKHSRRNR	2344
Rhinatrema_bivittatum	-----	
	.....2530.....2540.....2550.....2560.....2570.....2580	

Mus_musculus	ESHVLETLKPKATKAELS-----VVSTSVISEQEQPMPGMLPESMTKILDSFTAAPVPM	249
Rattus_norvegicus	EPHALETLKPKATKAELS-----AVSTSVISEQEQPVPMLEPESMTKILDSFAAAPVPM	251
Homo_sapiens	EPHILETLKPKATKAELS-----VVSTSVISEQEQSVAVMPEPESMTKILDSFAAAPVPT	252
Macaca_mulatta	EPHILETLKPKATKAELS-----VASTSVISEQEQSVAVTPEPESMTKILDSFAAAPVPT	252
Canis_lupus_familiaris	ESHTLETLKPKATKAELS-----VASTSVISEQEQSVALTLEPESMTKILDSFTTAPVPT	252
Felis_catus	EPHTLETLKPKATKAELS-----VASTSVISVQEQSVAVTLEPESMTKILDSFTMAAVPT	252
Equus_caballus	EPHTLETLKPKATKAELS-----VASTSVISVQEQSVAVTLEPESMTKILDSFTAPVPT	252
Bos_taurus	EPHILETLKPKATKAELS-----VASTSVISVQEQSVAVTLEPESMTKILDSFTAPVPT	250
Orcinus_orca	EPHTLETLKPKATKAELS-----VASTSVISVQEQSVAVTLEPESMTKILDSFTAPVPT	252
Pavo_muticus	KEYSWRFRHRGSGSSDR-----SKSRSSRSEKRGSRKASLRRSKRRRSKSSDRYKSRSSV	335
Pavo_cristatus	KEYSWRFRHRGSGSSDR-----SKSRSSRSEKRGSRKASLRRSKRRRSKSSDRYKSRSSV	335
Gallus_gallus	KEYSWRFRHRGSGSSDR-----SKSRSSRSEKRGSRKASLRRSKRRRSKSSDRYKSRSSV	1590
Chelonia_mydas	KDSSWRSSRRRRSRSSDH-----LKSRSRSEKREGKDSRRSSRRRRSRSSDRFKSRSSV	2584
Xenopus_tropicalis	SFSKSPPTRRGSRSSRSGRWGNSKSSRRGRSSRSGASRRNRSSRSSRRSSRLSDKNRGS	2404
Rhinatrema_bivittatum	-----	
	.....2590.....2600.....2610.....2620.....2630.....2640	

Mus_musculus	STAALKSPPEPVVTVMSVEYQ--KSVLKSLETMPPEPESMTKILDSFTAAPVPM	308
Rattus_norvegicus	STAVLRSPEPVVTVMSVEYQ--KSVLKSLETMPPEPESMTKILDSFTAAPVPM	310
Homo_sapiens	TTLVLKSSEPVVTVMSVEYQ--KSVLKSLETMPPEPESMTKILDSFTAAPVPM	312
Macaca_mulatta	TTVVLKSSEPVVTVMSVEYQ--KSVLKSLETMPPEPESMTKILDSFTAAPVPM	312
Canis_lupus_familiaris	TTVVLKSSEPVVTVMSVEYQ--KSVLKSLETMPPEPESMTKILDSFTAAPVPM	311
Felis_catus	TTVVLKSSEPVVTVMSVEYQ--KSVLKSLETMPPEPESMTKILDSFTAAPVPM	310
Equus_caballus	TTVVLKSSEPVVTVMSVEYQ--KSVLKSLETMPPEPESMTKILDSFTAAPVPM	312
Bos_taurus	TTVVLKSSEPVVTVMSVEYQ--KSVLKSLETMPPEPESMTKILDSFTAAPVPM	309
Orcinus_orca	TTVVLKSSEPVVTVMSVEYQ--KSVLKSLETMPPEPESMTKILDSFTAAPVPM	311
Pavo_muticus	EKRDRKQSSSRKSKRQSKSSDRYKSRSS--VEKK--KESSRKSRRRSKSSERYKSRSS	391
Pavo_cristatus	EKRDRKQSSSRKSKRQSKSSDRYKSRSS--VEKK--KESSRKSRRRSKSSERYKSRSS	391
Gallus_gallus	EKRDRKQSSSRKSKRQSKSSDRYKSRSS--VEKK--KESSRKSRRRSKSSERYKSRSS	1646
Chelonia_mydas	EKRERKDSRRSSRRHSKSLDRLKSRSSRSVEKKGHKDSWRSSRRRSKSSDRILKSRSS	2644
Xenopus_tropicalis	RSPVRKRHSSSRITQDKSLTKHPSKSTSPPPKKTPLKSTAFKHSIGLKSILQKQLSQA	2464
Rhinatrema_bivittatum	-----	
2650.....2660.....2670.....2680.....2690.....2700	

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Mus_musculus	PTEVHPEPSPS-TMDFPESSTIDVQRLPEQPVE-----APSEIADSSMTRPQE	355
Rattus_norvegicus	PTEVHPEPSPS-TMDFPESSTIDVQRLPEQPVE-----APPEIADSSMTRPQE	357
Homo_sapiens	PTEVYPEPSTSTTMDFPESSAIEALRLPEQPVD-----VPSEIADSSMTRPQE	360
Macaca_mulatta	PTEVYPEPSTSTTMDFPESSAIEALRLPEQPVD-----VPSEIADSSMTRPQE	360
Canis_lupus_familiaris	PTEVHPEPSTSTTMDFPESSAIEALRLPEQPVE-----VPSEIADSSMTRPQE	359
Felis_catus	TAEVHPEPSTSTTVDFPESSAIEALRLPEQPVE-----VPSEIADSSMTRPQE	358
Equus_caballus	PTEVHPEPSTSTTMDFPESSAIEALRLPEQPVE-----VPSEIADSSMTRPQE	360
Bos_taurus	PTEVHPEPSTSTAMDFPESSAIEALRLPEQPVE-----GPSEIADSSMTRPQE	357
Orcinus_orca	PTQVHPEPSTSTTMDFPESSAIEALRLPEQPVE-----VPSEIADSSMTRPQE	359
Pavo_muticus	SVEKK-RKESSKKSKRKRKSSDSLKSRSKS-----VEKRASKLASAKCSRKHA	439
Pavo_cristatus	SVEKK-RKESSKKSKRKRKSSDSLKSRSKS-----VEKRASKLASAKCSRKHA	439
Gallus_gallus	SVEKK-RKESSKKSKRKRKSSDSLKSRSKS-----VEKRASKLASAKCSRKHA	1694
Chelonia_mydas	SVEKRERKDSRRSRRRRSKSSDRLKSRSRRS-----FEKRGKESWRSRRRRS	2695
Xenopus_tropicalis	KLQSSINKSSSKEQLPAASLATAQLPASGLPAKQVLVPLPSKAKLPETNLNAKARPHL	2524
Rhinatrema_bivittatum	-----	
	.....2710.....2720.....2730.....2740.....2750.....2760	

Mus_musculus	SLELPKTTAVELQESTVASALELPGPPATSILELOGPPVTPVPELPGPSAT--PVPELSG	413
Rattus_norvegicus	SLELPKTTAVELQESSVASALELPGPPATSMLELOGPPVTPVPELPGPSATT--PVPELSG	416
Homo_sapiens	LPELPKTTALELQESSVASAMELPGPPATSMPELOGPPVTPVLELPGPSAT--PVPELPG	418
Macaca_mulatta	LPELPKTTALELQESSVASAMELPGPPATSMPELOGPPVTPVPELPGPSAT--PVPELPG	418
Canis_lupus_familiaris	LLELPKTTALELPESSVASVMELPGPPATSKPELOGPPVTPVLELPGPSAT--PLPELPG	417
Felis_catus	LPELPKTTALELPESSVASVVELPGPPATSKPELOGPPVTPVLELPGPSAT--PLPELPG	416
Equus_caballus	LLELPKTTALELPESSVASAMELPGPPATSMLELOGPPVTPVLELPGPSAT--PVPELPG	418
Bos_taurus	MLELPKTTALELQESSVASVMELPGPPATSMPELOGPPVTPVLELPGPSAT--PAPELPG	415
Orcinus_orca	MLELPKTTALELQESSVASAMELPGPPATSMLELOGPPVTPVLELPGPSAT--PVPELPG	417
Pavo_muticus	DSSE-----QEKVDGSEP-VTSEISSSKSSN--GPMVSVALSLEGINPELPPPSGSG	488
Pavo_cristatus	DSSE-----QEKVDGSEP-VTSEISSSKSSN--GPMVSVALSLEGINPELPPPSGSG	488
Gallus_gallus	DSSE-----QEKVDGSEP-VTSEISSSKSSN--GPVSVALSLEGVNPELPPPSGSG	1743
Chelonia_mydas	KSSDRFKSRSRSEFEKRGKESWRSRRRRSKSSDRLKSKSRSRSEFEKRGKASWRSRRR	2755
Xenopus_tropicalis	ASQLPKTQLPLPNNDRITQLSVLNTNVRAQQHVTDLTTEPWSVADLTITGAQWSIPDMST	2584
Rhinatrema_bivittatum	-----	
	.....2770.....2780.....2790.....2800.....2810.....2820	

Mus_musculus	PLSTPVPELPGPPATVVPPELPGPSVTPVPQLSQELPGPPAPSMG-----LEPPQEVF	465
Rattus_norvegicus	PLSTLVPELPGPPGTVVPELPGPSVTPVPQLSQELPGPSAPSMG-----LEPPQEVF	468
Homo_sapiens	PLSTPVPELPGPPATAVPELPGPSVTPVPQLSQELPGLPAPSMG-----LEPPQEVF	470
Macaca_mulatta	PLSTPVPELPGPPATAVPELPGPSVTPVPQLSQELPGLPAPSMG-----LEPPQEVF	470
Canis_lupus_familiaris	PLSTPVPELLGPPATAVPELPGPSATSVLPQLSQELPGLPAPSVG-----LEPPQEVF	469
Felis_catus	PLSTPVSELLGPPATAVPELPGPSVTSVPQLSQELPGLPAPSVG-----LEPPQEVF	468
Equus_caballus	PLSTPVPELLGPPATAVPELPGPSVTSVPQLSQELPGLPAPSMG-----LEPPQEVF	470
Bos_taurus	PLSTPVPELLGPPATAVPELAGPSVTSVPQLSQELSGLPAPSMG-----LEPPQEVF	467
Orcinus_orca	PLSTPVPELLGPPATAVPELPGPSVTSVPQLSQELPGLPAPSMG-----LEPPQEVF	469
Pavo_muticus	FSKTVESLETSS---SVEKMDVPQPSAIPELDSSKTSNDQEQCSMPVEKT---VTSENGS	542
Pavo_cristatus	FSKTVESLETSS---SVEKMDVPQPSAIPELDSSKTSNDQEQCSMPVEKT---VTSENGS	542
Gallus_gallus	FS-TVESLETSS---SVEKMDVPQPSAIPELDSSKTSNDQEQCSLPVEKTQVVTSENGS	1799
Chelonia_mydas	RSKSSDRLKSKSRSEFEKRGKESWRSRRRRSKSSDRLKSRSRSEFEKRGGRDSSWRSK	2815
Xenopus_tropicalis	GGHWGLSDMTAAGHWITQDMTSAQWAMPDLSSGQWPVITDMTSSTHWPLSDMSSGTOWP	2644
Rhinatrema_bivittatum	-----	
2830.....2840.....2850.....2860.....2870.....2880	

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Mus_musculus	EPPVMAQELSGVPAVSAAIELTGQPAVTVAMELTEQP-----	502
Rattus_norvegicus	EPPVMAQEVSGVPTVSAAIELTGQPAVTVAMELTEQP-----	505
Homo_sapiens	EPPVMAQELPGLPLVTAAVELPEQPAVTVAMELTEQP-----	507
Macaca_mulatta	EPPVMAQELPGLPLVTAAVELPEQPAVTVAMELTEQP-----	507
Canis_lupus_familiaris	EPPVMAQELPGLPAVTAAVELPGQPAVTVAMELTEQP-----	506
Felis_catus	EPPVMAQELPGLPAVTAAVELPGQPAVTVAMELAEQP-----	505
Equus_caballus	EPPVMAQELPGLPAVTAAVELPGQPAVTVAMELTEQP-----	507
Bos_taurus	EPPVMAQELPGLPAVTTAVELPGQPVVTVAMELTEQP-----	504
Orcinus_orca	EPPVMAQELPGLPVVTAAVELPGQPVVTVAMELTEQP-----	506
Pavo_muticus	AILYDS---DLGSPVVEKTVPLESSSLTELTFSSASS-----	575
Pavo_cristatus	AILYDS---DLGSPVVEKTVPLESSSLTELTFSSASS-----	575
Gallus_gallus	AALYDS---DLGSPVVEKTVPLESSSPTELTFPASS-----	1832
Chelonia_mydas	RRRSKSSDRLKSRSRSEVEKRGGRDSSRRSKRRRSKSTD-----	2853
Xenopus_tropicalis	VSDLSSGTQWPVSNLSSGTHWPSVDMATAQWHMPDLGVGTQWHMPDLTAGVTMPETMAST	2704
Rhinatrema_bivittatum	-----	
	.....2890.....2900.....2910.....2920.....2930.....2940	

Mus_musculus	-----	502
Rattus_norvegicus	-----	505
Homo_sapiens	-----	507
Macaca_mulatta	-----	507
Canis_lupus_familiaris	-----	506
Felis_catus	-----	505
Equus_caballus	-----	507
Bos_taurus	-----	504
Orcinus_orca	-----	506
Pavo_muticus	-----	575
Pavo_cristatus	-----	575
Gallus_gallus	-----	1832
Chelonia_mydas	-----	2853
Xenopus_tropicalis	SMPDFPPGTSGTDLAPPPAPMPDLAPPPPHFPLAPPPAPLPDLAPPPAPLPDLAPPPAP	2764
Rhinatrema_bivittatum	-----	
	.....2950.....2960.....2970.....2980.....2990.....3000	

Mus_musculus	-----	502
Rattus_norvegicus	-----	505
Homo_sapiens	-----	507
Macaca_mulatta	-----	507
Canis_lupus_familiaris	-----	506
Felis_catus	-----	505
Equus_caballus	-----	507
Bos_taurus	-----	504
Orcinus_orca	-----	506
Pavo_muticus	-----SVSLS	580
Pavo_cristatus	-----SVSLS	580
Gallus_gallus	-----SVSSS	1837
Chelonia_mydas	-----HHKSRSKS	2861
Xenopus_tropicalis	LPDLAPPPAPLPDLAPPPAPLPDLAPPPAPLPDLAPPPAPLPDLAPPPAPLPDLAAPPAP	2824
Rhinatrema_bivittatum	-----	
3010.....3020.....3030.....3040.....3050.....3060	

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Mus_musculus	-VTTTEFEQPVAMTTVEHPGHPEVTTATGLLGOPEAAMVLELPGQPVATTALELSGQPSV	561
Rattus_norvegicus	-VTTTEFEQPVAMTTVEHPGHPEVTTATGLLGOPEAAMVLELPGQPVATTALELSGQPSV	564
Homo_sapiens	-VTTTELEQPVGMTTVEHPGHPEVTTATGLLGOPEATMVLELPGQPVATTALELPGQPSV	566
Macaca_mulatta	-VTTTELEQPVGMTTVEHPGHPEVTTATGLLGOPEATMVLELPGQPVATTALELPGQPSV	566
Canis_lupus_familiaris	-VTTSELEQPVGMTTVEHPGPPEVTTATGLLGOPEAAMVLELPGQPVATTALELPGQPSV	565
Felis_catus	-VTTSELEQPVGMTAVEHPGOPEVTTAAGLLGOPEAAMVLELPGQPVATTALELPGQPSV	564
Equus_caballus	-VTTTELEQPVGMTTMEHPGOPEVTTASGLLGOPEAAMVLELPGQPVATTALELSGQPSV	566
Bos_taurus	-VTTTELEQPVGMTAVEHPGOPEVTTATGLLGOPEAAMVLELPGQPVATTALELSGQPSV	563
Orcinus_orca	-VTTTELEQPVGMTTVEHPGOPEVTTATGLLGOPEAAMVLELPGQPVATTALELPGQSSV	565
Pavo_muticus	VEKRDPEITSVTEFHLSTSHQD--ESRSSSLKEIEGPEPLLINESGCSVFADDYKSTSTS	638
Pavo_cristatus	VEKRDPEITSVTEFHLSTSHQD--ESRSSSLKEIEGPEPLLINESGCSVFADDYKSTSTS	638
Gallus_gallus	VEKRDPEITSLTEFHLSSHQD--ESRSTSLKKVEGPEPLLINESGCSVSADDYKSTSTS	1895
Chelonia_mydas	VEKIGSKESRRRSKRRRSKSSDRLKSRKSIEKLGSKESSWRSRRRCCKSFDDLKSRSR	2921
Xenopus_tropicalis	LPDLAPPPAPLPDLAPPPAPLPDLASPPAPLPDLAPPPAPFPDLAPPPAPFPDLAPPPAP	2884
Rhinatrema_bivittatum	-----	
	.....3070.....3080.....3090.....3100.....3110.....3120	

Mus_musculus	TGVPELSGLPSATRALELSGQSVATGALELPG-----	593
Rattus_norvegicus	TGVPELSGLPSATRALELSGQSVATGALELPG-----	596
Homo_sapiens	TGVPELPGLPSATRALELSGQPVATGALELPG-----	598
Macaca_mulatta	TGVPELPGLPSATRALELSGQPVATGALELPG-----	598
Canis_lupus_familiaris	TGVPELPGLPSATRALELSGQPVATGALELPG-----	597
Felis_catus	PGVPELPGLPSATRALELSGQPVATGALELPG-----	596
Equus_caballus	TGVPELPGLPSATRALELSGQPVATGALELPG-----	598
Bos_taurus	TGVPELPGLPSATRALELSGQPVATGALELPG-----	595
Orcinus_orca	TGVPELPGLPSATRALELSGQPVATGALELPG-----	597
Pavo_muticus	-----SGNTEIQGFSLMSGSVLSDGHESRHIP-----	665
Pavo_cristatus	-----SGNTEIQGFSLMSGSVLSDGHESRHIP-----	665
Gallus_gallus	-----SGNMEIQGFSLTSGSVLSDVHELHRIP-----	1922
Chelonia_mydas	KSVEKGESKESRRRSRKRKSKSFERHKLRSKS-----	2953
Xenopus_tropicalis	LPDLAPTAPLPDLALTAPSLPDLAPTAPLPDLAPPPASLPDLAPPPAPLPDLAAPP	2944
Rhinatrema_bivittatum	-----	
	.....3130.....3140.....3150.....3160.....3170.....3180	

Mus_musculus	-----	593
Rattus_norvegicus	-----	596
Homo_sapiens	-----	598
Macaca_mulatta	-----	598
Canis_lupus_familiaris	-----	597
Felis_catus	-----	596
Equus_caballus	-----	598
Bos_taurus	-----	595
Orcinus_orca	-----	597
Pavo_muticus	-----	665
Pavo_cristatus	-----	665
Gallus_gallus	-----	1922
Chelonia_mydas	-----	2953
Xenopus_tropicalis	PAPLTDLAAPPPAPLPDLAAPPAYLPDLAPPPPLMPDLMAPPPAPLSDLAAPPPAPLPDL	3004
Rhinatrema_bivittatum	-----	
3190.....3200.....3210.....3220.....3230.....3240	

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Species	Length
Mus_musculus	593
Rattus_norvegicus	596
Homo_sapiens	598
Macaca_mulatta	598
Canis_lupus_familiaris	597
Felis_catus	596
Equus_caballus	598
Bos_taurus	595
Orcinus_orca	597
Pavo_muticus	665
Pavo_cristatus	665
Gallus_gallus	1922
Chelonia_mydas	2953
Xenopus_tropicalis	3064
Rhinatrema_bivittatum	3300

Species	Sequence	Position
Mus musculus	-----OLMATGALEFSGQSGAAGALELLGOPLATG-----VLELPGOPGAPEL	636
Rattus norvegicus	-----OLMATGALEFSGQSGAAGALELLGOPLATG-----VLELPGOPGAPEL	639
Homo sapiens	-----PLMAAGALEFSGQSGAAGALELLGOPLATG-----VLELPGOPGAPEL	641
Macaca mulatta	-----PLMAAGALEFSGQSGAAGALELLGOPLATG-----VLELPGOPGAPEL	641
Canis lupus familiaris	-----OLMATGALEFSGQSGAAGALELLGOPLATG-----VLELPGOPGAPEL	640
Felis catus	-----OLMATGALEFSGQSGAAGALELLGOPLATGGLATG-----VLELPGOPGAPEL	644
Equus caballus	-----OLMAAGALEFSGQSGAAGALELLGOPLATG-----VLELPGOPGAPEL	641
Bos taurus	-----OLMAAGALEFSGQSGAAGALELLGOPLATG-----VLELPGOPGAPEL	638
Orcinus orca	-----OLMAAGALEFSGQSGAAGALELLGOPLATG-----VLELPGOPGAPEL	640
Pavo muticus	-----AENAEPQKFLQVPSGGSSELADSTESRSLSFETAEVQKPFLLAPGVITSSQ	714
Pavo cristatus	-----AENAEPQKFLQVPSGGSSELADSTESRSLSFETAEVQKPFLLAPGVITSSQ	714
Gallus gallus	-----AENAEPQKFLQVPSGGSSELADSTESRSLSFETTEVQKPFLLAPEVITSSSE	1971
Chelonia mydas	-----VERIEVQEPSQRSRSTCSKSSSEHHKSRSKSVBEIEAQEPSQRSRSSRSK	3002
Xenopus tropicalis	LAPPPAPMPDLALAAHPVSFSLALSPALMPDLALAAPKPDLAAPSAPMPDLAPAAPPAQ	3124
Rhinatrema bivittatum	.....3310.....3320.....3330.....3340.....3350.....3360	

Mus_musculus	PGQPVAIVALEISVQSVVTTSELSTMIVSQSLEVPSTTALESYNTVAQELPTTLVGETSV	696
Rattus_norvegicus	PGQPVAIVALEISVQSVVTTSELSTMIVSQSLEVPSTTALESYNTVAQELPTTLVGETSV	699
Homo_sapiens	PGQPVAIVALEISVQSVVTTSELSTMIVSQSLEVPSTTALESYNTVAQELPTTLVGETSV	701
Macaca_mulatta	PGQPVAIVALEISVQSVVTTSELSTMIVSQSLEVPSTTALESYNTVAQELPTTLVGETSV	701
Canis_lupus_familiaris	PGQPVAIVALEISVQSVVTT-ELSTMIVSQSLEVPSTTALESYNTVAQELPTTLVGETSV	699
Felis_catus	PGQPVAIVALEISVQSVVTTTELSTMIVSQSLEVPSTTALESYNTVAQELPTTLVGETSV	704
Equus_caballus	PGQPVAIVALEISVQSVVTTTELSTMIVSQSLEVPSTTALESYNTVAQELPATLVGETSV	701
Bos_taurus	PGQPVAIVALEISVQSVVTT-ELSTMIVSQSLEVPSTTALESYNTVAQELPTTLVGETSV	697
Orcinus_orca	PGQPVAIVALEISVQSVVTTTELSTMIVSQSLEVPSTTALESYNTVAQELPTTLVGETSV	700
Pavo_muticus	FLDAHESVSLPIAQGMEMPVSLADSVCFSTPDRHELGSSFGTQTGELPLISEMSLQSA	774
Pavo_cristatus	FLDAHESVSLPIAQGMEMPVSLADSVCFSTPDRHELGSSFGTQTGELPLISEMSLQSA	774
Gallus_gallus	FLDVHDSASLPIARGQMEMPSLADSVCFRTPDRHELGSSFGTQIEELPLISEGASLQSP	2031
Chelonia_mydas	SFERHTSGSKSVEETIEGKESSPRERSRERKSSERNKRSKSVEEVEAQEPSQRSRSSRSK	3062
Xenopus_tropicalis	MPDLAPAPTPSLAPSSAEMPDLAPEVTPAPLPDLATVVPVSALATLAQPSFLPLHESIEN	3184
Rhinatrema_bivittatum	-----3370-----3380-----3390-----3400-----3410-----3420	

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Mus_musculus	TVGVDPDMAQESHMLASNTMETHMLASNTMQSMLASNTMQSMLASNTMQSMLASSTM	756
Rattus_norvegicus	TVGVDPDMAQESHMLASNTMETHMLASNTMQSMLASNTMQSMLASNTMQSMLASSTM	759
Homo_sapiens	TVGVDPDMAPESHILASNTMETHILASNTMQSMLASNTMQSMLASNTMQSMLASSTM	761
Macaca_mulatta	TVGVDPDMAPESHILASNTMETHILASNTMQSMLASNTMQSMLASNTMQSMLASSTM	761
Canis_lupus_familiaris	TVGVDPDMAQESHMLASNTMETHMLASNTMQSMLASNTMQSMLASNTMQSMLASSTM	759
Felis_catus	TVGVDPDMAQESHMLASNTMETHMLASNTMQSMLASNTMQSMLASNTMQSMLASSTM	764
Equus_caballus	TVGVDPDMAQESHMLASNTMETHMLASNTMQSMLASNTMQSMLASNTMQSMLASSTM	761
Bos_taurus	TVGVDPDMAQESHMLASNTMETHMLASNTMQSMLASNTMQSMLASNTMQSMLASSTM	757
Orcinus_orca	TVGVDPDMAQESHMLASNTMETHMLASNTMQSMLASNTMQSMLASNTMQSMLASSTM	760
Pavo_muticus	VGKVKVPASSLTSECGPVEITVDHISASS-----SAKIQEVFLTTAGQSCKSS---	822
Pavo_cristatus	VGKVKVPASSLTSECGPVEITVDHISASS-----SAKIQEVFLTTAGQSCKSS---	822
Gallus_gallus	VGKVKAPSAFLTSECGPVEITVDHISTSS-----SPKVQEVFLTTVVGQSCITSS---	2079
Chelonia_mydas	SFERHTSGSKSVEEIEGKESSPRRSRRSRKSSERNKRGRKSVEEIEAQEPQRSRSTRSRK	3122
Xenopus_tropicalis	NQNYYLSEDASSCVNDVQAQKPVYVLISKLPVDSNRLSAAEELVKPGLSTIAAMYPIISDKFKF	3244
Rhinatrema_bivittatum	.....3430.....3440.....3450.....3460.....3470.....3480	

Species	Sequence	Position
Mus_musculus	DSQMLASSTMDSQMLATSTMDSQMLATSS-----	785
Rattus_norvegicus	DSQILASSTMDSQMLATSSMDSQMLASS-----	788
Homo_sapiens	DSQMLATSSMDSQMLATSSMDSQMLATST-----	790
Macaca_mulatta	DSQMLATSTMDSQMLATSSMDSQMLATST-----	790
Canis_lupus_familiaris	DSQMLATSSMDSQMLATSSMDSQMLATSS-----	788
Felis_catus	DSQMLATSSMDSQMLATSSMDSQMLATSS-----	793
Equus_caballus	DSQMLATSSMDSQMLATSSMDSQMLATSS-----	790
Bos_taurus	DSQMLATSSMDSQMLATSSMDSQMLATSS-----	786
Orcinus_orca	DSQMLATSSMDSQMLATSSMDSQMLATSS-----	789
Pavo_muticus	--EAYESSSSVDKDLDGSSASSQVLGVGCF-----	849
Pavo_cristatus	--EAYESSSSVDKDLDGSSASSQVLGVGCF-----	849
Gallus_gallus	--EAHESSSSVDKDLGGSASSQVLGVGCF-----	2106
Chelonia_mydas	SLEHHMSRKSVETIEGKEFSQRSRSSH-----	3151
Xenopus_tropicalis	QEQPSDCEPLPDAAETISAGCDLLKQSCD-----	3304
Rhinatrema_bivittatum	.....3490.....3500.....3510.....3520.....3530.....3540	

Species	Sequence	Method	Value
Mus_musculus	-----MDSQM		790
Rattus_norvegicus	-----MDSQM		793
Homo_sapiens	-----MDSQM		795
Macaca_mulatta	-----MDSQM		795
Canis_lupus_familiaris	-----MDSQM		793
Felis_catus	-----MDSQM		798
Equus_caballus	-----MDSQM		795
Bos_taurus	-----MDSQM		791
Orcinus_orca	-----MDSQM		794
Pavo_muticus	-----EISEM		854
Pavo_cristatus	-----ETSEM		854
Gallus_gallus	-----ETSEV		2111
Chelonia_mydas	-----KSSER		3156
Xenopus_tropicalis	EISCSTNEHPLVQLSDKPSLPLLOESFAKPCHLORNASTADHLQGVSCDYLEQPLQSKNE		3364
Rhinatrema_bivittatum3550.....3560.....3570.....3580.....3590.....3600		

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Mus_musculus	LATSSMDSQMLATSSMDSQMLATSSMDSQMLATSSMDSQMLATSSMDSQMLATSSMDSQML	850
Rattus_norvegicus	LATSSMDSQMLATSSMDSQMLATSSMDSQMLATSSMDSQMLATSSMDSQMLATSSMDSQML	853
Homo_sapiens	LATSSMDSQMLATSSMDSQMLATSSMDSQMLATSSMDSQMLATSTMDSQMLATSTMDSQML	855
Macaca_mulatta	LATSSMDSQMLATSSMDSQMLATSSMDSQMLATSSMDSQMLATSTMDSQMLATSTMDSQML	855
Canis_lupus_familiaris	LATSSMDSQMLATSSMDSQMLATSSMDSQMLATSSMDSQMLATSTMDSQMLATSTMDSQML	853
Felis_catus	LATSSMDSQMLATSSMDSQMLATSSMDSQMLATSSMDSQMLATSTMDSQMLATSTMDSQML	858
Equus_caballus	LATSSMDSQMLATSSMDSQMLATSSMDSQMLATSSMDSQMLATSTMDSQMLATSTMDSQML	855
Bos_taurus	LATSSMDSQMLATSSMDSQMLATSSMDSQMLATSSMDSQMLATSSMDSQMLATSTMDSQML	851
Orcinus_orca	LATSSMDSQMLATSSMDSQMLATSSMDSQMLATSSMDSQMLATSSMDSQMLATSTMDSQML	854
Pavo_muticus	HESRHLPAQKIEVT-----ESALSKSGIPLCHHD-----HESKYSYFEKTKDVDI	899
Pavo_cristatus	HESRHLPAQKIEVT-----ESALSKSGIPLCHHD-----HESKYSYFEKTKDVDI	899
Gallus_gallus	NESRHLPAEKIEVT-----ESALSKSGIPLCHHG-----HESEYSYFEKTKGVDM	2156
Chelonia_mydas	RKSRSEKSVQMEVRKPSQMSRSRSRKSSSEHLHCRSKSVAGIEVQKLSQRFRRSSLSKSSSEC	3216
Xenopus_tropicalis	DHSSHIQLDEYSISASSHLHNDLVSHSESTLLNEPCASLQHSQMIEPCESQILSKEACVST	3424
Rhinatrema_bivittatum	.....3610.....3620.....3630.....3640.....3650.....3660	

Mus_musculus	LATS-----	854
Rattus_norvegicus	LATS-----	857
Homo_sapiens	LATS-----	859
Macaca_mulatta	LATS-----	859
Canis_lupus_familiaris	LATS-----	857
Felis_catus	LATSSMDSQMLATSSMSQMLATSSMSQMLATSSMSQMLATSSMSQMLATSSMSQM	918
Equus caballus	LATS-----	859
Bos_taurus	LATS-----	855
Orcinus_orca	LATSSMDSQMLATS--	868
Pavo_muticus	VESVS-----	904
Pavo cristatus	VESVS-----	904
Gallus_gallus	VESVS-----	2161
Chelonia_mydas	VTSES-----	3221
Xenopus_tropicalis	ECSLAGAPCGIKNVKSHSSSLPE----	3451
Rhinatrema_bivittatum	.....3670.....3680.....3690.....3700.....3710.....3720	

Species	Sequence	Position
Mus_musculus	-----SMDSQLASGAMDSQMLASGTMDAQMLASGTMDAQM	890
Rattus_norvegicus	-----SMDSQLASGAMDSQMLASGTMDAQMLASGTMDAQM	893
Homo_sapiens	-----SMDSQLASGTMDSQLASGTMDAQMLASGTMDAQM	895
Macaca_mulatta	-----SMDSQLASGTMDSQLASGTMDAQMLASGTMDAQM	895
Canis_lupus_familiaris	-----SMDSQLASGTMDSQLASGTMDAQMLASGTMDAQM	893
Felis_catus	LATSTMDSQLATSTMDSQLATSMDSQLASGTMDSQLASGTMDAQMLASGTMDAQM	978
Equus_caballus	-----SMDSQLASGTMDSQLASGTMDAQMLASGTMDAQM	895
Bos_taurus	-----SMDSQLASGTMDSQLASGSMDAQMLASGTMDAQM	891
Orcinus_orca	-----SMDSQLASGTMDSQLASGTMDAQMLASGTMDAQM	904
Pavo_muticus	-----TPAEKLEATVPCLTSEGGLLILPDSHEL RATQTENA EVOK	944
Pavo_cristatus	-----TPAEKLEATVPCLTSEGGLLILPDSHEL RATQTENA EVOK	944
Gallus_gallus	-----TPAEKLEATVPCLTSEGGLFMLPDSREL RATHTDAVEVOK	2201
Chelonia_mydas	-----KSVQETEAQEP AERSRS SC SKSP ELQKSR SKSVEKIEGKD	3261
Xenopus_tropicalis	VPSNPVQDDNVVFSERPLEHQSLVPPEQDEPSLCLNQSF DVRPCL SADOTLQKPTGCLD	3511
Rhinatrema_bivittatum3730.....3740.....3750.....3760.....3770.....3780	

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Mus_musculus          LASSTQDSAMMGSKSPDPYRLA QDPYRLA QDPYRLGHDPYRLGHDAYRLGQDP----- 943
Rattus_norvegicus     LASSTQDSAMMGSKSPDPYRLA QDPYRLA QDPYRLGHDPYRLGHDAYRLGQDP----- 946
Homo_sapiens          LASSTQDSAMLGSKSPDPYRLA QDPYRLA QDPYRLGHDPYRLGHDAYRLGQDP----- 948
Macaca_mulatta        LASSTQDSAMLGSKSPDPYRLA QDPYRLA QDPYRLGHDPYRLGHDAYRLGQDP----- 948
Canis_lupus_familiaris LASSTQDSAMLGSKSPDPYRLA QDPYRLA QDPYRLGHDPYRLGHDAYRLGQDP----- 946
Felis_catus           LASSTQDSAMLGSKSPDPYRLA QDPYRLA QDPYRLGHDPYRLGHDAYRLGQDP----- 1031
Equus_caballus        LASSTQDSAMLGSKSPDPYRLA QDPYRLA QDPYRLGHDPYRLGHDAYRLGQDP----- 948
Bos_taurus            LASSTQDSAMLGSKSPDPYRLA QDPYRLA QDPYRLGHDPYRLGHDAYRLGQDP----- 944
Orcinus_orca          LASSTQDSAMLGSKSPDPYRLA QDPYRLA QDPYRLGHDPYRLGHDAYRLGQDP----- 957
Pavo_muticus          SSLPSEQKCIASPDEHQLRSPSGREIQVQEEQPLIVESRHSVSSGDHETLTP----- 997
Pavo_cristatus        SSLPSEQKCIASPDEHQLRSPSGREIQVQEEQPLIVESRHSVSSGDHETLTP----- 997
Gallus_gallus         SSLPSEQKCIASADEHQLRSPSGREIQVQEEQPLIVESRHSVSSGDYELTLP----- 2254
Chelonia_mydas        SSQSRSSRSRSEERHSRSRKSVEKIEGKDSSQSRSSR-SRSEERHSRSRKS----- 3313
Xenopus_tropicalis    QSLPDESSVIAIQSSVVRPCLSPDQVLENTVRPHYLQQTEAKTKPDQLQLLETGMIFQQP 3571
Rhinatrema_bivittatum -----
.....3790.....3800.....3810.....3820.....3830.....3840

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Mus_musculus          ----- 943
Rattus_norvegicus     ----- 946
Homo_sapiens          ----- 948
Macaca_mulatta        ----- 948
Canis_lupus_familiaris ----- 946
Felis_catus           ----- 1031
Equus_caballus        ----- 948
Bos_taurus            ----- 944
Orcinus_orca          ----- 957
Pavo_muticus          ----- 997
Pavo_cristatus        ----- 997
Gallus_gallus         ----- 2254
Chelonia_mydas        ----- 3313
Xenopus_tropicalis    VPAERFESHKQSLPHGLLGNSGQLKDDKLNESFVMCSADKPSTSPSLSSDNEKLKFDPLG 3631
Rhinatrema_bivittatum -----
.....3850.....3860.....3870.....3880.....3890.....3900

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Mus_musculus          ----- 943
Rattus_norvegicus     ----- 946
Homo_sapiens          ----- 948
Macaca_mulatta        ----- 948
Canis_lupus_familiaris ----- 946
Felis_catus           ----- 1031
Equus_caballus        ----- 948
Bos_taurus            ----- 944
Orcinus_orca          ----- 957
Pavo_muticus          ----- 997
Pavo_cristatus        ----- 997
Gallus_gallus         ----- 2254
Chelonia_mydas        ----- 3313
Xenopus_tropicalis    RPVQOKSEEHQSTVQAVSDELLIKHENPLSDGYNSGPSITLMGSGSAKFEKPDQLLONK 3691
Rhinatrema_bivittatum -----MG----- 2
.....3910.....3920.....3930.....3940.....3950.....3960

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Mus_musculus	-----YRLGHD	PYRLTPDPYRVSPRP	964	
Rattus_norvegicus	-----YRLGHD	PYRLTPDPYRMSPRP	967	
Homo_sapiens	-----YRLGHD	PYRLTPDPYRMSPRP	969	
Macaca_mulatta	-----YRLGHD	PYRLTPDPYRMSPRP	969	
Canis_lupus_familiaris	-----YRLGHD	PYRLTPDPYRMSPRP	967	
Felis_catus	-----YRLGHD	PYRLTPDPYRMSPRP	1052	
Equus_caballus	-----YRLGHD	PYRLTPDPYRMSPRP	969	
Bos_taurus	-----YRLGHD	PYRLTPDPYRMSPRP	965	
Orcinus_orca	-----YRLGHD	PYRLTPDPYRMSPRP	978	
Pavo_muticus	-----FKKVDV	EDPSQMPGNEYTVGLPGPELTSTPA	1028	
Pavo_cristatus	-----FKKVDV	EDPSQMPGNEYTVGLPGPELTSTPA	1028	
Gallus_gallus	-----FKKADV	GDPSQMPGNEYTVGLPGPELMTSSA	2285	
Chelonia_mydas	-----VEKIEG	KDFSQRSRSSRSRSSEIPTSRSSKSV	3344	
Xenopus_tropicalis	PCDSPKRP	PLIEHFSSSNQSLQKSFINMDHFP	TVEQYEIPDKQQPNKEIVNIDPVMGKSMV	3751
Rhinatrema_bivittatum	-----	TNIEQIFRSFVV	14	
	.....3970.....3980.....3990.....4000.....4010.....4020		

Mus_musculus	YRIAPRSYRIAPRPYRLAPRPLMLASRRSMMSYAAERSMMSSYERSMMSYERSMMS	1024
Rattus_norvegicus	YRIAPRSYRIAPRPYRLAPRPLMLASRRSMMSYAAERSMMSSYERSMMSYERSMMS	1027
Homo_sapiens	YRIAPRSYRIAPRPYRLAPRPLMLASRRSMMSYAAERSMMSSYERSMMSYERSMMS	1029
Macaca_mulatta	YRIAPRSYRIAPRPYRLAPRPLMLASRRSMMSYAAERSMMSSYERSMMSYERSMMS	1029
Canis_lupus_familiaris	YRIAPRSYRIAPRPYRLAPRPLMLASRRSMMSYAAERSMMSSYERSMMSYERSMMS	1027
Felis_catus	YRIAPRSYRIAPRPYRLAPRPLMLASRRSMMSYAAERSMMSSYERSMMSYERSMMS	1112
Equus_caballus	YRIAPRSYRIAPRPYRLAPRPLMLASRRSMMSYAAERSMMSSYERSMMSYERSMMS	1029
Bos_taurus	YRIAPRSYRIAPRPYRLAPRPLMLASRRSMMSYAAERSMMSSYERSMMSYERSMMS	1025
Orcinus_orca	YRIAPRSYRIAPRPYRLAPRPLMLASRRSMMSYAAERSMMSSYERSMMSYERSMMS	1038
Pavo_muticus	EKTEVQELYLIPERCVSLSQELLSSAFEKTEVQEPALTSENEYTVSWKQELRASSP	1088
Pavo_cristatus	EKTEVQELYLIPERCVSLSQELLSSAFEKTEVQEPALTSENEYTVSWKQELRASSP	1088
Gallus_gallus	EKTEVQELNVIPEERCVSLSQELLSPAFEKTEVQEPALTSENEYTVSWKQELRASSP	2345
Chelonia_mydas	EEREVQEPSPQRSRSRSRSRSEERHTSRSKSVEEIEVEEPPSEGRSSRSKSERHTSGSKSV	3404
Xenopus_tropicalis	SPQVPVLPEPCEGLEDSPPSKLHVVSDDHVKPGPPSEPCMTSEQPFELCKSPSQVQIREP	3811
Rhinatrema_bivittatum	SKFKEIQEE-----KLNSCRSRAHTCQSDPCK-----CDQAGSLINGEN	55
	.....4030.....4040.....4050.....4060.....4070.....4080	

Species	Sequence	Length
Mus_musculus	ERSMMSAYERSMMSAYERSMMSPM-----	1048
Rattus_norvegicus	ERSMMSAYERSMMSAYERSMMSPM-----	1051
Homo_sapiens	ERSMMSAYERSMMSAYERSMMSPM-----	1053
Macaca_mulatta	ERSMMSAYERSMMSAYERSMMSPM-----	1053
Canis_lupus_familiaris	ERSMMSAYERSMMSAYERSMMSPM-----	1051
Felis_catus	ERSMMSAYERSMMSAYERSMMSPM-----	1136
Equus_caballus	ERSMMSAYERSMMSAYERSMMSPM-----	1053
Bos_taurus	ERSMMSAYERSMMSAYERSMMSPM-----	1049
Orcinus_orca	ERSMMSAYERSMMSAYERSMMSPM-----	1062
Pavo_muticus	EKVEMQESSVVPDSECAVYSGDQE-----	1112
Pavo_cristatus	EKVEMQESSVVPDSECAVYSGDQE-----	1112
Gallus_gallus	EKVEMQKPFIVPDSECAAYSGDQE-----	2369
Chelonia_mydas	EEIEVEEESRQSRSRSESRHT-----	3428
Xenopus_tropicalis	CEPLLPDLSSVMTVLPKPSANSEELLPLKSCMDYGHILPSKHDASPDITVPFPLPANPNQ	3871
Rhinatrema_bivittatum	VAPVMEASSAIVVCDEG-----	73

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Mus_musculus	-----AERSMMSAYERSMMS	1063
Rattus_norvegicus	-----AERSMMSAYERSMMS	1066
Homo_sapiens	-----AERSMMSAYERSMMS	1068
Macaca_mulatta	-----AERSMMSAYERSMMS	1068
Canis_lupus_familiaris	-----AERSMMSAYERSMMS	1066
Felis_catus	-----AERSMMSAYERSMMS	1151
Equus_caballus	-----AERSMMSAYERSMMS	1068
Bos_taurus	-----AERSMMSAYERSMMS	1064
Orcinus_orca	-----AERSMMSAYERSMMS	1077
Pavo_muticus	-----SQTLPAEKTEVQMHS	1127
Pavo_cristatus	-----SQTLPAEKTEVQMHS	1127
Gallus_gallus	-----SQTLPAEKSTVQMHS	2384
Chelonia_mydas	-----SGSKSVEEMEVEQEPS	3443
Xenopus_tropicalis	AFPTETLASLNQEI SLRPLANSEQC PPTDPC L PGKDWESPHALCP EACPTAKYIQT SKP	3931
Rhinatrema_bivittatum	-----	73
	.....4150.....4160.....4170.....4180.....4190.....4200	

Mus_musculus	AYERSMMSPMADRSMMSMGADRSMMSSSYSAADRSMMSSSYSAADRSMMSSYT-DRSMMSMA	1122
Rattus_norvegicus	AYERSMMSPMADRSMMSMGADRSMMSSSYSAADRSMMSSSYSAADRSMMSSYT-DRSMMSMA	1125
Homo_sapiens	AYERSMMSPMADRSMMSMGADRSMMSSSYSAADRSMMSSSYSAADRSMMSSYTADRSMMSMA	1128
Macaca_mulatta	AYERSMMSPMADRSMMSMGADRSMMSSSYSAADRSMMSSSYSAADRSMMSSYTADRSMMSMA	1128
Canis_lupus_familiaris	AYERSMMSPMADRSMMSMGADRSMMSSSYSAADRSMMSSSYSAADRSMMSSYTADRSMMSMA	1126
Felis_catus	AYERSMMSPMADRSMMSMGADRSMMSSSYSAADRSMMSSSYSAADRSMMSSYTADRSMMSMA	1211
Equus_caballus	AYERSMMSPMADRSMMSMGADRSMMSSSYSAADRSMMSSSYSAADRSMMSSYTADRSMMSMA	1128
Bos_taurus	AYERSMMSPMADRSMMSMGADRSMMSSSYSAADRSMMSSSYSAADRSMMSSYTADRSMMSMA	1124
Orcinus_orca	AYERSMMSPMADRSMMSMGADRSMMSSSYSAADRSMMSSSYSAADRSMMSSYTADRSMMSMA	1137
Pavo_muticus	LMSENEYAASPEGQDMTAISAETVQ--EPSAISCREYVAVPRGQELSSPLGEKTEVQECS	1185
Pavo_cristatus	LMSENEYAASPEGQDMTAISAETVQ--EPSAISCREYVAVPRGQELSSPLGEKTEVQECS	1185
Gallus_gallus	SMSENEYAASPEGQDMTAISAETVQ--EPSAVSCREYVAVPTGQDLSS-LPEKTEVQECS	2441
Chelonia_mydas	QRSRSRSRSESRHTSRSKSVEKIEGKDSQRSRSRSRSESRHTSRSKSVEKIEVEEPS	3503
Xenopus_tropicalis	TVHDDSCASHSQALPQGSFVQSLLDQPCASFIFISDTDFCAATEQPLSDKSYSSICQNVS	3991
Rhinatrema_bivittatum	VLDEKTVEKTEEVLLG-----	90
	.....4210.....4220.....4230.....4240.....4250.....4260	

Mus_musculus	ADSYTDSYTDYTEAYMVPLPPEEPPTMPPLPPEEPPMTPLPPEEPPEGPALSTEQSA	1182
Rattus_norvegicus	ADSYTDSYTDYTEAYMVPLPPEEPPTMPPLPPEEPPMTPLPPEEPPEGAALSTEQSA	1185
Homo_sapiens	ADSYTDSYTDYTEAYMVPLPPEEPPTMPPLPPEEPPMTPLPPEEPPEGPALPTEQSA	1188
Macaca_mulatta	ADSYTDSYTDYTEAYMVPLPPEEPPTMPPLPPEEPPMTPLPPEEPPEGPALPTEQSA	1188
Canis_lupus_familiaris	ADSYTDSYTDYTEAYMVPLPPEEPPTMPPLPPEEPPMTPLPPEEPPEGPALPTEQSA	1186
Felis_catus	ADSYTDSYTDYTEAYMVPLPPEEPPTMPPLPPEEPPMTPLPPEEPPEGPALPTEQSA	1271
Equus_caballus	ADSYTDSYTDYTEAYMVPLPPEEPPTMPPLPPEEPPMTPLPPEEPPEGPALPTEQST	1188
Bos_taurus	ADSYTDSYTDYTEAYMVPLPPEEPPTMPPLPPEEPPMTPLPPEEPPEGPVLAEEQSA	1184
Orcinus_orca	ADSYTDSYTDYTEAYMVPLPPEEPPTMPPLPPEEPPMTPLPPEEPPEGPALPTEQSA	1197
Pavo_muticus	MLSENEYDISPEGHDLRSSPVEKEEMREPSETSESESSMSTDDQELQSTAVGKTEVQELS	1245
Pavo_cristatus	VLSENEYDISPEGHDLRSSPVEKEEMREPSETSESESSMSTDDQELQSTAVGKTEVQELS	1245
Gallus_gallus	VLSENEYDISPEGHDLRSSPAKG-EMREPSETSESESSMSTDDQELQSTAVGKTEVQELS	2500
Chelonia_mydas	QRSQSSRSKSSSESHKSRKSVEEIEVEEPSQRSRRSRSRSESRHTSRSKSVEKIEGKDS	3563
Xenopus_tropicalis	DNRCTSLHQSLAAELSTSESACELVQPNGNSNQMLPHTCEHTSSERASSTAHPQLVSVE	4051
Rhinatrema_bivittatum	-----	90
4270.....4280.....4290.....4300.....4310.....4320	

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Mus_musculus          LTADNTWSTEVTLSTGESLSQPEPPVSQSEISEPMAVPANYSMSESETSMMLASEAVMTV 1241
Rattus_norvegicus     LTADNTWSTEVTLPTTEESVSQPEPPVSQSEISEPLVVPANYSAESETSMMLASEAVMTV 1244
Homo_sapiens          LTAENTWPTTEVPSSPSEESVSQPEPPVSQSEISEPSAVPTDYSVSASDPSVLVSEAAVTV 1248
Macaca_mulatta        LTAENTWPAEVPSPSPSEESVSQPEPPVSQSEISEPSAVPTDYSMSASDPSVLVSEATVTV 1248
Canis_lupus_familiaris LTAENTWSTTEVPALPPEESVSLSEPSVSQSEISEPSALPANYSVSASDPSVLASEAAVTV 1246
Felis_catus           LTAENTWPTTEVPALPPEESVSLSEPSVSQSEISEPSTLPANYSVSASDPSVLASEAAVTV 1331
Equus_caballus        LTAENTWPTTEVSALPPEESVSLPEPPVSQSEISEPSAVPANYSVSASEPSVLASEATVTV 1248
Bos_taurus            LTAENTWSAEVPALAPEESVSLPEPPVSQSEIAEPLAVTANYSVSASEPSVLASEADTVTV 1244
Orcinus_orca          LTAENTWPTTEVPALPPEESVSLPEPPVSQSEISEPSAVLANYSASASEPSMLASEASMTV 1257
Pavo_muticus          LMSEGECA MSPEVQELQSSPAEKVESEEPSLTYENEHAVSLEGYELRSTHGDKTEDKDSS 1305
Pavo_cristatus        LMSEGECA MSPEVQELQSSPAEKVESEEPSLTYENEHAVSLEGYELRSTHGDKTEDMDSS 1305
Gallus_gallus         LMSEGECA MSPEVQELQSSPAEKVETEESLTYENEHAVSLEGYESRSTRGDKTEDTDSS 2560
Chelonia_mydas        QRSRRSRKSSERHKSRKSVEEIEVEEPSQRSRRSRKSSERHKSRKSVEEIEVEEPS 3623
Xenopus_tropicalis    LLPSIPVSDSSQYLKPDASPMKPLQSDPCSSPNITPEDSFSSKPKQVLAHRPCGSSPSMSQE 4111
Rhinatrema_bivittatum -----LDVEPQK-----SDVKETPAESS-----TVPEMN----- 115
.....4330.....4340.....4350.....4360.....4370.....4380

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Mus_musculus          PEPAREPESSVTSAPVES----- 1259
Rattus_norvegicus     PEPAREPESSVTSTPVES----- 1262
Homo_sapiens          PEPPEPESSITLTPVES----- 1266
Macaca_mulatta        PEPPEPESSITSTPVES----- 1266
Canis_lupus_familiaris PEPPEPESSVTATPVES----- 1264
Felis_catus           PEPPEPESSVTSTPIES----- 1349
Equus_caballus        PEPPEPESSVMSTPMES----- 1266
Bos_taurus            PEPQLEPESSVMSTPVES----- 1262
Orcinus_orca          PEPPEPESLVTSTPVES----- 1275
Pavo_muticus          LTSERDHYLSFKSQEVRF----- 1323
Pavo_cristatus        LTSERDHYLSFKSQEVRF----- 1323
Gallus_gallus         LTSERDHYLSFKSQEVRF----- 2578
Chelonia_mydas        KRSRRSRKSSERHTRS----- 3641
Xenopus_tropicalis    VCCESDHSINEQYTSLOYTLVDKNYGSPLTPESVQVSYPHITNELSLSPSQPKODDQ 4171
Rhinatrema_bivittatum ----- 115
.....4390.....4400.....4410.....4420.....4430.....4440

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Mus_musculus          -----AVVA-EHEMVPERPMTYMVSET-TMSVEPAVLTSEA----- 1293
Rattus_norvegicus     -----AVVA-EHEMVPERPMTYMVSET-TMAAEPVLTSEA----- 1296
Homo_sapiens          -----AVVAEEHEVVPERPVTICMVSETPAMSAEPTVLASEP----- 1302
Macaca_mulatta        -----AVVAEEHEVVPERPVTICMVSETPTVSAEPTVVASEP----- 1302
Canis_lupus_familiaris -----TVVAEEHQIVPERAVTYMVSETPIMTAEPVLTSEP----- 1300
Felis_catus           -----AVVAEEHQIVPERPVTYMVSETPMMSAEPTVLTSEP----- 1385
Equus_caballus        -----AVVAEEHEIVPERPVTYMVSETPVMSAEPVLTSEP----- 1302
Bos_taurus            -----AAGAEHEHMAERPVTYMVSETPTTSAEPTVLTSEP----- 1298
Orcinus_orca          -----AAVAEEHEIIPERPVTYMVSETPTTSGEPTVLTSEP----- 1311
Pavo_muticus          -----TTVQKADAQELSP TSESEHTASPDSELRFLT----- 1355
Pavo_cristatus        -----TTVQKADAQELSP TSESEHTASPDSELRFLT----- 1355
Gallus_gallus         -----TTVQKVDVQELSP TSESEHTASPDSELRFLT----- 2610
Chelonia_mydas        -----KSVEKIEGKDSSQSRSRSRKSSERHKSRNS----- 3673
Xenopus_tropicalis    SVNPSLTDCSDDRPMLVKEMPKPCQSIKHETSSSQEPSLFSKSSSTTVLAVSKPSALCIDA 4231
Rhinatrema_bivittatum -----LVEEVPR-KKSKKHKKHKS----- 133
.....4450.....4460.....4470.....4480.....4490.....4500

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Mus_musculus          -----SVISETSETYDSMRPSGHAISEVTMSLLEPAVTTI 1327
Rattus_norvegicus     -----SVMAETSETYDSMRPSGHAISEVSMLEPAVTTI 1330
Homo_sapiens          -----PVMSETAETFDSDMRASGHVASEVSTSLVPAVTT 1336
Macaca_mulatta        -----PVLSETAETFDSDMRASGYVASEVSTSLLEPAVTT 1336
Canis_lupus_familiaris -----SVMSETAETFDSDMKASGHVASEVSLSLLEPAATN 1334
Felis_catus           -----SVMSETAETFDSDMKASGHVASEVSSLSLESAATN 1419
Equus_caballus        -----SIMSETAETFDSDVRASGHVASEVSMLEDPVTTI 1336
Bos_taurus            -----SVISETAETFDSDMRASGQTASEVSMLEPAVPI 1332
Orcinus_orca          -----SVMSEAAETFDSDMRASGHVASEVSMLEAAVPI 1345
Pavo_muticus          -----SGQVGESEPLTLNDRG-SMSPDVSDLKSIPVGKM 1388
Pavo_cristatus        -----SGQVGESEPLTLNDRG-SMSPDVSDLKSIPVGKM 1388
Gallus_gallus         -----AGQVGDSEPLTLNDRG-SMSPDVSDLKSIAVEKM 2643
Chelonia_mydas        -----VEEIEVEEPSQSRSRSRKSSSESHKSRKSVVEEI 3707
Xenopus_tropicalis    NIQTISADLISSLPCLDTSFPLVAKAVTGKIDSSISSEKKEDAKQCAAEVTLDSKTISSV 4291
Rhinatrema_bivittatum -----KKKKKKKKKEKNRSHSKSKSNS 156
.....4510.....4520.....4530.....4540.....4550.....4560

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Mus_musculus          SQPAEN----- 1333
Rattus_norvegicus     SQPAES----- 1336
Homo_sapiens          PVLAES----- 1342
Macaca_mulatta        PVLAES----- 1342
Canis_lupus_familiaris PEPSON----- 1340
Felis_catus           PEPSQS----- 1425
Equus_caballus        PEPSQS----- 1342
Bos_taurus            AEPSQS----- 1338
Orcinus_orca          PEPSQS----- 1351
Pavo_muticus          DDAAP----- 1393
Pavo_cristatus        DDAAP----- 1393
Gallus_gallus         DDAAP----- 2648
Chelonia_mydas        EVEEPS----- 3713
Xenopus_tropicalis    EQENPVTDLGKSEEGLVHEKHFRITPPDLLPYDSEQPAVPHDTSATLEQTAFICQPPPE 4351
Rhinatrema_bivittatum ----- 156
.....4570.....4580.....4590.....4600.....4610.....4620

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Mus_musculus          --SLELPSTMTVPAPSTMTTIESPVVAVTEIPPVAVPEPPIMAVPELPTMAVVKTPAVAVP 1391
Rattus_norvegicus     --SLELPSTMAVPAPSTIATTES-LVAVPELAADVADSEPPIMAVPEPPTVAVPEP----- 1387
Homo_sapiens          --ILEPPAMAAPESSAMAVLESSAVTVLESSTVTVLESSTVTVLE----- 1385
Macaca_mulatta        --ILEPPDMAVPESAMAVLESSAVTVLESSTVTVLESSTVTVLE----- 1385
Canis_lupus_familiaris --TLELPAMTISELPVAVVPPPTGTVPPEPPTVAVLETPAVAIPTDPAVAVSDP----- 1392
Felis_catus           --ALELPAMAVSELPAVAVPEPPTGTVPPEPAVTVLETPAMAIPDPTAMVVSDD----- 1477
Equus_caballus        --TLELPATAVSELPAVAVPEPPAGTVPEPPAMAVLEPPAVAVPE----- 1385
Bos_taurus            --TVDLPAVAVPEHPAGIVSETSTVAVPEPQAEAVLDPP-----AAAVQDP----- 1382
Orcinus_orca          --TVDLPAVAVSELPAVAVPEQPAVAVPEQPAQTVSEPPDMAVPEPQAEAVPDP----- 1403
Pavo_muticus          -----LMPESGCSMSPSGNSVKSVPGEETGDLEPPLTSECRHSTSPYHES----- 1438
Pavo_cristatus        -----LMPESGCSMSPSGNSVKSVPGEETGDLEPPLTSECRHSTSPYHES----- 1438
Gallus_gallus         -----LMPESGCSVSPGGNSMKSVPEETGDLETSLSAECRHSISPYHES----- 2693
Chelonia_mydas        -----QRSRRSRKSSERHTSRKSVKEIEGKDSQSRSRSRKSSERHK----- 3758
Xenopus_tropicalis    LLPYDSEQPANSYLGASETQSEQASVFHTPELLPYDSEQPTLHDNESPNDNL----- 4405
Rhinatrema_bivittatum -----SFQGGGEIDSE-----SVPLQRGDESLKLN----- 183
.....4630.....4640.....4650.....4660.....4670.....4680

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Mus_musculus      EPLVAAPEPPTMATPELCSLSVSEPPVAVSELPALADPEHAITAVSGVSSLEPSVPVLEP 1451
Rattus_norvegicus -PVTTAPEPPPMITPELCSLSISESPVAVSELPALADPEHAVTAVSGVSSLEPSVPVLEP 1446
Homo_sapiens      -----PSVVTVPPEPPVVAEPDYVTIPVPVVSVALEPSVPVLEP 1422
Macaca_mulatta    -----PSVVTVPPEPPVVAEPDYITIPVPVVSVALEPSVPVLEP 1422
Canis_lupus_familiaris -----VAVAVPDPP-VEAVPETLALAESEHVTIPVP-VSALEPTVPVLEP 1435
Felis_catus       -----TAVAIPTDPTAEAVPETVALAESENVTISVPVVSVALEPSVPVLEP 1522
Equus_caballus    -----PPADAVMEPLALAEHVTVPVPVVSVALEPTVPVLEP 1422
Bos_taurus        -----PAVAVLDPP-AEAVPEPLALSEPEHVTVPVPVVSVALEPTVPVLEP 1426
Orcinus_orca      -----AAVAVQDPP-AEAVPEPLALSEPEHVTVPVPVVSVALEPTVPVLEP 1447
Pavo_muticus      -----HEVKSPMEEDGLESSVTFEHRRSVTPD---EKSIVDE 1472
Pavo_cristatus    -----HEVKSPMEEDGLESSVTFEHRRSVTPD---EKSIVDE 1472
Gallus_gallus     -----HEVKSPIEDGLESSDTFEHRRSVTPD---EKSIVDE 2730
Chelonia_mydas    -----SRNSVEEIEVEEPSQRSSRSRSKSSSESHKSRSKSVE 3795
Xenopus_tropicalis -----PASHSQSEPASQKSSVHMHESMPGNFQSEVELPSSHE 4442
Rhinatrema_bivittatum -----EDNKTIN----- 189
.....4690.....4700.....4710.....4720.....4730.....4740

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Mus_musculus      AVSVLQPMVIVSEPSVPVQEPVAVSEPAVIVSEHTQITSPEMAVESSPVIVDSVMSVSSQ 1511
Rattus_norvegicus SVSVLQPMVIVSEPCVSIQEPVAVSEPAVIVSEHTQITSPEMAVESSPVIVDSVMSVSSQ 1506
Homo_sapiens      AVSVLQPSMIVSEPSVSVQESTVTVSEPAVTVSEQTQVIPTEVAIAESTPMILESSIMSSH 1482
Macaca_mulatta    AVSVLQPSMIVSEPSVSVQESTVTVSEPAVTVSEQTQVIPTEVAIAESTPMILESSIMSSH 1482
Canis_lupus_familiaris VVSVPQNTIVVSEPSVSVQESTVVIIEPAVTVSEQTQVIPDEMVLSTPMILEP-----T 1490
Felis_catus       AVSVLPQANAVVSEPSVSVQESTVVIIEPAITVSEQTQIIPTEIVAESTPMILES-----D 1577
Equus_caballus    GVSVLQPNVIVSEPSVSVQESAVTVSEPAVTVSEQTQVIPAEMLLESTPMILES-----S 1477
Bos_taurus        VVSILQPNVIVSEPSVSVQESTVTVIEPPVTVSEQTQVIPAEVVESTAVILES-----S 1481
Orcinus_orca      AVSVFQPNVIVSEPSVSVQESTVTVIEPPVTVSEQTQVIPAEVVESTAVILES-----S 1502
Pavo_muticus      EMEDREPSLTSEHRRSTSPDEHESRSSVGEAEYSEQLTMERRSSISSDEHDSRSTAGE 1532
Pavo_cristatus    EMEDREPSLTSEHRRSTSPDEHESRSSVGEAEYSEQLTMERRSSISSDEHDSRSTAGE 1532
Gallus_gallus     EMEDREPSLTSEHRRSTSPDEHESRSSVGEAEYSEQLTMERRSSISSDEHDSRSTAGE 2790
Chelonia_mydas    EMAVEEPSQRSSRSRSRSEHRTSRKCKVEKIEGKDSQRSSRSRSKSSERHKSRSKSSVE 3855
Xenopus_tropicalis LQRIKVPFETESIVNLSETPMDIAHEQLVCEGAARCSQSVSYTPITYMISHSIECNLVARQ 4502
Rhinatrema_bivittatum ----VVSLDTQSMADLENSKLSVQEQNLSV----- 216
.....4750.....4760.....4770.....4780.....4790.....4800

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Mus_musculus      IMKGMNLLGGDENLGPVGMQETLLHPGEEPRDGGHLKSDLYENEYDRNADLTVNNSHLIV 1571
Rattus_norvegicus IMKGMNLLSGDENLGSVGTQETLLHPGEEPHDGGHLKSDLYEHEYDRNTDLTVNSHLIA 1566
Homo_sapiens      VMKGINLSSGDQNLAPAEIGMQEIALHSGEEPHAEHLKGDYFYESEHGINIDLNNHNLIA 1542
Macaca_mulatta    VMKGINLPSGDQNLAPAEIGMQEIPHLSGEEPHAEVHLKSDSYESEHGINIDLNNHNLIA 1542
Canis_lupus_familiaris VIKGVSILPGDQNLAPAEIGIQEIPMHADDEPHEGHLKNDPYESENCTNIELNVNHLVA 1550
Felis_catus       VIKGVNLLSGDQSLTPEIGMQEIPMHSDEEPHAEHLKNDPYESDHGTNIDLNTNHLVA 1637
Equus_caballus    VIKGMNLLSGDQNLAPAEIGLQEIIPMHSDEEPHAEHLKNDYSEKHGINVDLNNHNLIA 1537
Bos_taurus        VIKGMNLLSGDQSIASEIGLQEIAMHSEEPRAEGLKSGSNETENCISTDLNNHNLIA 1541
Orcinus_orca      VIKGMNLLSGDQNLAPAEISMQEIPMHSDEEPHAEGLKNDYSEYTESGMIDCNHNLIA 1562
Pavo_muticus      EVEDVEPSLTGKRRDSTSSDERESRSTTGEEAEDHETSFAAERRDSVSSDEHDSRSTAGE 1592
Pavo_cristatus    EVEDVEPSLTGKRRDSTSSDERESRSTTGEEAEDHETSFAAERRDSVSSDEHDSRSTAGE 1592
Gallus_gallus     EVEDVEPSLTGKRRDSTSSDERDSRSTTGEEAEDHET-LAAERRDSVSSDERDSRSTAGE 2849
Chelonia_mydas    EMAVEEPSQRSSRSRSRSEHRTSRKCKVEKIEGKDSQRSSRSRSKSSERHKSRSKSSVE 3915
Xenopus_tropicalis SSENTESINKSSEKHFSSSELPVSVPFTSEHTDFNQVQSNYVKPAEVSQSVRENACTTE 4562
Rhinatrema_bivittatum ----TSVDGSKEAPFEVTPQ-----EDECHTNINLMDIN----TTVEGLLLAPEPESD 261
.....4810.....4820.....4830.....4840.....4850.....4860

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Mus_musculus      KDAEHNTVCATTVPVGEASEEEKILPISETKEITELATCAAVSEADIGRSLSSQ--LALE 1629
Rattus_norvegicus KEAEHSTACAAAIVPVGETSEEEKILPISETKEMIELDTCPAVSEADVGRSLSSQ--LALE 1624
Homo_sapiens      KEMEHNTVCAAGTSPVGEIGEEKILPTSETKQRTVLDTPGVSEADAGETLSSTGPFAL 1602
Macaca_mulatta    KEMEHNTVCAASTSPVGEIGEEKILPTSETKQCTVLDNYPGVSEADAGETLSSTGSLAL 1602
Canis_lupus_familiaris KEMEHNTVSAASTGAVDEIGEGNILSISETKQCTVLDTCSSVSEA-DGGTLSSAGPLALE 1609
Felis_catus       KGMEHDTVSAAGTAVGEIGEGNILSIGETKQCTVLDTCSSVSEA-DGGTLSSAGPFAL 1696
Equus_caballus    KEMEHNAVSAISTGAVGEIGEEILPSETKQCTVLDTCPIVSET-DGG--GTGPLALE 1593
Bos_taurus        QEMECSTVSAASTGAIGEMGEEAVLPTSETKQCTVLDTCPSVSETELGGTLSSVGPLVLE 1601
Orcinus_orca      KEMEHNTVSAASTGAVGETGEEKILPTNETKQCTVLDTCPTVSETDVGGTLSSGSLALE 1622
Pavo_muticus      EVEDLEPLTAEHR-RSVSPDGRESRSTTGEEAEDREPSLTAERRHSTSSDERESRSTTGE 1651
Pavo_cristatus    EVEDLEPLTAEHR-RSVSPDGRESRSTTGEEAEDREPSLTAERRHSTSSDERESRSTTGE 1651
Gallus_gallus     EVEDLEPLAAGHR-CSVSPDGRESRSTTGEEAEDREPSLTAERRHSTSSDERESRSTTGE 2908
Chelonia_mydas    EMAVEEPSQRSSRSRSKSSERHTSRSESVEEIEVEEPSQRSSRSRSKSSERHKSRSKSVE 3975
Xenopus_tropicalis LLTSLIAEQPLMAELPSKQLSTAPEALEHGLSLSEFAIKAKQSTSIASALTGQQPLLTE 4622
Rhinatrema_bivittatum LIPAAASVVS--ISKPEEKS-----EIAVKCEDECSIQASITDNG--TAD 303
.....4870.....4880.....4890.....4900.....4910.....4920

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Mus_musculus      LDTVGTSGKGFVFTAS-----ALISESKYDVEVSVTTQDTEHDM 1668
Rattus_norvegicus LDTVGTSGKGFVFAAS-----APISESKYDVEVSVTTQDTEHDM 1663
Homo_sapiens      PDATGTSGKGFVFTAS-----TLSLVNKYDVDLSLTQDTEHDM 1641
Macaca_mulatta    PDATGTSGKGFVFTAS-----TLSSVNKYDIDVSLTQDTEHDM 1641
Canis_lupus_familiaris PDAMGTSGKGFVFTAS-----ALSSVNKYDVEVSLTQDTEHDM 1648
Felis_catus       PDAVGTSGKGFVFTAS-----ALTSVSKYDVEVSLTQDTEHDM 1735
Equus_caballus    PDALGTSGKGFVFTAS-----ALSSVSKYVVEVSLTQDTEHDM 1632
Bos_taurus        SEAVGTGKDLFEGTAS-----ALSSVSKYDGEVSLTQDTEHDM 1640
Orcinus_orca      PDALGTGKGLFATAS-----AFSSISKYDVEVSLTQDTEHDM 1661
Pavo_muticus      DVEDVEPSLTAER-----RDSTSSDEQDSRSTTGEEAEDMEL 1688
Pavo_cristatus    DVEDVEPSLTAER-----RDSTSSDEQDSRSTTGEEAEDMEL 1688
Gallus_gallus     DVEDVEPSLTAER-----RDSTSSDEQDSRSTTGEEAEDMEL 2945
Chelonia_mydas    EMEVQEPSQRSSRS-----SRSKSEERHESRSKSEERIEIQEP 4012
Xenopus_tropicalis LSSSTESQVSEVTMAGKLIATSAQSAVPALKESALLPEATCKRSRSRSVTKRTKRSKSI 4682
Rhinatrema_bivittatum EKDSKDNQEVNDIN-----TLKRSRSRSASTSRKQPKLSS 337
.....4930.....4940.....4950.....4960.....4970.....4980

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Mus_musculus      VISTSPSGGSEADIEGPLPAKDIHLDLPSTN-FVCKDVEDSLPIKESAQAVAVALS PKES 1727
Rattus_norvegicus VISTSPSGGSEADIEGPLPAKDIHLDLPSTN-LVCKDVEDSLPIKESDETIVIALS PKES 1722
Homo_sapiens      VISTSPSGGSEADIEGPLPAKDIHLDLPSTN-NLVSKDTEEP LPVKESDQTLAALLS PKES 1701
Macaca_mulatta    VISTSPSGGSEADIEGPLPAKDIHLDLPSTN-NLVSKDTEEP LPVKESDQTLAALLS PKES 1701
Canis_lupus_familiaris IISTSPSGGSEADIEGPLPAKDIHLDLPSTN-FMSKDAEGPLPIKECDQTLAVALS PKES 1707
Felis_catus       IISTSPSGGSEADIEGPLPAKDIHLDLPSTN-FISKDAEGPLPIKECDQTLAVALS PKES 1794
Equus_caballus    VISSSPSGGSEPDIEGPLPAKDIHLDLPSTN-NFISKDAEGPLPIKESDQTLAVALS PKES 1692
Bos_taurus        VISTSPSGGSEADIEGPLPAQDIHPDLSNN--FINKDAEGSLPVQESDQMLAAALIS PKES 1698
Orcinus_orca      VISTSPSGGSEADIEGPLPAKDIHPDIPANNFVSKDAEGSLPIQESDQTLAVALS PKES 1721
Pavo_muticus      SLTTEHRRSTSPDGRESRSTTGEEGEDVEPSLTAERRDSTSSDDHESRSTTGEEVEDMEP 1748
Pavo_cristatus    SLTTEHRRSTSPDGRESRSTTGEEGEDVEPSLTAERRDSTSSDDHESRSTTGEEVEDMEP 1748
Gallus_gallus     SLTTEHRRSTSPDGRESRSTTGEEGEDVEPSLTAERRDSTSSDDHESRSTTGEEVEDMEP 3005
Chelonia_mydas    SQRSS--RSKSPELQHTSRKSVEDIEGKDTSQKSRSSRSKSPELQHTSRKSVKLEKGD 4070
Xenopus_tropicalis SRSRDSRSKSVTRMKRSRSKSGTRKRSRSKSAWSKRSRSKSVAKRQRSQSKTVMQGRS 4742
Rhinatrema_bivittatum SHDTSNHSQST---RSGSRSGSLSDSKRSPSPSCRKRSRSRAEK-----GKNVEYS PKES 388
.....4990.....5000.....5010.....5020.....5030.....5040

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Mus_musculus      S-EDTEVPLPNKEIVPESGYSAS-IDEINEADLVRPLLPKDMERLTSLRAGIEGPLLASE 1785
Rattus_norvegicus S-EDTEGPLPNKEIVPDSGYSVS-IDEINEADLVRPLLPKDMERLTSLRAGIEGPLLASE 1780
Homo_sapiens      SGGEKEVPVPPPKETLPDSGFSAN-IEDINEADLVRPLLPKDMERLTSLRAGIEGPLLASE 1760
Macaca_mulatta    SGGEKEVPVPPPKETLSDSGFSAN-IEDINEADLVRPLLPKDMERLTSLRAGIEGPLLASE 1760
Canis_lupus_familiaris SGEDKEVALPTKEILSDSGFSAN-IDDINEADLVRPLLPKDMERLTSLRAGIEGPLLASE 1766
Felis_catus       SGEDKEAPLPTKEILSDSGFSAN-IDDINEADLVRPLLPKDMERLTSLRAGIEGPLLASE 1853
Equus_caballus    SGEDKEVPLPTKEILSDSGFPAN-IDDINEADLVRPLLPKDMERLTSLRAGIEGPLLASE 1751
Bos_taurus        SGEDKEVSLTTKEILSDSGFPAS-IDDINEADLVRPLLPKDMERLTNLRAGIEGPLLASE 1757
Orcinus_orca      SGEDKEVPLPTKEILSDSGFSAN-IDDINEADLVRPLLPKDMERLTSLRAGIEGPLLASE 1780
Pavo_muticus      SLAVDDKREGSPSIPLEKS-----EGQDS-FMTESRRSESSEREKSRSESAAEKMSDRES 1801
Pavo_cristatus    SLAVDDKREGSPSIPLEKS-----EGQDS-FMTESRRSESSEREKSRSESAAEKMSDRES 1801
Gallus_gallus     SLAVEDKHGEGSPSIPLEKS-----EGQDSSFMTESRRSESSEREKSRSESAAEKMSDRES 3059
Chelonia_mydas    SQKSRSSRSKSPPELQKSRKSVEDIEGKDSLSRSRSSRSKSPPELQKSRKSVKEIKGKDS 4130
Xenopus_tropicalis RSKSVTRRSRSKSYLQRRS-----WSKSTTRRKRSQSKSDTGKRRSRSRSVGRKRRSR 4797
Rhinatrema_bivittatum RTKCSG-----STSDKDKAKTHSR-----HRSRKSVARIKRSR 424
.....5050.....5060.....5070.....5080.....5090.....5100

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Mus_musculus      VERDKSAASPVVVISIPERASESSSEKDDYEIFVKVKDTHEKSKKNKNRDKGEKEKKRDS 1845
Rattus_norvegicus VERDKSVASPVVISIPERASESSSEKDDYEIFVKVKDTHEKSKKNKNRDKGEKEKKRDS 1840
Homo_sapiens      VGRDRSAASPVVSSMPERASESSSEKDDYEIFVKVKDTHEKSKKNKNRDKGEKEKKRDS 1820
Macaca_mulatta    VGRDKSAASPVVSSMPERASESSSEKDDYEIFVKVKDTHEKSKKNKNRDKGEKEKKRDS 1820
Canis_lupus_familiaris VERDKSAASPVVVISIPERASESSSEKDDYEIFVKVKDTHEKSKKNKNRDKGEKEKKRDS 1826
Felis_catus       VERDKSAASPVIISIPERASESSSEKDDYEIFVKVKDTHEKSKKNKNRDKGEKEKKRDS 1913
Equus_caballus    VERDKSAASPVVVISIPERASESSSEKDDYEIVVKVKDTHEKSKKNKNRDKGEKEKKRDS 1811
Bos_taurus        VERDKSAASPVVVISIPEKASESSSEKDDYEIFVKVKDTHEKSKKNKNRDKGEKEKKRDS 1817
Orcinus_orca      VERDKSAASPVVVISIPERASESSSEKDDYEIFVKVKDTHEKSKKNKNRDKGEKEKKRDS 1840
Pavo_muticus      SQRSRSRPSKSPTRQMSRSPSVDKAADEESSRRSRHRS-----RSTSVEKAADKES 1853
Pavo_cristatus    SQRSRSRPSKSPTRQMSRSPSVDKAADEESSRRSRHRS-----RSTSVEKAADKES 1853
Gallus_gallus     SQRSRSRPSKSPTHQMSRSPSVDKAADEESSRRSRHRS-----RSTSVEKAADKES 3111
Chelonia_mydas    SQKSRSSRSKSPPELQKSRKSVKEIKGKDSQKSRSSRSKSPPELLKSRKSVKEIKGKGS 4190
Xenopus_tropicalis RSVGRKRRSRKSPVRKRHSRKSAGRKRSSRSKSAGRKN-----RSRSKSVGRKRRSR 4852
Rhinatrema_bivittatum KTANR---SKSRSLSHSRHEOR-----TRSRKSKGR-----SCSRERRRRS 464
.....5110.....5120.....5130.....5140.....5150.....5160

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Mus_musculus      SLRSRSKRKSKSSEHKSRKRTSESRSRARKRSSKSKSHRSQTRSRSRSRRRR-RSSRSRSK 1904
Rattus_norvegicus SLRSRSKRKSKSSEHKSRKRTSESRSRARKRSSKSKSHRSQTRSRSRSRRRR-RSSRSRSK 1899
Homo_sapiens      SLRSRSKRKSKSSEHKSRKRTSESRSRARKRSSKSKSHRSQTRSRSRSRRRR-RSSRSRSK 1879
Macaca_mulatta    SLRSRSKRKSKSSEHKSRKRTSESRSRARKRSSKSKSHRSQTRSRSRSRRRR-RSSRSRSK 1879
Canis_lupus_familiaris SLRSRSKRKSKSSEHKSRKRTSESRSRARKRSSKSKSHRSQTRSRSRSRRRR-RSSRSRSK 1885
Felis_catus       SLRSRSKRKSKSSEHKSRKRTSESRSRARKRSSKSKSHRSQTRSRSRSRRRR-RSSRSRSK 1972
Equus_caballus    SLRSRSKRKSKSSEHKSRKRTSESRSRARKRSSKSKSHRSQTRSRSRSRRRR-RSSRSRSK 1870
Bos_taurus        SLRSRSKRKSKSSEHKSRKRTSESRSRARKRSSKSKSHRSQTRSRSRSRRRR-RSSRSRSK 1876
Orcinus_orca      SLRSRSKRKSKSSEHKSRKRTSESRSRARKRSSKSKSHRSQTRSRSRSRRRR-RSSRSRSK 1899
Pavo_muticus      SRRSRHRRSR-----STSVDKTADKESRRSRRRRRSRSTARQRSRSKSVDKTADKES 1905
Pavo_cristatus    SRRSRHRRSR-----STSVDKTADKESRRSRRRRRSRSTARQRSRSKSVDKTADKES 1905
Gallus_gallus     SRRSRHRRSRSAARQMSRVSVEKTADKESRRSRRRRRSRSAARQRSRSKSVDKTADKES 3171
Chelonia_mydas    SQRSRSSRSKSPPELQKSRKSVKEIKGVSSQRSRKRKSKSERHKSRKSVKEKVESKES 4250
Xenopus_tropicalis PSTSRKRKRSRVRRRRSSASVARRRRSRSTSVARRRRSRSTSVVRRRRS-----RSSSV 4907
Rhinatrema_bivittatum PSRERRKKSPSRERRKKSPS---RERRKKSPSRERRKKSPS---RERRK-----RSPSR 512
.....5170.....5180.....5190.....5200.....5210.....5220

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      :  **      :      . : *  *      ..:  :: *      :      :.***
Mus_musculus      SRGRRSVSKEKKRSPKHKRSKRERKKRKRSSSRDNRKAAARARSRTPSRRSRSHTPSRRRR 1964
Rattus_norvegicus SRGRRSVSKEKKRSPKHKRSKRERKKRKRSSSRDNRKTVRARSRTPSRRSRSHTPSRRRR 1959
Homo_sapiens      SRGRRSVSKEKKRSPKHKRSKRERKKRKRSSSRDNRKTVRARSRTPSRRSRSHTPSRRRR 1939
Macaca_mulatta    SRGRRSVSKEKKRSPKHKRSKRERKKRKRSSSRDNRKTVRARSRTPSRRSRSHTPSRRRR 1939
Canis_lupus_familiaris SRGRRSVSKEKKRSPKHKRSKRERKKRKRSSSRDNRKTVRARSRTPSRRSRSHTPSRRRR 1945
Felis_catus       SRGRRSVSKEKKRSPKHKRSKRERKKRKRSSSRDNRKTVRARSRTPSRRSRSHTPSRRRR 2032
Equus_caballus    SRGRRSVSKEKKRSPKHKRSKRERKKRKRSSSRDNRKTVRARSRTPSRRSRSHTPSRRRR 1930
Bos_taurus        SRGRRSVSKEKKRSPKHKRSKRERKKRKRSSSRDNRKTVRARSRTPSRRSRSHTPSRRRR 1936
Orcinus_orca      SRGRRSVSKEKKRSPKHKRSKRERKKRKRSSSRDNRKTVRARSRTPSRRSRSHTPSRRRR 1959
Pavo_muticus      SRRSRSSRRSRSSQRRTRYDADSRSRNRNRSRVTRRRASRSKSNRRSRSSSLSRSRSHRRR 1965
Pavo_cristatus    SRRSRSSRRSRSSQRRTRYDADSRSRNRNRSRVTRRRASRSKSNRRSRSSSLSRSRSHRRR 1965
Gallus_gallus     SRRSRSSRRSRSSQRRTRYDADSRSRNRNRSRVTRRRASRSKSNRRSRSSSLSRSRSHRRR 3231
Chelonia_mydas    SQRSSKRSKSSERKSQKHDSLELRSRNRNRSRVTRKRLSKSKSNHRSRTRSLSRSHRRR 4310
Xenopus_tropicalis ARRRRSRSVSAGPRSSRSVSVPRKRSSCPSPVSRRRRTRSPSPVSRRRRSRTSPVSRRRR 4967
Rhinatrema_bivittatum ERRRRS-----PSRERRRRSPLRERRRRSP--SRERRKRSPSRERRKMS----PSRERR 560
.....5230.....5240.....5250.....5260.....5270.....5280

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      : *      :      *      .      :      *      .      :
Mus_musculus      SRS-VGRRRSFSISPSRRSRTPSRRSRTPSRRSRTPSRRSRTPSRRSRTPSRRSRTPSRR----- 2016
Rattus_norvegicus SRS-VGRRRSFSISPSRRSRTPSRRSRTPSRRSRTPSRRSRTPSRRSRTPSRRSRTPSRRSRTPSRR 2018
Homo_sapiens      SRS-VGRRRSFSISPSRRSRTPSRRSRTPSRRSRTPSRRSRTPSRRSRTPSRRSRTPSRR 1998
Macaca_mulatta    SRS-VGRRRSFSISPSRRSRTPSRRSRTPSRRSRTPSRRSRTPSRRSRTPSRRSRTPSRRSRTPSRR 1998
Canis_lupus_familiaris SRS-VGRR-SFSISPSRRSRTPSRRSRTPSRRSRTPSRRSRTPSRRSRTPSRRSRTPSRRSRTPSRR 2003
Felis_catus       SRS-VGRR-SFSISPSRRSRTPSRRSRTPSRRSRTPSRRSRTPSRRSRTPSRRSRTPSRRSRTPSRR 2090
Equus_caballus    SRS-AGRR-SFSISPSRRSRTPSRRSRTPSRRSRTPSRRSRTPSRRSRTPSRRSRTPSRRSRTPSRR 1988
Bos_taurus        SRS-GGRR-SFSISPSRRSRTPSRRSRTPSRRSRTPSRRSRTPSRRSRTPSRRSRTPSRRSRTPSRR 1994
Orcinus_orca      SRS-GGRR-SFSISPSRRSRTPSRRSRTPSRRSRTPSRRSRTPSRRSRTPSRRSRTPSRRSRTPSRR 2017
Pavo_muticus      SRRSRASRRRRSLSRDRRRRSQRNRSRSADRRRRRSDSRDRR-----ISLRLRSRSRT 2018
Pavo_cristatus    SRRSRASRRRRSLSRDRRRRSQRNRSRSADRRRRRSDSRDRR-----ISLRLRSRSRT 2018
Gallus_gallus     SRRSRASRRRRSLSRDRRRRSQRNRSRSADRRRRRSDSRDRR-----ISLRLRSRSRT 3284
Chelonia_mydas    TRSRSVSKRRRSLSRERHKRSQRNRSRSADRRRRRSNSRDHR-----IVLRLRTRSR 4363
Xenopus_tropicalis SRSPPSVGRRRRSGSTSVTRKGRSRSGLAHHRRRSRSASEACIKRSRSVSATRKRSVSKS 5027
Rhinatrema_bivittatum RQSPSSERRKQSPRNSSSDK-----RRRSNSKDCN-----STGVKLRSRSR- 602
.....5290.....5300.....5310.....5320.....5330.....5340

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      **:*      *      *
Mus_musculus      -----RRSRSAVR-----RRSFSIS----- 2031
Rattus_norvegicus -----RRSRSVVR-----RRSFSIS----- 2033
Homo_sapiens      -----RRSRSVVR-----RRSFSIS----- 2013
Macaca_mulatta    -----RRSRSVVR-----RRSFSIS----- 2013
Canis_lupus_familiaris -----RRSRSVVR-----RRSFSIS----- 2018
Felis_catus       -----RRSRSVVR-----RRSFSIS----- 2105
Equus_caballus    SRT-----PSRRRRSVVR-----RRSFSIS----- 2010
Bos_taurus        -----RRSRSVVR-----RRSFSIS----- 2009
Orcinus_orca      -----RRSRSVVR-----RRSFSIS----- 2032
Pavo_muticus      PLR-----QRRSRSG-----RRRS--SR----- 2036
Pavo_cristatus    PLR-----QRRSRSG-----RRRS--SR----- 2036
Gallus_gallus     PLR-----QRRSRSG-----RRRS--SR----- 3302
Chelonia_mydas    PIR-----RKRSSVG-----RRRS--SK----- 4381
Xenopus_tropicalis LTPKSPTYKPSAVSRSDRSRSHSASNVLRKRKTRSRSSSRDKNKLSEKRRRRSNSKDHYN 5087
Rhinatrema_bivittatum ----TPDYR-----QRKSAG-----RRWS--CR----- 621
.....5350.....5360.....5370.....5380.....5390.....5400

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* * *:***. :. :**** * :**** :.
Mus_musculus      -----PVRLRRSRTPLRRR-FSRSPIRRKRSSRSE-----G 2062
Rattus_norvegicus -----PVRLRRSRTPLRRR-FSRSPIRRKRSSRSE-----G 2064
Homo_sapiens       -----PVRLRRSRTPLRRR-FSRSPIRRKRSSRSE-----G 2044
Macaca_mulatta     -----PVRLRRSRTPLRRR-FSRSPIRRKRSSRSE-----G 2044
Canis_lupus_familiaris -----PVRLRRSRTPLRRR-FSRSPIRRKRSSRSE-----G 2049
Felis_catus        -----PVRLRRSRTPLRRR-FSRSPIRRKRSSRSE-----G 2136
Equus_caballus      -----PVRLRRSRTPLRRR-FSRSPIRRKRSSRSE-----G 2041
Bos_taurus         -----PVRLRRSRTPLRRR-FSRSPIRRKRSSRSE-----G 2040
Orcinus_orca       -----PVRLRRSRTPLRRR-FSRSPIRRKRSSRSE-----G 2063
Pavo_muticus        -----SPIRLRRSRSSGRRRGYSRSPDR-RRSRSSRSE--FSS 2070
Pavo_cristatus      -----SPIRLRRSRSSGRRRGYSRSPDR-RRSRSSRSE--FSS 2070
Gallus_gallus       -----SPIRLRRSRSSGRRRGYSRSPDR-RRSRSSRSE--FSS 3336
Chelonia_mydas      -----SPVRLRRSRSPGRRRCYSRSPDRQRRSRSSDK--FSS 4416
Xenopus_tropicalis  VKSRRRSRTPPRRKKSRSPIKMSPVRRRRSRSAIRRKSFSSRPVRRKRSSRSDKSLDSS 5147
Rhinatrema_bivittatum -----SPGQRKRSRSPVKKKSFSRSPERRKRSSRSPDKLKDLSS 658
.....5410.....5420.....5430.....5440.....5450.....5460

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*****:*****:*****.* * : * : *
Mus_musculus      RSPKRLTDLDKAQLLEIAKANAAMCAKAGVPLPPNLKP---APPPTIEEKVAKKSGGAT 2119
Rattus_norvegicus RSPKRLTDLDKAQLLEIAKANAAMCAKAGVPLPPNLKP---APPPTIEEKVAKKSGGAT 2121
Homo_sapiens       RSPKRLTDLDKAQLLEIAKANAAMCAKAGVPLPPNLKP---APPPTIEEKVAKKSGGAT 2101
Macaca_mulatta     RSPKRLTDLDKAQLLEIAKANAAMCAKAGVPLPPNLKP---APPPTIEEKVAKKSGGAT 2101
Canis_lupus_familiaris RSPKRLTDLNKAQLLEIAKANAAMCAKAGVPLPPNLKP---APPPTIEEKVAKKSGGAT 2106
Felis_catus        RSPKRLTDLNKAQLLEIAKANAAMCAKAGVPLPPNLKP---APPPTIEEKVAKKSGGAT 2193
Equus_caballus      RSPKRLTDLNKAQLLEIAKANAAMCAKAGVPLPPNLKP---APPPTIEEKVAKKSGGAT 2098
Bos_taurus         RSPKRLTDLNKAQLLEIAKANAAMCAKAGVPLPPNLKP---APPPTIEEKVAKKSGGAT 2097
Orcinus_orca       RSPKRLTDLNKAQLLEIAKANAAMCAKAGVPLPPNLKP---APPPSIEEKVAKKSGGAT 2120
Pavo_muticus        RSPKRLTDLDKAQLLEIAKANAAMCAKSGVPLPPSLMP--MLS-QKKDDKASQKSSRDT 2127
Pavo_cristatus      RSPKRLTDLDKAQLLEIAKANAAMCAKSGVPLPPSLMP--MLS-QKKDDKASQKSSRDT 2127
Gallus_gallus       RSPKRLTDLDKAQLLEIAKANAAMCAKSGVPLPPSLMP--MLS-QKKDDKASQKSSRDT 3393
Chelonia_mydas      RSPKRLTDLDKAQLLEIAKANAAMCAKAGVPLPPSLLP--IIAPAKKEEKVTQKSAARDT 4474
Xenopus_tropicalis RSPKRLTDLDKAQLLEIAKANAAMCAKAGVPLPPSLKPVIAPV-TPVEEKITLRSYGV 5206
Rhinatrema_bivittatum RSPKRLTELDKAQLLEIAKANAAMCVKAGVPLPESLKP TVAPAPAPVEEKVSHRSGAVT 718
.....5470.....5480.....5490.....5500.....5510.....5520

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:*****:****. ** ***** ** ***** * :****.* *.* *
Mus_musculus      IEELTEKCKQIAQSKEDDDVIVNKPVSDEEEEEPPFYHHPFKLSEPKPIFFNLNIAAA 2178
Rattus_norvegicus IEELTEKCKQIAQSKEDDDVIVNKPVSDEEEEEPPFYHHPFKLSEPKPIFFNLNIAAA 2180
Homo_sapiens       IEELTEKCKQIAQSKEDDDVIVNKPVSDEEEEEPPFYHHPFKLSEPKPIFFNLNIAAA 2160
Macaca_mulatta     IEELTEKCKQIAQSKEDDDVIVNKPVSDEEEEEPPFYHHPFKLSEPKPIFFNLNIAAA 2160
Canis_lupus_familiaris IEELTEKCKQIAQSKEDDDVIVNKPVSDEEEEEPPFYHHPFKLSEPKPIFFNLNIAAA 2165
Felis_catus        IEELTEKCKQIAQSKEDDDVIVNKPVSDEEEEEPPFYHHPFKLSEPKPIFFNLNIAAA 2252
Equus_caballus      IEELTEKCKQIAQSKEDDDVIVNKPVSDEEEEEPPFYHHPFKLSEPKPIFFNLNIAAA 2157
Bos_taurus         IEELTEKCKQIAQSKEDDDVIVNKPVSDEEEEEPPFYHHPFKLSEPKPIFFNLNIAAA 2156
Orcinus_orca       IEELTEKCKQIAQSKEDDDVIVNKPVSDEEEEEPPFYHHPFKLSEPKPIFFNLNIAAA 2179
Pavo_muticus        LKELTEKCKKIAQST--DDVIVNKPVSDEEEEEPPFYHHPFKLNEPKPIFFNLSTPSI 2184
Pavo_cristatus      LKELTEKCKKIAQST--DDVIVNKPVSDEEEEEPPFYHHPFKLNEPKPIFFNLSTPSI 2184
Gallus_gallus       LKELTEKCKKIAQST--DDVIVNKPVSDEEEEEPPFYHHPFKLNEPKPIFFNLSTPSI 3450
Chelonia_mydas      IKELTEKCKKIAQST--DDVIVNKPVSDEEEEEPPFYHHPFKLNEPKPIFFNLNT--- 4528
Xenopus_tropicalis IQELTEKCKQIAQSK--DDVIVNKPVSDEEEEEPPFYHHPFKVSEHKPISFSLN--- 5262
Rhinatrema_bivittatum IQELTEKCKQIAQSK--DDEIVNKPVSDEEEEEHLFINHPFKVNEPKSISFSLN--- 773
.....5530.....5540.....5550.....5560.....5570.....5580

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*          *.*.*.*:*****.* *****.* *:*** **..
Mus_musculus      KPTPP---KSQVTLTKEFPVSSGSQHRKKEADSVYGEWVPVEKNGEESKDDDNVFSNLP 2235
Rattus_norvegicus KPTPP---KSQVTLTKEFPVSSGSQHRKKEADSVYGEWVPVEKNGEESKDDDNVFSNLP 2237
Homo_sapiens      KPTPP---KSQVTLTKEFPVSSGSQHRKKEADSVYGEWVPVEKNGEENKDDDNVFSNLP 2217
Macaca_mulatta    KPTPP---KSQVTLTKEFPVSSGSQHRKKEADSVYGEWVPVEKNGEENKDDDNVFSNLP 2217
Canis_lupus_familiaris KPTPP---KSQVTLTKEFPVSSGSQHRKKEADSVYGEWVPVEKNGEENKDDDNVFSNLP 2222
Felis_catus       KPTPP---KSQVTLTKEFPVSSGSQHRKKEADSVYGEWVPVEKNGEENKDDDNVFSNLP 2309
Equus_caballus    KPTPP---KSQVTLTKEFPVSSGSQHRKKEADSVYGEWVPVEKNGEENKDDDNVFSNLP 2214
Bos_taurus        KPTPP---KSQVTLTKEFPVSSGSQHRKKEADSVYGEWVPVEKNGEENKDDDNVFSNLP 2213
Orcinus_orca      KPTPP---KSQVTLTKEFPVSSGSQHRKKEADSVYGEWVPVEKNGEENKDDDNVFSNLP 2236
Pavo_muticus      KPAPPPQPKNQVSLSKFPPVSSGSQHRKKEADSVYGEWVPVEKGKEDSKDD--VFPKPSI 2242
Pavo_cristatus    KPAPPPQPKNQVSLSKFPPVSSGSQHRKKEADSVYGEWVPVEKGKEDSKDD--VFPKPSI 2242
Gallus_gallus     KPAPPPQPKNQVSLSKFPPVSSGSQHRKKEADSVYGEWVPVEKGKEDSKDD--VFPKPSI 3508
Chelonia_mydas    TPVVKPAPKNQVTLTKEFPVSSGSQHRKKEADSVYGEWVPVEKSKESKDD--VFPKPAL 4586
Xenopus_tropicalis -PSVKPAPKNQVTLTKEFPVSSGSQHRKKEADKVYGEWVPVDKKSEESKDD--VFTTNTGP 5319
Rhinatrema_bivittatum -PTIKPAPKNQVTLTKEFPVSSGSQHRKKEADAVYGEWVPVEKSSEESKDD--VFTTTLPL 830
.....5590.....5600.....5610.....5620.....5630.....5640

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***:***.*: **.*. *.*.*: *: :*****:***** *:*****.*
Mus_musculus      SEPVDISTAMSERALAQKRLSENAFDLEAMSLNRAQERIDAWAQLNSIPGQFTGSTGVQ 2295
Rattus_norvegicus SEPVDISTAMSERALAQKRLSENAFDLEAMSLNRAQERIDAWAQLNSIPGQFTGSTGVQ 2297
Homo_sapiens      SEPVDISTAMSERALAQKRLSENAFDLEAMSLNRAQERIDAWAQLNSIPGQFTGSTGVQ 2277
Macaca_mulatta    SEPVDISTAMSERALAQKRLSENAFDLEAMSLNRAQERIDAWAQLNSIPGQFTGSTGVQ 2277
Canis_lupus_familiaris SEPVDISTAMSERALAQKRLSENAFDLEAMSLNRAQERIDAWAQLNSIPGQFTGSTGVQ 2282
Felis_catus       SEPVDISTAMSERALAQKRLSENAFDLEAMSLNRAQERIDAWAQLNSIPGQFTGSTGVQ 2369
Equus_caballus    SEPVDISTAMSERALAQKRLSENAFDLEAMSLNRAQERIDAWAQLNSIPGQFTGSTGVQ 2274
Bos_taurus        SEPVDISTAMSERALAQKRLSENAFDLEAMSLNRAQERIDAWAQLNSIPGQFTGSTGVQ 2273
Orcinus_orca      SEPVDISTAMSERALAQKRLSENAFDLEAMSLNRAQERIDAWAQLNSIPGQFTGSTGVQ 2296
Pavo_muticus      EG-VDITAAMNDRALAQKRLNENTFDLEAMCMLNRAQEQIDAWAQNSIPGQFTGSTGAQ 2301
Pavo_cristatus    EG-VDITAAMNDRALAQKRLNENTFDLEAMCMLNRAQEQIDAWAQNSIPGQFTGSTGAQ 2301
Gallus_gallus     EG-VDITAAMNDRALAQKRLNENTFDLEAMCMLNRAQEQIDAWAQNSIPGQFTGSTGAQ 3567
Chelonia_mydas    AQTVDISTAMNERTMAQKRLTENTFDLEAMCMLNRAQEQIDAWAQNSIPGQFTGSTGAQ 4646
Xenopus_tropicalis SQPVDITSAMNERALAQTRLTGNPFDMEALIMLNRAQEQIDAWAQSTSLPGQFTGSTGAQ 5379
Rhinatrema_bivittatum PPSVDISAAMTKRAAAQKRLTGNPFDMVALLNRAQEQIDAWAQSSSLPGQFTGSTGAQ 890
.....5650.....5660.....5670.....5680.....5690.....5700

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*: :*:***.*:*****:***** ** *****:***:***:***. :*:
Mus_musculus      VLTQEQLANTGAQAWIKKDOFLRAAPVTGGMGAVLMRKMGWREGEGGLGKNKEGNKEPILV 2355
Rattus_norvegicus VLTQEQLANTGAQAWIKKDOFLRAAPVTGGMGAVLMRKMGWREGEGGLGKNKEGNKEPILV 2357
Homo_sapiens      VLTQEQLANTGAQAWIKKDOFLRAAPVTGGMGAVLMRKMGWREGEGGLGKNKEGNKEPILV 2337
Macaca_mulatta    VLTQEQLANTGAQAWIKKDOFLRAAPVTGGMGAVLMRKMGWREGEGGLGKNKEGNKEPILV 2337
Canis_lupus_familiaris VLTQEQLANTGAQAWIKKDOFLRAAPVTGGMGAVLMRKMGWREGEGGLGKNKEGNKEPILV 2342
Felis_catus       VLTQEQLANTGAQAWIKKDOFLRAAPVTGGMGAVLMRKMGWREGEGGLGKNKEGNKEPILV 2429
Equus_caballus    VLTQEQLANTGAQAWIKKDOFLRAAPVTGGMGAVLMRKMGWREGEGGLGKNKEGNKEPILV 2334
Bos_taurus        VLTQEQLANTGAQAWIKKDOFLRAAPVTGGMGAVLMRKMGWKEGEGGLGKNKEGNKEPILV 2333
Orcinus_orca      VLTQEQLANTGAQAWIKKDOFLRAAPVTGGMGAVLMRKMGWKEGEGGLGKNKEGNKEPILV 2356
Pavo_muticus      ILSSDELTSNGPQAWIRKDOFLRAAPVTGGMGAVLMRKMGWREGEGGLGKNKEGSVEPIMV 2361
Pavo_cristatus    ILSSDELTSNGPQAWIRKDOFLRAAPVTGGMGAVLMRKMGWREGEGGLGKNKEGSVEPIMV 2361
Gallus_gallus     ILSSDELTSNGPQAWIRKDOFLRAAPVTGGMGAVLMRKMGWREGEGGLGKNKEGSVEPIMV 3627
Chelonia_mydas    ILSSDELSNSGPQAWIRKDOFLRAAPVTGGMGAVLMRKMGWREGEGGLGKNREGTVEPILV 4706
Xenopus_tropicalis VLSADEISNSGPQAWLKKDOFLKAAPVTGGRGALLMRKMGWKEGKGLGRHNEGNVDPILI 5439
Rhinatrema_bivittatum VLSSEELTSNGPQAWIRKDOFLKAAPVTGGMGAVLMRKMGWKEGEGGLGRNNEGTVEPILI 950
.....5710.....5720.....5730.....5740.....5750.....5760

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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*** ***** **::: *****:*****:***:*.** *:*** *
Mus_musculus      DFKTDRKGLVAVGERAQKRSGNFSAAMKDLSGKHPVSALMEICNKRRWOPPEFLLVHDSG 2415
Rattus_norvegicus DFKTDRKGLVAVGERAQKRSGNFSAAMKDLSGKHPVSALMEICNKRRWOPPEFLLVHDSG 2417
Homo_sapiens      DFKTDRKGLVAVGERAQKRSGNFSAAMKDLSGKHPVSALMEICNKRRWOPPEFLLVHDSG 2397
Macaca_mulatta    DFKTDRKGLVAVGERAQKRSGNFSAAMKDLSGKHPVSALMEICNKRRWOPPEFLLVHDSG 2397
Canis_lupus_familiaris DFKTDRKGLVAVGERAQKRSGNFSAAMKDLSGKHPVSALMEICNKRRWOPPEFLLVHDSG 2402
Felis_catus       DFKTDRKGLVAVGERAQKRSGNFSAAMKDLSGKHPVSALMEICNKRRWOPPEFLLVHDSG 2489
Equus_caballus    DFKTDRKGLVAVGERAQKRSGNFSAAMKDLSGKHPVSALMEICNKRRWOPPEFLLVHDSG 2394
Bos_taurus        DFKTDRKGLVAVGERAQKRSGNFSAAMKDLSGKHPVSALMEICNKRRWOPPEFLLVHDSG 2393
Orcinus_orca      DFKTDRKGLVAVGERAQKRSGNFSAAMKDLSGKHPVSALMEICNKRRWOPPEFLLVHDSG 2416
Pavo_muticus      DFKTDRKGLVAVGEKAQK-RSGHYVVMKDLSGKHPVSALMEICNKRRWSPPEFVLVDDSG 2420
Pavo_cristatus    DFKTDRKGLVAVGEKAQK-RSGHYVVMKDLSGKHPVSALMEICNKRRWSPPEFVLVDDSG 2420
Gallus_gallus     DFKTDRKGLVAVGEKAQK-RSGHYVVMKDLSGKHPVSALMEICNKRRWSPPEFVLVDDSG 3686
Chelonia_mydas    DFKTDRKGLVAVGEKTQK-RSGHFSVMKDLSGKHPVSALMEICNKRRWSPPEFVLVDDSG 4765
Xenopus_tropicalis DFKTDRKGLVADGEKASN-KLA-LPMMDLSGKHPISALMELCNKKKWSPPPEFVLVDDTG 5497
Rhinatrema_bivittatum DFKRDRKGLVAEGEKTQK-KSGNLTVMKDLSGKHPISALMEICNKRRWSPPEFVLVHDRG 1009
.....5770.....5780.....5790.....5800.....5810.....5820

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*::*:***:*** ** :*. ::
Mus_musculus      PDHRKHFLFRVLRNGSPYQPNCMFFLNRY----- 2444
Rattus_norvegicus PDHRKHFLFRVLINGSAYQPSFASPNKKHAKATAATVVLOAMGLVPKDLMANATCFRSAS 2477
Homo_sapiens      PDHRKHFLFRVLRNGALTRPNCMFFLNRY----- 2426
Macaca_mulatta    PDHRKHFLFRVLINGSAYQPSFASPNKKHAKATAATVVLOAMGLVPKDLMANATCFRSAS 2457
Canis_lupus_familiaris PDHRKHFLFRVLINGSAYQPSFASPNKKHAKATAATVVLOAMGLVPKDLMANATCFRSAS 2462
Felis_catus       PDHRKHFLFRVLINGSAYQPSFASPNKKHAKATAATVVLOAMGLVPKDLMANATCFRSAS 2549
Equus_caballus    PDHRKHFLFRVLINGSAYQPSFASPNKKHAKATAATVVLOAMGLVPKDLMANATCFRSAS 2454
Bos_taurus        PDHRKHFLFRVLINGSAYQPSFASPNKKHAKATAATVVLOAMGLVPKDLMANATCFRSAS 2453
Orcinus_orca      PDHRKHFLFRVLINGSAYQPSFASPNKKHAKATAATVVLOAMGLVPKDLMANATCFRSAS 2476
Pavo_muticus      PDHRKHFIKVRVNGNEYRPTFASLNKKHAKATAATAALQAMGLVPKESMVNTTMFRSAS 2480
Pavo_cristatus    PDHRKHFIKVRVNGNEYRPTFASLNKKHAKATAATAALQAMGLVPKESMVNTTMFRSAS 2480
Gallus_gallus     PDHRKHFIKVRVNGNEYRPTFASLNKKHAKATAATAALQAMGLVPKESMVNTTMFRSAS 3746
Chelonia_mydas    PDHRKHFIKVMVNGHEYRPSFSLNKKHAKATAATAALQAMGLVPKDSMPNATIFRSAS 4825
Xenopus_tropicalis PEHRKRFLFRVTVNGGVYQPNQPSVNKKLAKATAAAAAALQALGALPKESMTSTANFRSAS 5557
Rhinatrema_bivittatum PDHRRHFLFKVMVNGSEYQPSLASPNKKLARATTATVALQAMGLVPRDNIANATSFMSAS 1069
.....5830.....5840.....5850.....5860.....5870.....5880

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Mus_musculus      ---- 2444
Rattus_norvegicus RR-- 2479
Homo_sapiens      ---- 2426
Macaca_mulatta    RR-- 2459
Canis_lupus_familiaris RR-- 2464
Felis_catus       RR-- 2551
Equus_caballus    RR-- 2456
Bos_taurus        RR-- 2455
Orcinus_orca      RR-- 2478
Pavo_muticus      HR-- 2482
Pavo_cristatus    HR-- 2482
Gallus_gallus     HR-- 3748
Chelonia_mydas    HR-- 4827
Xenopus_tropicalis TS 5561
Rhinatrema_bivittatum DS-- 1071
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