

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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                                     * .
Homo_sapiens      -----MSLHSTHNRRNNSGDILDIPSSQN      23
Pan_troglodytes   -----MSLHSTHNRRNNSGDILDIPSSQN      23
Macaca_mulatta     -----MSLHSTHNRRNNGRDILDIPSSQN      23
Canis_lupus_familiaris -----MSIYTTYNKNS-NILGIPSSQR      22
Equus_caballus     -----MSAFPACGRNDS-DVLGSPPLPR      22
Rattus_norvegicus  -----MSVHTSHSRHNI-GSLEVSSSQK      22
Mus_musculus       -----MSVHTSHSRHNI-GSLEVSSSQK      22
Pavo_muticus       -----MPIYTVSVSKTY-KARRTTTLOK      22
Pavo_cristatus     -----MPIYTVSVSKTY-KARRTTTLOK      22
Gallus_gallus      MISCWHLTVPWEETTKYNVGSICNHYIPNVNSCEEKMSIYTVSVSKPY-KAQCTATLOK      59
Anas_platyrhynchos -----MPDYKVPARNPS-ETQCTTTTQR      22
Chelonia_mydas     -----MPIYTVPTRNHT-DVLGVSSFOK      22
Latimeria_chalumnae -----MSIYTPSRNHT-AVFAFRYKKR      22
Rhinatrema_bivittatum -----MPIYPAPTQQA-SVAGISSHV      22
Xenopus_tropicalis -----MSSERISTRPHM-DVYGVLAAGN      22
1.....10.....20.....30.....40.....50.....60

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Homo_sapiens      SSSLN----ALTHSSRLKLHLKSDMSECENDPLLRSAGKVRDINRTYVISASRKTADMP      79
Pan_troglodytes   SSSLN----ALTHSSRLKLHLKSDMSECENDPLLRSAGKVRDINRTYVISASKKTADMP      79
Macaca_mulatta     SSSLN----ALTHSSRLKLHLKSDMSECENYDPLLRSAGKVRDINSTYVISASEKTADMP      79
Canis_lupus_familiaris SSPLN----VLTHSSRRKLHLNSDMSCENDDPLLKSASKIRDINSTYVISACKETGDVP      78
Equus_caballus     SSTPR----VPAQSSRLQPHLKSDVSECENDDSLLRSASKIRDINSTYVISACKKTGDRP      78
Rattus_norvegicus  ISASS----GLVHSSRLELRLKSDMSECENHDPPLANAGTKTIDINSTYVISACKKARETP      78
Mus_musculus       ISASS----GLVHSSRLELHLKADMSECENHDPFVNAGSKTIDINSTYVISACKKTRETP      78
Pavo_muticus       ISSQN----TFTSSKMLEQQLGSQVSGEDQDSLSSHSONKSEEVNRTYVISACKNADDTS      78
Pavo_cristatus     ISSQN----TFTSSKMLEQQLGSQVSGEDQDSLSSHSONKSEEVNRTYVISAFKNADDTS      78
Gallus_gallus      TSSQN----AFTSSKMLGQQLPSQVSGNDQDSLRSQNKSEEVNRTYVISACSNAADDTS      115
Anas_platyrhynchos ISSRS----AFTSSKMSGQQLTSQMSGKEKDLLSSRNRTYVISACNNANDAS      78
Chelonia_mydas     NPPQN----TFPKSNRFGQQLKSQGPENEKDNSLS--LTKTKEINRTYVISACKNAGDTS      76
Latimeria_chalumnae TNQLVQSSDLTKASSKFGQQLKSQQLQ--DNQLAAADQVKKGRESNKTYVLSNCPKIGRP      80
Rhinatrema_bivittatum KSPLS----IFARSSRVGWQPKSSED--DKSVQSPLLLATSRINRTYIIPTS---ADAP      73
Xenopus_tropicalis RPHSK--PNAVNNIASPVKKGTFADGIGVKQKLLSNKSKEVNTTYVISACKKQASL      80
.....70.....80.....90.....100.....110.....120

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Homo_sapiens      LTPNPVGRLALQRRTRN-KESSLLVSE----LEDTEKTAETRLTLQRR--AKTDSAEK      132
Pan_troglodytes   LTPNPVGRLALQRRTRN-KESSLLVSE----LEDTEKTAETRLTLQRR--AKTDSAEK      132
Macaca_mulatta     LTPNPVGKLTLLQRRTRN-KESSLLGRD----LEDTEKTAETHLTLQRR--AKTDSAEK      132
Canis_lupus_familiaris LTPNPVGRLALQRRVTRN-KESSLLGRE----LGDSTEKTAETRLTLQRR--AKTESVAK      131
Equus_caballus     LSPKPAGRLTLQRRVTRN-KEASSLCSE----LGDSTEKTAETRLTLQRR--AKAESVGK      131
Rattus_norvegicus  ATPDPG-RLTLQRRTTWN-KESSLLGSE----SGHPTGRTADTSLRLQRRPLARADYGEK      132
Mus_musculus       VTSDFR-RLSLQRRATCGDRESSLLGSE----LGN--RRTADTSLRLQRR-HGRADYVGK      130
Pavo_muticus       LTPKPQDRLTLQRRTRTSKNLASSSERSNKNIPQGTENMQMEKRLTLQRR--VKSGSVEK      136
Pavo_cristatus     LTPKPQDRLTLQRRTRTSKNLASSSERSNKNIPQGTENMQMEKRLTLQRR--VKSGSVEK      136
Gallus_gallus      LTLRPPGRLTLRRRTTSKNLASGGGQPDKNIPQGTENMQMEKRLTLQRR--VKSGSVEK      173
Anas_platyrhynchos VTLKPQDRLTLQRRTRVSKNLVSSSEQSDNKIROSIENTQTGKRCTLQRR--VRTGSVEK      136
Chelonia_mydas     VTFKPEGRLTLQRRTGASKISTSIDKQLENTAQDVENTQNGRLTLQRR--MGTGSIEK      134
Latimeria_chalumnae VTPRSEQNLTLQRRKTVSKGSSGTEKETHEN--IDWEKEQLERRLTLQRL--TRTGSIER      136
Rhinatrema_bivittatum STPKQDGRLLTLQRR-TPKKDSSFGDKETDKG--AEQ-NGQAEROFTLQRR--TRPYAAEQ      127
Xenopus_tropicalis KTSRPGSKLILQRRERSSSKGS PHAEETG---ETINKQDCTDRRLTLQRR--LRTGSTEN      134
.....130.....140.....150.....160.....170.....180

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Homo_sapiens      WKTAEIDSV-----KMTLNVGGETENNGVSKESRTNVRIVNNAKNSFVASS 178
Pan_troglodytes   WKTAEIDSV-----KMTLNVGGETENNGVSKESRTNVRIVNNAKNSFVASS 178
Macaca_mulatta    WKTAEIDSV-----KMTLNVGGETENNGVSKESRTNVRIVNNAKNSFVASC 178
Canis_lupus_familiaris WKTARTESVAKWKTATQDCVAKWKTTONVGSATEKDCASLEASTNVTIVNKDKNSFVASS 191
Equus_caballus    WKT-----TQNVGGETGNNCAPREPCTNVRIVNNAKNSFVASS 169
Rattus_norvegicus WET-----SNFVGGNPGSKSASQKGRTEAKLVNND--SCALSS 168
Mus_musculus      WET-----LNPVGGNPGSDSASQASRTAKGVNND--TRVLSS 166
Pavo_muticus      STING-----NTVPGAEN-SVFDAERKYKIALQHGISNNDTHYIKPS 177
Pavo_cristatus    STING-----NTVPGAEN-SVFDAERKYKIALQHGISNNDTHYIKPS 177
Gallus_gallus     STING-----STVPGAEN-SVFDAERKYKIALQPSISNNDTHYIKSS 214
Anas_platyrhynchos SKINW-----NAVPGIEN-NDF-AERNYKTALRPNNNDTRHGNS 176
Chelonia_mydas    HKTNK-----NREPGIENSDSVVAQTNNKNVFPFGISTNNTHYIKSS 176
Latimeria_chalumnae GSSTN-----LPQSPIVDNAAHQAAKN---TKHISQRNTCSKSL 172
Rhinatrema_bivittatum VGMNK-----NSQPGLENTDSGKLPKNETFLLTNVSGKIDCSTPV 167
Xenopus_tropicalis ARPNK-----ITEEVLQHCLEPMEHLDTFGLAGPSK 166
.....190.....200.....210.....220.....230.....240

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Homo_sapiens      VPLDEDPPQVIEMMADKKYKETFS-APSRAENVALKYSSNRPPIASLSQTEVVRSGHLTT 237
Pan_troglodytes   VPLDEDPPQVIEMMADKKYKETFS-APNRRANQVALKYSSNRPPIASLSQTEVVRSGHLTT 237
Macaca_mulatta    VPLDKDPQVIEMMADKKYKEIFS-APSRAENIALKYSSNRAPIASLSQTEVVRSGHLTT 237
Canis_lupus_familiaris VPLAKDPKDIEMMADEKHKETFSKALPGASENVALKYLRNSAPTDSQSQTQVVPVSGHLAT 251
Equus_caballus    CKLAEDPKDVEMTADKCKETFS-TLSGANENAAALKYLSNRAPIGSQSQ-VVVRSGHSAA 227
Rattus_norvegicus VVSEKDSNDTGLTKRKDPCCALS----TSNEKVTVKNPNSRAPIGSQSQTEAMRSGHLVV 224
Mus_musculus      VVSVKDSNDTGLTRCKDPGPPVG----ASNEKVTVKDNTSRAPVGSQSQTEAMRSGHLVV 222
Pavo_muticus      GKLGEQQVTKLNYKTNSKDLFGNVE---NDGYVQSKCRTSSADVNCQKEVPVSEQLAT 233
Pavo_cristatus    GKLGEQQVTKLNYKTNSKDLFGNVE---NDGYVQSKCRTSSADVNCQKEVPVSEQLAT 233
Gallus_gallus     CKLAEGQQVTNLNSKFHSDVFGNVE---NDDCVHSHKCRMDAADARFPKEVPVSEQLAT 270
Anas_platyrhynchos CKLAEGQSNTKMHFNLSKDLFGNVE---NDKRTFVKRKTSADSKLQNEAHISEQLVT 232
Chelonia_mydas    TQLAEGQMNGKRCSDLKNKDSLNLNGSSGNENSKCLKYRTIADAKIQNDVPRSAHLIA 236
Latimeria_chalumnae AGSSSS---LEASEAPTSTESRRLN-----PCGKGALKSDH-----FYLV 212
Rhinatrema_bivittatum IQPMASRMVVELKCNLKSDFSALGRSDGTDKSTCGNGRAPITDMQSQSEVLHADYSCT 227
Xenopus_tropicalis FTVKMSSKDIKSEMMNKDFNAVS-----GKMSPPKSELSSAEP LNTQVEGRSKEADK 218
.....250.....260.....270.....280.....290.....300

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Homo_sapiens      KPTQSKLDIKVLGTGNLYHRSIGKEIAK----TSNKFGSLEKRTPTKCTTEHKLTTPKC-- 291
Pan_troglodytes   KPTQSKLDIKVLGTGNLYHRSIGKEIAK----TSNKFGSLEKRTPTKCTTEHKLTTPKC-- 291
Macaca_mulatta    KPTQSKLDIKVSGTGNLHRTIGKEIAK----TSNKFGSLEKRTPTKCTTEHKLTTPKC-- 291
Canis_lupus_familiaris KPLQSKLNTKVPGTGALHHSIGKDMAK----HSNKFSLEK-TPTKYIVGHKLTPRC-- 304
Equus_caballus    KPLQSKSDSKVSGTGNLHRSIGKDVAK----TPNKFSLEKRTPTKCTTEHRLTPKG-- 281
Rattus_norvegicus QPVENKADIQVSGGGNSHHGNAGKGIK----HTSTFGSSETRTPAKCVSEHRSAPRHD 280
Mus_musculus      QLTESKSDTFVSGGRNSHRGNAGKD TAK----QVGTFGSSDTRTPVKCVLEHRWTPRHDP 278
Pavo_muticus      SKYVNOISGEQVNEQDDIKRMAGKQRLQ--QLKHNSLERPRTPIKAS-TEEFKLTTPKN-- 288
Pavo_cristatus    SKYVNOISGEQVNEQDDIKRMAGKQRLQ--QLKHNSLERPRTPIKAS-TEEFKLTTPKN-- 288
Gallus_gallus     SKYVNOVSGEQLHEKGDIKRMAGKQRLQ--QLKHNSLERPRTPIKAS-TEGFKLTTPKN-- 325
Anas_platyrhynchos SKNINRISGEQLNEKGDVNKLEEKQRLQHLMIKHNSLERPRIPITKGS-TEGFMLTPKN-- 289
Chelonia_mydas    TKLVNRTPGVKLNEKDNFNETGKERIRNSVAKYGSLEQRQTPRNGGPTGEGIKATPMR-- 294
Latimeria_chalumnae PTSSKSTVGAKLNGKDYSGQKPEKGVLRSPGAKSGSLERQRTPSIPTAVEGFKILLKS-- 270
Rhinatrema_bivittatum AKPFKGI PGVKPSEKDTAHKIIIGRANMKTPDTKSGSLEQQKAPRQ-GAMLATRLASKD-- 284
Xenopus_tropicalis VGPVIGTLGIKGNKDGSSLGKPGQEKKTP-VTKKNGLDQQRMPQLGATSLSRSSSTRN-- 275
.....310.....320.....330.....340.....350.....360

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Homo_sapiens	-----SLPQLKSP-APS	302
Pan_troglodytes	-----SLPQLKSP-APS	302
Macaca_mulatta	-----GLPQLKSP-APS	302
Canis_lupus_familiaris	-----GTPQLTSP-AAS	315
Equus_caballus	-----GVFQLKSP-AES	292
Rattus_norvegicus	PPPKSPALSTQKNNGKDIAKHVSTFRNSSSETQTPAKCVLEHRWAPRHGLPPPKSP-ALS	339
Mus_musculus	PPPKSPALSTPKNNGKDIKPHGSTFRSASSESRTPVKCVPEHRWTPRHDLPPPKSP-ALS	337
Pavo_muticus	-----STFQVKSS--LS	298
Pavo_cristatus	-----STFQVKSS--LS	298
Gallus_gallus	-----STFQVKSS--LS	335
Anas_platyrhynchos	-----STFQDKSS--LS	299
Chelonia_mydas	-----GTLQDAKS-PAS	306
Latimeria_chalumnae	-----GNHQDAQS-PAS	281
Rhinatrema_bivittatum	-----DTLQNVRR-PTM	295
Xenopus_tropicalis	-----IRSP--QV	281

.....370.....380.....390.....400.....410.....420

Homo_sapiens	ILKNRMSNLQVKQRPKSSFLANKQERSAENTILP-----EEETVVQNTSAGKDPLK	353
Pan_troglodytes	ILKNRMSNLQVKQRPKSSLLANKQERSAENTILP-----EEETVVQNTSAGKDPLK	353
Macaca_mulatta	ILKNRMSNFQVKQRPKSSFLANKQERSAENTILP-----EEETVVQNTSAGKDPLK	353
Canis_lupus_familiaris	ILKNRMPSLQVK-KPRSSVLNERERSQENILP-----EEEEIGQYTSIETDPLK	365
Equus_caballus	MLKHRMPSLQVKHKPKNSLLANKKEGSQENTLPP-----EGETAVQNAAPETDPLK	343
Rattus_norvegicus	TLKNRIASPRVKPRPKSSLLANK--SSQESTLPP-----EEKSTVQNTFTPEPSLK	388
Mus_musculus	TLKNRIASPRVKPRPKSSLFANKRESSRESLPP-----EENSIVQKIFTEPSLK	388
Pavo_muticus	ASSKQTANLPTVSEKKTSSS---LLGRSAKADE-----NAETLAESNSTEKEIFK	345
Pavo_cristatus	ASSKQTANLPTVSEKKTSSS---LLGRSAKADE-----NAETLAESNSTEKEIFK	345
Gallus_gallus	ASSKQTADLPTLSEKKTSSS---PGGRSAKADE-----DAE---SDSAEKDTFK	378
Anas_platyrhynchos	ALNKRPLHPPPLVSKKKTGVS---SCPVSISAKE-----KVETLTENNSTEEDIFK	346
Chelonia_mydas	TLKNRTPLCLQVTQKKNTNASNSLSISRSARAEEESQIFMOPAALKIETVAQNTCTDENPLK	366
Latimeria_chalumnae	AASKTFLGIKPKS--KMSLTLSLSAGGDRKLKENADGQSVLVKRETEVQMTCPGKAVLT	339
Rhinatrema_bivittatum	SASKNRASNLPTTTKTTTVANSFLACRSGRTOE-PSGASSTILLREAVAQNSCVRQDPSK	354
Xenopus_tropicalis	TPKRVVATLPASQKKNSSTPGSVYSGRSEKSAADVCLSSDEIQPKGDAFNFNLEEHFK	341

.....430.....440.....450.....460.....470.....480

Homo_sapiens	***. * **** **: ** .*: *:.* :* . * *:.....** :.	413
Pan_troglodytes	VENSQVTAVRVRPFTKREKIEKASQVVFMSGKEITVEHPDTKQVYNFIYDVSFWSFDEC	413
Macaca_mulatta	VENSQVTAVRVRPFTKREKIEKASQVVFMSGKEITVEHPDMKQVYNSFIYDVSFWSFDEC	413
Canis_lupus_familiaris	VENSQVTAVRVRPFSKREMEKACQVVFMSGKEITVEHPDMKQVYNFIYDVSFWSFDEC	425
Equus_caballus	VENSQVTAVRVRPFSQREKMDKASQVVFMSGKEITVEHPDMKQVYTFSYDVSFWSFDDR	403
Rattus_norvegicus	VENSQVTAVRVRPFSKREKTEKASQVVFMSGKEITVEHPDMKQVYNSFIYDVSFWSFDEC	448
Mus_musculus	VENSQVTAVRVRPFSKREKTEKASQVVFMSGKEITVEHPDMKQVYNSFIYDVSFWSFDEC	448
Pavo_muticus	VENSKVIVAVRVRPFSREKNENSLPVVMSGSETSVRNPSINQLYNFSYDVSFWSFDDKY	405
Pavo_cristatus	VENSKVIVAVRVRPFSREKNENSLPVVMSGSETSVRNPSINQLYNFSYDVSFWSFDDKY	405
Gallus_gallus	VENSKVTAVRVRPFSREKNENSLPVVMSGSETSVRNPSINQLYNFSYDVSFWSFDEC	438
Anas_platyrhynchos	VENSKVTAVRVRPFSREKNENSLPVVMSGSETSVRNPSINQVYTFSYDVSFWSFDDKY	406
Chelonia_mydas	VENSKVTAVRVRPFSREKREKASQVVFMSGQETTVVRHPETKQVYNFIYDVSFWSFDDHC	426
Latimeria_chalumnae	VENSAMVAVRVRPFSREKSENAFQVVFMDGQDTIVQHPETKQTFNFYDVSFWSFDDHC	399
Rhinatrema_bivittatum	AENSAVIVAVRVRPFSREKSEHAYQVVFMSGQETTVQHPETKQAHNFYDVSFWSFDDKY	414
Xenopus_tropicalis	AENCAVTVAVRVRPFSKREVNEKAVQVVFMSGQETTVQHPDQKQNYIFCYDVSFWSFDDHC	401

.....490.....500.....510.....520.....530.....540

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[illegible]

Homo_sapiens	HPHYASQTITVYEKLAAPLLERAFEGFNTCLFAYGQTGSGKSYTMMGFSEEPGIIPRFCED	473
Pan_troglodytes	HPHYASQTITVYEKLAAPLLERAFEGFNTCLFAYGQTGSGKSYTMMGFSEEPGIIPRFCED	473
Macaca_mulatta	HPHYASQTITVYEKLAAPLLERAFEGFNTCLFAYGQTGSGKSYTMMGFSEEPGIIPRFCED	473
Canis_lupus_familiaris	HPNYASQTITVYETLAVPLLLERAFEGYNTCLFAYGQTGSGKSYTMMGLNEEPGIIPRFCED	485
Equus_caballus	HPDYASQTAVYEALAAPLLQRALQGYNTCLFAYGQTGSGKSYTMMGLSEEPGIIPRFCED	463
Rattus_norvegicus	HPGYANQTITVYETLAAAPLLDRAFEFYNTCLFAYGQTGSGKSYTMMGLNEEPGIIPRFCED	508
Mus_musculus	HPGYASQTITVYETLAAAPLLDRAFEFYNTCLFAYGQTGSGKSYTMMGLNEEPGIIPRFCED	508
Pavo_muticus	HTNFASQEMIYETLALPLLERAFEGYNACLFAYGQTGSGKSYTMMGFDEDRGIIPRLCED	465
Pavo_cristatus	HTNFASQEMIYETLALPLLERAFEGYNACLFAYGQTGSGKSYTMMGFDEDRGIIPRLCED	465
Gallus_gallus	HPNFASQEMIYKTLALPLLERAFEGYNTCLFAYGQTGSGKSYTMMGFDEDRGIIPRLCED	498
Anas_platyrhynchos	HPNFASQAMIYKTLALPLLERAFEGYNACLFAYGQTGTGKSYTMMGFDEDRGIIPRLCED	466
Chelonia_mydas	HPNFASQNTIYKALAVPLLLERAFEGYNTCLFAYGQTGSGKSYTMMGFGEELGIIPRFCED	486
Latimeria_chalumnae	HPDFASQEMVYDKVALPLLERAFEGFNTCLFTYGQTGSGKSYTMMGFSEEGIIIPRFCBQ	459
Rhinatrema_bivittatum	HSNYASQEMVYKKLAVPLLLERAFEGYNTCLFAYGQTGSGKSYTMMGFDEEPGIIPRFCED	474
Xenopus_tropicalis	QPSFVQASVYEKLAAPLLLEWSLLGYNTCLFAYGQTGSGKSYTMMGFDEPGEPIIPRFCSD	461
550.....560.....570.....580.....590.....600	

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Homo_sapiens	LFSQVARKQTQEVSYHIEMSF FEVYNEKIHDLLVCKDENGORKOPLRVREHPVYGPYVEA	533
Pan_troglodytes	LFSQVARKQTQEVSYHIEMSF FEVYNEKIHDLLVCKDENGORKOPLRVREHPVYGPYVEA	533
Macaca_mulatta	LFSQVARKQTQEVSYHIEMSF FEVYNEKIHDLLVCKDENGORKOPLRVREHPVYGPYVEA	533
Canis_lupus_familiaris	IFAQVAKKQTQEVSFHLEMSF FEVYNEKIHDLLVCKGENGORKOPLRVREHPVSGPYVEA	545
Equus_caballus	LFAQVTKKQTQEISYHLEMSF FEVYNEKIHDLLVCKGENGORKOPLRVREHPVSGPYVEA	523
Rattus_norvegicus	LFAQIAKKQASEVSYHLEMSF FEVYNEKIHDLLVCKGENGORKOPLRVREHPVSGPYVEG	568
Mus_musculus	LFAQIAKKQISEVSYHLEMSF FEVYNEKIHDLLVCKGENGORKOPLRVREHPVSGPYVEG	568
Pavo_muticus	LFTRIADTDQQQVLVHLEMSYF EVYNEKIHDLLVFKAESROKKOPLRVREHPVLGPYVED	525
Pavo_cristatus	LFTRIADTDQQQVLVHLEMSYF EVYNEKIHDLLVFKAESROKKOPLRVREHPVLGPYVED	525
Gallus_gallus	LFTRIADTDQQQVLVHLEMSYF EVYNEKIHDLLVFKAESROKKOPLRVREHPVLGPYVED	558
Anas_platyrhynchos	LFS---QMDKQQVLVHLEMSYF EVYNEKIHDLLVFKAENROKKOPLRVREHPVLGPYVED	523
Chelonia_mydas	LFTQIAQMDTQQILVHFEMS YF EVYNEKIHDLLIFKAENGOKKOPLRVREHPVLGPYVED	546
Latimeria_chalumnae	LFSRVAKTKTQQVIYNLEMSYF EVYNEKIHDLLVAKDQSGOKKOPLRVREHPVFGPYVQD	519
Rhinatrema_bivittatum	LFSRVSRIETSIQSHIVEMS YF EYNEKIHDLLVFKGENGOKKOPLRVREHPVTHGPYVEE	534
Xenopus_tropicalis	LFSRIQATMKQKLSFHLEIS YF EVYNEKIHDLLIFKAENGOKKOPLKVRREHPLTGPYVED	521
610.....620.....630.....640.....650.....660	

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Homo sapiens	LSMNVVSSSYADIQSWLELGNKQRATAATGMNDKSSRSHSVFTLVMQTQKTEFVEGEEH	593
Pan troglodytes	LSMNVVSSSYADIQSWLELGNKQRATAATGMNDKSSRSHSVFTLVMQTQKTEFVEGEEH	593
Macaca mulatta	LSMNVVSSSYTDIQSWLELGNKQRATAATGMNDKSSRSHSVFTLVMQTQKTEFVEGEEH	593
Canis lupus familiaris	LSMNVVSSSYSDIQSWLELGNKQRATAATGMNDKSSRSHSVFTLVMQTQKTESVDGEEH	605
Equus caballus	LSLNVVSSSYSDIQSWLELGNCKQRASAAATGMNDKSSRSHSVFTLLMTRTKTESVEGEEH	583
Rattus norvegicus	LSMNVVSSSYSDIQSWLELGNKQRATAATGMNDKSSRSHSVFTLVMQTQKTEFVEGEEH	628
Mus musculus	LSMNVVSSSYSDIQSWLELGNKQRATAATGMNDKSSRSHSVFTLVMQTQKTEVVEGEEH	628
Pavo muticus	LTNVVSSSYSDIQSWLELGNKQRATAATVMNDKSSRSHSVFTLVMQTQKVKFVDEEQCDH	585
Pavo cristatus	LTNVVSSSYSDIQSWLELGNKQRATAATVMNDKSSRSHSVFTLVMQTQKVKFVDEEQCDH	585
Gallus gallus	LTNVVSSSYSDIQSWLELGNKQRATAATVMNDKSSRSHSVFTLVMQTQKVKSVDEEQRDH	618
Anas platyrhynchos	LTNVVSSSYSDIQSWLELGNKQRATAATVMNDKSSRSHSVFTLVMQTQKVESVDEEQDRD	583
Chelonia mydas	LTANMVSSSYSDIQSWLELGNKQRATAATGMNDKSSRSHSVFSLVMTQTKTEFVEGEEH	606
Latimeria chalumnae	LSVNVVTSYSYDIQSWLELGNKQRATAATGMNDKSSRSHSVFTLVMQTQKTEFVEEEH	579
Rhinatrema bivittatum	LSVNVVTSYSYDIQSWLELGNKQRATAATGMNDKSSRSHSVFMVMTQTKTEFVEEEH	594
Xenopus tropicalis	LSMNVVSSFQDIQSWLELGNKQRATAATGMNDKSSRSHSVFTLVMQTQKTEYVDGQEH	581
670.....680.....690.....700.....710.....720	

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Homo_sapiens      RITSRLNIDLAGSERCSTAHTNGDRLKEGVSINKSLLTLGKVVISALSEQA-NQRSVFIP 652
Pan_troglodytes   RITSRLNIDLAGSERCSTAHTNGDRLKEGVSINKSLLTLGKVVISALSEQA-NQRSVFIP 652
Macaca_mulatta    RITSRLNIDLAGSERCSTAHTSGDRLKEGVSINKSLLTLGKVVISALSEQA-NQKRVFIP 652
Canis_lupus_familiaris RITSRLNIDLAGSERCSTAQTSGDRLKEGVSINKSLLTLGKVVISALSEQA-NGKRVFIP 664
Equus_caballus    RITSRLNIDLAGSERCSTAAHTCGERLKEGVSINKSLLTLGKVVISALSEQA-GRKSVFVP 642
Rattus_norvegicus RITSRLNIDLAGSERCSTAHTSSGERLKEGVSINKSLLTLGKVVISALSEQA-NGKRVFIP 687
Mus_musculus      RITSRLNIDLAGSERCSTAHTSSGERLKEGVSINKSLLTLGKVVISALSEQA-NGKRVFIP 687
Pavo_muticus      RLTSHVNLIDLAGSECCSTAQTTGERLKEGVSINKSLLTLGKVVISALSCLKSRNGKKTFFIP 645
Pavo_cristatus    RLTSHVNLIDLAGSECCSTAQTTGERLKEGVSINKSLLTLGKVVISALSCLKSRNGKKTFFIP 645
Gallus_gallus     RLTSHVNLIDLAGSECCSTAQTTGERLKEGVSINKSLLTLGRVISALSCLKSRNGKKTFFIP 678
Anas_platyrhynchos SLTSHINLIDLAGSECCSTAQTTGERLKEGVSINKSLLTLGKVVISALSCLKSQSQNGKKTFFIP 643
Chelonia_mydas    RITSRLNIDLAGSERCSTPTQTSERLKEGVSINKSLLTLGKVVISALSEQSQNRKRAFIP 666
Latimeria_chalumnae RVTSRINLVDLAGSERCSTQASGDRLKEGVSINKSLLTLGKVVISALSSEHSQTRKKAFIP 639
Rhinatrema_bivittatum RITSRLNVDLAGSERCITAAQSGEQLKEGVSINKSLLTLGKVVISALSSEDSQTRRRVFIP 654
Xenopus_tropicalis RITSRLNVDLAGSERCSTAQTSGERLKEGVSINKSLLTLGKVVISALSSEHSQTRKKAFIP 641
.....730.....740.....750.....760.....770.....780

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      **:*.*****:*.****:***: : **:*.***** :* *:.*:**** *
Homo_sapiens      YRESVLTWLLKESLGGNSKTAMIATISPAASNIEETLSTLRYANQARLIVNIAKVNEDMN 712
Pan_troglodytes   YRESVLTWLLKESLGGNSKTAMIATISPAASNIEETLSTLRYANQARLIVNIAKVNEDMN 712
Macaca_mulatta    YRESVLTWLLKESLGGNSKTAMIATISPAASNIEETLSTLRYANQARLIVNIAKVNEDMN 712
Canis_lupus_familiaris YRESVLTWLLKESLGGNSKTAMIATISPAASNIEETLSTLRYANQARLIVNIAKVNEDMN 724
Equus_caballus    YRDSVLTWLLKESLGGNSKTTMIATVSPAASNIEETLSTLRYAKARMINVARVNEDVN 702
Rattus_norvegicus YRESTLTWLLKESLGGNSKTAMIATISPAASNIEETLSTLRYATQARLIVNIAKVNEDMN 747
Mus_musculus      YRESTLTWLLKESLGGNSKTAMIATVSPAASNIEETLSTLRYATQARLIVNIAKVNEDMN 747
Pavo_muticus      YRESVLTWLLKESLGGNSQTAMIATISPAASSTEEETLSTLRYAKQACSIINMAKVNEDVN 705
Pavo_cristatus    YRESVLTWLLKESLGGNSQTAMIATISPAASSTEEETLSTLRYAKQACSIINMAKVNEDVN 705
Gallus_gallus     YRESVLTWLLKESLGGNSQTAMIATISPAASSTEEETLSTLRYAKQACSIINMAKVNEDVN 738
Anas_platyrhynchos YRESVLTWLLKESLGGNSQTAMIATISPAASSTEEETLSTLRYAKQACSIINTAKVNEDVN 703
Chelonia_mydas    YRESVLTWLLKESLGGNSKTTMIATVSPAASNVEETLSTLRYAKQARLIINTAKVNEDVN 726
Latimeria_chalumnae YRESVLTWLLKESLGGNSKTAMIATISPASSYVEETLSTLRYAQARMIINVAKVNEDTN 699
Rhinatrema_bivittatum YRESVLTWLLKESLGGNSKTAMIATISPAATNVEESLGTLYRYAKQARMIVNIAKVNEDMN 714
Xenopus_tropicalis YRESVLTWLLKESLGGNSKTSMIATISPAATNMEETLSTLRYAKQARLIINVAKVNEDLN 701
.....790.....800.....810.....820.....830.....840

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      *:*****:.* *:.* :. :.***: **:* :. :.*** :* :.* :.
Homo_sapiens      AKLIRELKAETIAKLKAAQRNSRNIDPERYRLCRQETISLRMKLHQQERDMAEMORVWKEK 772
Pan_troglodytes   AKLIRELKAETIAKLKAAQRNNRNIDPERYRLCRQETISLRMKLHQQERDMAEMORVWKEK 772
Macaca_mulatta    AKLIRELKAETIAKLKAAQRNNRNIDPEQYRLCRQETISLRMKLHQQERDMAEMORVWKEK 772
Canis_lupus_familiaris AKLIRELKAETIEKLKAAQRNNRNIDPERYRLCRQETISLRMKLHQQERDMTEMORAWKEK 784
Equus_caballus    ARLIRELKAETIEKLKAAQRNSRTIDPEQYRLCRQETISLRMKLYQQERDMAEMORMWREK 762
Rattus_norvegicus AKLIRELKAETIEKLKAAQKSSRNIDPERYRLCRQETISSLRMKLHQQERDMAEIQRVWKEK 807
Mus_musculus      AKLIRELKAETIEKLKAAQRNSRNIDPERYRLCRQETISLRMKLHQQERDMAEIQRVWKEK 807
Pavo_muticus      AKLIRELRAETIEKLKAAQKSAQNRDPEKYRHYLQETISLRKILHQQERDMTEMORAWKAK 765
Pavo_cristatus    AKLIRELRAETIEKLKAAQKSAQNRDPEKYRHYLQETISLRKILHQQERDMTEMORAWKAK 765
Gallus_gallus     AKLIRELRAETIEKLKAAQKSAQNRDPEKYRHYLQETISLRKILHQQERDMTEMORAWKAK 798
Anas_platyrhynchos AKLIRELKAETIEKLK-AQKSAQNTDPEKYRHYLQETISLRMKLHQQERDTAEMORAWKEK 762
Chelonia_mydas    AKLIRELKAETIEKLKAARKSALNTDPEKYRQYLOETISLRVKLHQQERDMAEMORAWKEK 786
Latimeria_chalumnae AKLIRELKGETIEKLKAAQMSARGIESEKYRLCQOEIAAMKMKLGQOEREMQEAORTWKLK 759
Rhinatrema_bivittatum AKLIRELKAETIEKLKAAQRSTLSMDSEKYKHSQOEIISLRKLSQOEMAIAEMORAWKVR 774
Xenopus_tropicalis AKIIRELKAETIEKMKASQLSAKNKDSEKYRQCHQEVTSKLKLCQOEREMSELRAWKDK 761
.....850.....860.....870.....880.....890.....900

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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:**** ** : : *****: *::*:*****.*****.****:*** :*:..
Homo_sapiens      FEQAEKRRLQETKELQKAGIMFQMDNHLNPNLVNLNEDPOLSEMLLYMIKEGTTTVGKYKP 832
Pan_troglodytes   FEQAEKRRLQETKELQKAGIMFQMDNHLNPNLVNLNEDPOLSEMLLYMIKEGTTTVGKYKP 832
Macaca_mulatta    FEQAEKRRLQETKELQKAGITFQMDNHLNPNLVNLNEDPOLSEMLLYMIKEGTTTVGKYKP 832
Canis_lupus_familiaris LEQAERRKLQETKELQKAGITFQMDNHLNPNLVNLNEDPOLSEMLLYMIKEGTTTVGKYKP 844
Equus_caballus    LKQAEKRRLQETTELQKAGITFQMDNHLNPNLVNLNEDPOLSEMLLYMIKEGTTTVGKHHP 822
Rattus_norvegicus FEQAEKRRLQETKELQKAGVTFQMDNHLNPNLVNLNEDPOLSEMLLYMVKEGITTIVGKHHP 867
Mus_musculus      FEQAEKRRLQETKELQKAGVTFQMDNHLNPNLVNLNEDPOLSEMLLYMVKEGITTIVGKHHP 867
Pavo_muticus      LEQAEKRRLQETKELQKAGIAFKMDNRLNPNLVNLNEDPOLSEVLLYMIKEGTTTVGRYTA 825
Pavo_cristatus    LEQAEKRRLQETKELQKAGIAFKMDNRLNPNLVNLNEDPOLSEVLLYMIKEGTTTVGRYTA 825
Gallus_gallus     LEQAEKRRLQETKELQKAGIAFKMDNRLNPNLVNLNEDPOLSEVLLYMIKEGTTTVGRYTA 858
Anas_platyrhynchos LEQAEKRRLQETKELQKAGIAFKMDNRLNPNLVNLNEDPOLSEVLLYMIKEGTTTVGRYTP 822
Chelonia_mydas    FEQAEQRKFETKELQKAGITFKMDNRLNPNLVNLNEDPOLSEMLLYMIKEGTTTVGKYKP 846
Latimeria_chalumnae LEQAEKRRLQETKELQKAGITFKMDNRLNPNLVNLNEDPOLSEMLLYMIKEGTTTVGKYKP 819
Rhinatrema_bivittatum LEQAEIRKYEETKELQKAGITFKMDNRLNPNLVNLNEDPOLSEMLLYMLKEGTTTIGKSKP 834
Xenopus_tropicalis LEQAEQRKKVEMQELQKAGITFKMDNRLNPNLVNLNEDPOLSEMLLYMIKEGTTTVGKYKA 821
.....910.....920.....930.....940.....950.....960

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* *****: *::*:*** * . . * * * :*****: * * * :*****:***
Homo_sapiens      NSSHDIQLSGVLIADDDHCTIKNFGGTVSIIIPVGEAKTYVNGKHILEITVLRHGDRVILGG 892
Pan_troglodytes   NSSHDIQLSGVLIADDDHCTIKNFGGTVSIIIPVGEAKTYVNGKHILEITVLRHGDRVILGG 892
Macaca_mulatta    NSSHDIQLSGVLIADDDHCTITNLGGTVSIIIPVGEAKTYVNGKHILEITVLRHGDRVILGG 892
Canis_lupus_familiaris NSSHDIQLSGVLIADDDHCTIKNFGGTVSIIIPVGEAKTYVNGKHILEITVLRHGDRVILGG 904
Equus_caballus    NSSHDIQLSGVLIADDDHCTIKNFGGTVSIIIPVGEAKTYVNGKHILEITVLRHGDRVILGG 882
Rattus_norvegicus NSSHDIQLSGVLIADDDHCTIRSYGGTVSIIIPVGEAKTYVNGKHILEITVLRHGDRVILGG 927
Mus_musculus      SSSHDIQLSGVLIADDDHCTIRNFGGTVSIIIPVGEAKTYVNGKHILEITVLRHGDRVILGG 927
Pavo_muticus      NSKHDIQLSGVLIADDDHCTIKNFGGTVSIIIPVGEAKTYVNGKHILEITVLRHGDRVILGG 885
Pavo_cristatus    NSKHDIQLSGVLIADDDHCTIKNFGGTVSIIIPVGEAKTYVNGKHILEITVLRHGDRVILGG 885
Gallus_gallus     NSKHDIQLSGVLIADDDHCTIKNFGGTVSIIIPVGEAKTYVNGKHILEITVLRHGDRVILGG 918
Anas_platyrhynchos NSKHDIQLSGVLIADDDHCTIKNFGGTVSIIIPVGEAKTYVNGKHILEITVLRHGDRVILGG 882
Chelonia_mydas    NSRHDIQLSGVLIADDDHCTIKNFGGTVSIIIPVGEAKTYVNGKHILEITVLRHGDRVILGG 906
Latimeria_chalumnae TSTHDIQLSGVLIADDDHCTIKNFGGTVSIIIPVGEAKTYVNGKHILEITVLRHGDRVILGG 879
Rhinatrema_bivittatum DSSHDIQLTGVLIADDDHCTIKNFGGTVSIIIPVGEAKTYVNGKHILEITVLRHGDRVILGG 894
Xenopus_tropicalis GSSHDIQLSGVLIADDDHCTIKNFGGTVSIIIPVGEAKTYVNGKHILEITVLRHGDRVILGG 881
.....970.....980.....990.....1000.....1010.....1020

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:****.***:***: : : :****:***** **.: * *:***:***
Homo_sapiens      DHYFRFNHPVEVQKGRPSGRDTPIS-EGPKDFEFAKNELLMAQRSQLEAEIKEAQLKAK 951
Pan_troglodytes   DHYFRFNHPVEVQKGRPSGRDTPIS-EGPKDFEFAKNELLMAQRSQLEAEIKEAQLKAK 951
Macaca_mulatta    DHYFRFNHPVEVQKGRPSGRDTPIS-EGPKDFEFAKNELLMAQRSQLEAEIKEAQLKAK 951
Canis_lupus_familiaris DHYFRFNHPVEVQKGRPSGGDTLTN-EGPKDFEFAKNELLMAQRSQLEAEIKEAHLKAK 963
Equus_caballus    DHYFRFNHPVEVQKGRPSGRDALT-EGPKDFEFAKNELLMAQRSQLEAEIKDARLKAK 941
Rattus_norvegicus DHYFRFNHPVEVQKGRPS-RRNLT-EGPKDFEFAKNELLMAQRSQLEAEIKDARLKAK 985
Mus_musculus      DHYFRFNHPVEVQKGRPS-RRNLT-EGPKDFEFAKNELLMAQRSQLEAEIKDARLKAK 987
Pavo_muticus      DHYFRFNHPVEVQKGRPS-RRNLT-EGPKDFEFAKNELLMAQRSQLEAEIKDARLKAK 944
Pavo_cristatus    DHYFRFNHPVEVQKGRPS-RRNLT-EGPKDFEFAKNELLMAQRSQLEAEIKDARLKAK 944
Gallus_gallus     DHYFRFNHPVEVQKGRPS-RRNLT-EGPKDFEFAKNELLMAQRSQLEAEIKDARLKAK 977
Anas_platyrhynchos DHYFRFNHPVEVQKGRPS-RRNLT-EGPKDFEFAKNELLMAQRSQLEAEIKDARLKAK 941
Chelonia_mydas    DHYFRFNHPVEVQKGRPS-RRNLT-EGPKDFEFAKNELLMAQRSQLEAEIKDARLKAK 965
Latimeria_chalumnae DHYFRFNHPVEVQKGRPS-RRNLT-EGPKDFEFAKNELLMAQRSQLEAEIKDARLKAK 938
Rhinatrema_bivittatum DHYFRFNHPVEVQKGRPS-RRNLT-EGPKDFEFAKNELLMAQRSQLEAEIKDARLKAK 948
Xenopus_tropicalis DHYFRFNHPVEVQKGRPS-RRNLT-EGPKDFEFAKNELLMAQRSQLEAEIKDARLKAK 936
.....1030.....1040.....1050.....1060.....1070.....1080

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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****:::****: *:*: ** *: *: *: *: *: *: *: *: *:
Homo_sapiens      EEMMQGIQIAKEMAQQELSSQKAAYESKIKALEAELREESQRKKMQEINNQKANHKEEL 1011
Pan_troglodytes   EEMMQGIQIAKEMAQQELSSQKAAYESKIKALEAELREESQRKKMQEINNQKANHKEEL 1011
Macaca_mulatta    EEMMQGIQIAKEMAQQELSSQKAAYESKIKALEAELREESQRKKMQEINNQKANHKEEL 1011
Canis_lupus_familiaris EEMMQGIQIAKEMAQQELSSQKAAYESKIKALEAELREESQRKKMQEINNQKANDKEEL 1023
Equus_caballus    EEMMQGIQIAKEMAQQELSSQKATYEGKIRALEAELKEESERKKMQEITNQKAHHKEEL 1001
Rattus_norvegicus EEMMQGIQIAKEMAQQELSSQRAAYENKIRALEAELREESQRKRLEEINNQKASHKEEL 1045
Mus_musculus      EEMMQGIQIAKEMAQQELSSQKAVYERKICALEAELREESQRKRLEEINNQKASHKEEL 1047
Pavo_muticus      EEMMQSVQIAKQMVQQLTSQKEAYESKIKSLEAEVREESRKKQVQELNNQKAASKIQEL 1004
Pavo_cristatus    EEMMQSVQIAKQMVQQLTSQKEAYESKIKSLEAEVREESRKKQVQELNNQKAASKIQEL 1004
Gallus_gallus     EEMMQSVQIAKQMVQQLTSQKEAYESKIKSLEAEVREESRKKQVQELNNQKAASKIQEL 1037
Anas_platyrhynchos EEMMQSVQIAKEMIQQELTSQKEAYESKIKSLEAEVREESRKKQVQELNNQKAATKIQEL 1001
Chelonia_mydas    EEMMQGIQVAKEMAQQELISQKKVYESKIKSLEAELREESHKKQIQEMNNQQTNNKIQEL 1025
Latimeria_chalumnae EEMIQGIQVAKEMAQRELSCQKTIYENKIKLEVELEESRKKKFQEIINNQKAVTKIEEL 998
Rhinatrema_bivittatum EEMMQGIQIAKEMAQQELSSQKTIYENKIKDLETELKEEVQKKQMQEMNNQKAKNKIQEL 1008
Xenopus_tropicalis EEMMEGIQIAKEMAQQELTSQKFAYEEKIRDLEAQLKKESSHKEQLQEMNSQRAATTRIQEL 996
.....1090.....1100.....1110.....1120.....1130.....1140

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* . . *: * ..:****:****:***** :*:****:**** ** *:****: : .
Homo_sapiens      EKAKQHLEQEIYVNNKRRLEMETLATKQALDHHSIRHARILEALETEKQKIAKEVQILQON 1071
Pan_troglodytes   EKAKQHLEQEIYVNNKRRLEMETLATKQALDHHSIRHARILEALETEKQKIAKEVQILQON 1071
Macaca_mulatta    EKAKQHLEQEIYVNNKRRLEMETLATKQALDHHSIRHARILEALETEKQKIAKEVQILQON 1071
Canis_lupus_familiaris EKTQRLEQEIYVNNKRRLEMETLAAKQALDHHSIRHARILEALETEKQKIAKEVQILQON 1083
Equus_caballus    EKAKQLLEQEIICINRRKRLMETLATKQALDHHSIRHARILEALETEKQKIAKEVQILQON 1061
Rattus_norvegicus EKAKQHLEQEVYVNNKRRLEMETLATKQALDHHSIRHARILEALEREKQKIAEEVQILQON 1105
Mus_musculus      ERAKQHLEQEVYVNNKRRLEMETLATKQALDHHSIRHARILEALEIEKQKIAEEVQMLQON 1107
Pavo_muticus      EKAKQNLLELELHFNKKRLEMETLATKQALDHHTIHHAKILKALEDEKQKIAEEIOTLQKN 1064
Pavo_cristatus    EKAKQNLLELELHFNKKRLEMETLATKQALDHHTIHHAKILKALEDEKQKIAEEIOTLQKN 1064
Gallus_gallus     EKAKQNLLELELHFNKKRLEMETLATKQALDHHTIHHAKILKALEDEKQKIAEEIOTLQKN 1097
Anas_platyrhynchos EKAKQNLLELELHFNKKRLEVETLATKQALDHHSIHHAKILQALEAEKQKIAEEIOTLQKN 1061
Chelonia_mydas    EKAKQHLELEVHFSKKRLEMETFATQALDHHTIRHAKILEALEAEKQKIAKEIETLQON 1085
Latimeria_chalumnae EKVKQRLEQEVHLNKKRLOLETLATKQALDHHSIRHARILEALEAEKWKVLADDLARMQNE 1058
Rhinatrema_bivittatum EKKTLHLEQEAHVNNKRRLELETLATRRALDHHTVRHAKILEALEAEKQKISNEVQELMQA 1068
Xenopus_tropicalis EEMKIHLQEQEVQFNKKRLEMETLATKQALDHHSIRHAKILQALEAEKQKIAKEVQMLQRE 1056
.....1150.....1160.....1170.....1180.....1190.....1200

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: . . . . * .:**** :*:****:****: :* *: : .
Homo_sapiens      RNNRDKTFTVQTT-----WSSMKLSMMIQEANAISSKLKTYVVFGRHDISDK-- 1118
Pan_troglodytes   RNNRDKTFTMQTT-----WSSMKLSMMIQEANAISSKLKTYVVFGRHDISDK-- 1118
Macaca_mulatta    RSNRDKTFTMQTT-----WSSMKLSMMIQEANAISSKLKTYVVFGRHDVSDK-- 1118
Canis_lupus_familiaris QNNREKTFLIQTN-----WNSMKLSMMIQEANAISNKFKKCYVFGGRHDVSDKG- 1131
Equus_caballus    QTNRDKTFTIQLN-----WSSMKLSMLIQEANAISSKLNKCYVFGARHDIADNG- 1109
Rattus_norvegicus RGNRDKTFTIQPN-----WSSMKLSTMIQEANAISDKFFKKHYVFGGRHDASDK-- 1152
Mus_musculus      RGNRDKTFTIQPN-----WNSMKLSTMIQEANAISDKFFKKCYVFGGRHDASDK-- 1154
Pavo_muticus      RASGNKTVNTPLN-----WNSLKL SVMIKEANTISNELGQNTIFNRHDKIDDKT 1113
Pavo_cristatus    RASGNKTVNTPLN-----WNSLKL SVMIKEANTISNELGQNTIFNRHDKIDDKT 1113
Gallus_gallus     RASGNKTVNTPLN-----WNSLKL SVMIKEANTISNELGKNTVFNRRHDKIDDKT 1146
Anas_platyrhynchos RSGNKTMTIPLN-----WNSLKL SVMIKEANTISNELGKNTVFCRHDKVDDKT 1110
Chelonia_mydas    RGNGNKTITIKPN-----WNSMKLSLMIQEANTISSKLKHTVFCRHDISEGN 1134
Latimeria_chalumnae R-NRKAMSTKNVNSKSDMLLAEMYWSMKLSVMIQEANTISNKLKHTVFSRYEPSDKEN 1117
Rhinatrema_bivittatum R-NKQKDAQAQPN-----WNSMKLSVMIQEANTISSKLKHTVFCRHEISDKGS 1116
Xenopus_tropicalis RNSQDRAMAVQPT-----WNNMKLSVMIQEANSISSKLKHTVFSRHDVTDKEN 1105
.....1210.....1220.....1230.....1240.....1250.....1260

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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	: *:~ : * ~*:~** **~~~~::~ *	**::
Homo_sapiens	-SSSDTISIRVRNLKLGISTFWSLEKFESKLAAMKELYESNGSNRGEDAFCDPEDEWEPDI	1177
Pan_troglodytes	-SSSDTISIRVRNLKLGISTFWSLEKFESKLAAMKELYESNGSNRGEDVFCDPEDEWEPDI	1177
Macaca_mulatta	-SSSDTISIRVRNLKLGISTFWSLEKFESKLAAMKELYESNGSNRDEDVFCDPEDEWEPDI	1177
Canis_lupus_familiaris	--SSDICVSRVNQLGISTFWSLEKFESKLAAMKELYEYLTM-----VEPDI	1178
Equus_caballus	-SGPDTSVRVRNLRLLGISTFWSLEKFESKLAAMKELYESNPGNKSEDFVCDPEDEWEPDI	1168
Rattus_norvegicus	-GRSDPSVRVRNLQIGISTFWNLKLFESKLAAMKDLYESNSGTRGEDVFCDPEDEWEPDI	1211
Mus_musculus	-GRSDTISVRVRNLQIGISTFWSLEKFESKLAAMKELYESNGGDREDFVCDPADEWEPDI	1213
Pavo_muticus	GVS SVQVQVRNIKLGIATFWSLEKFECKLAAMKELYESND SNKAADVFYDPADEWEPDL	1173
Pavo_cristatus	GSVSVQVQVRNIKGLIATFWSLEKFECKLAAMKELYESND SNKAADVFYDPADEWEPDL	1173
Gallus_gallus	GVS SVQVQVRNVKLRIATFWSLEKFECKLAAMKELYESND SNKAADVFYDPADEWEPDL	1206
Anas_platyrhynchos	GTVSSI QVQVRNIKLGIATFWSLEKFECKLAAMKELYESNDNNKAADVFYDPADEWEPDL	1170
Chelonia_mydas	GTGPSVKVLVRNLKLEIATFWSLEKFEYKLAAMKELYESNGSNK-ADVFDYPADWEPDL	1193
Latimeria_chalumnae	LA-PGTQIRVQNITLGITTFWTLETFSKLAAMRELIEGNTS SRDDDFYDPPGEWEPDL	1176
Rhinatrema_bivittatum	MVRPSVQVQVQNIKLGITTFWSLEKFENKLAAMKELIYENTGSKDDDLFYDPADNWPEPI	1176
Xenopus_tropicalis	LPTNPVQIQVKNLKGIVTYWSLEKFEYKLAAMKELYENHGSTKDDDFYDPPGEWEPDL	1165
	.....1270.....1280.....1290.....1300.....1310.....1320	

	:	..*	..**	*:*.:.*: *	:	..:..:.*	..*	:
Homo_sapiens	TDAPVSSLSRRRSRSLMKNRRISGCLHDIQVHP	IKNLHSSSHSSGLMDKSS	-----	TIY	1230			
Pan_troglodytes	TDAPVSSLSRRRSRSLMKNRRISGCLHDIQVHP	IKNLHSSSHSSGLMDKSS	-----	TIY	1230			
Macaca_mulatta	TDAPVSSLSRRRSRSLMKNRRISGCLHDIQVHP	IKNLHSSSHSSGLMDKSS	-----	TIY	1230			
Canis_lupus_familiaris	TNPVPSFSRRRSRSLMKNRRISGCLYDIQAHPI	QSLHSSSHSSGLMEKSS	-----	TIY	1231			
Equus_caballus	TDAPVSSFSRRRSRSLMKNRRISGCLQDVQAHS	MONMHSSSHSSGLLEKSS	-----	TIY	1221			
Rattus_norvegicus	TSTPVSLSRRRSRSLMKNRRVSGCLHDI--	HPIQSMHPSHTSGLMEKPS	-----	TIY	1262			
Mus_musculus	TSTPVSLSRRRSRSLMKNRRVSGCLHDI--	HPIQSMQSSSHSSGLMEKPS	-----	TIY	1264			
Pavo_muticus	SDASVSSLSRRRSRSMFNKRISGCLSGIKLQPI	QNTQASYISGAQNKS	-----	SIH	1225			
Pavo_cristatus	SDASVSSLSRRRSRSMFNKRISGCLSGIKLQPI	QNTQASYISGAQNKS	-----	SIH	1225			
Gallus_gallus	SDASVSSLPRRRSRSMFNKRISGCLSGIKLQPI	QNTQASYISGTQSKS	-----	SIQ	1258			
Anas_platyrhynchos	SDASVSSLSRRRSRSLMKNKRISRCLSGIKLEP	THDTQTSYISGSQSKS	-----	SIC	1222			
Chelonia_mydas	TTTSISSFSRRRSRSLMKNRRISGCLSDIKLQPI	QGLHTSHLSGSVNKSG	-----	SIC	1246			
Latimeria_chalumnae	STSSVSLFSRRRSRSLMKNRRISGLYEIQEHS	IQSLQSSSHSSGLMNKSK	-----	RVC	1229			
Rhinatrema_bivittatum	TNTSISLSRRRSRSLMRRRISGCLNGVNPYFM	QSLQTSYISGGLINKSS	NIMDKSSSV	C	1236			
Xenopus_tropicalis	SNTSVSRFSRRK--SLMKNRRISGCLYEIRVHP	IQSLQSGHSSGLMNKSSSFLSCSSVS			1223			
	.....1330.....1340.....1350.....1360.....1370.....1380						

	**	***:	..	:::	**	::	..	*	..	*	:::	*
Homo_sapiens	SNSAESFLPGICKELIGSSLDFFGQSYDEERTIADSLINSFLKIYNGLFAISKAHEEQDE	1290															
Pan_troglodytes	SNSAESFLPGICKELIGSSLDFFGQSYDEERTIADSLINSFLKIYNGLFAISKAHEEQDE	1290															
Macaca_mulatta	SNSAESFLPRICKELIGSSLDFFGQSYDEERTIADSLMNSFLKIYNGLFAISKAHEEQDE	1290															
Canis_lupus_familiaris	SSSAESFLPGICKELIGSSLDFFGQSYDEEKTMAADSLINNFLKIYHGLFAISKAHEEQDE	1291															
Equus_caballus	SNSAESFLPGICKELIGSSLDFFGQSYNEEQTMADSLINNFLKIDDDGLLAISKAHEEQDE	1281															
Rattus_norvegicus	SNSSESFLPGICKELIGSSIDFFGQSFDEEKTIAADSLINNLLKLYNGVIAISKAHEEQDE	1322															
Mus_musculus	SNSSESFLPGICKELIGSSIDFFGQSFDEEKTIAADSLINNLLRLHNGVIAISKAHEEQDE	1324															
Pavo_muticus	PNFFDSLPGICKESISSALDILLEONHEGGKSIADHLLIDLFTISSGVSAISRAYEQDE	1285															
Pavo_cristatus	PNFFDSLPGICKESISSALDILLEONHEGGKSIADHLLIDLFTISSGVSAISRAYEQDE	1285															
Gallus_gallus	PNFFDSLPGICKESISSALDILLEONHEGGKSIADHLLINLFTISSGVSAISKAYEQDE	1318															
Anas_platyrhynchos	PNFSESLPGICKESVSSALDILLEONHEGRKSIADHLLRNLFITIFSGVSAISKAYEQDE	1282															
Chelonia_mydas	SSSESFLPGICKELIGSALDILGONHEEEKSIADSLNLLTIYTGVTAINAYEQDE	1306															
Latimeria_chalumnae	SSVSETVLPDICKELMGLALESLERNSTQESIAADRVLTDLMTIHTGMVVISKAYKELDE	1289															
Rhinatrema_bivittatum	SDSSEPILPGICKELIGCALDVLGRSYTEERSVADSLTISLLTVYTGVSIASTAYEQDE	1296															
Xenopus_tropicalis	SNPSDHLPGICKDLIASLDYLGRSHVDESMAIDSMDSVVRACIGVRTVSQAYEQKE	1283															
1390.....1400.....1410.....1420.....1430.....1440																

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Homo_sapiens	ESQDNL	FSSDRAI	QSLTI	QTACAFE	QLVVLMKH	WLSDLL	PCTN-	IARLE	DELRO	EVKKLG					1349
Pan_troglodytes	ESQDNL	FSSDRAI	QSLTI	QTACAFE	QLVVLMKH	WLSDLL	PCTN-	IARLE	DELRO	EVKKLG					1349
Macaca_mulatta	ESQDNL	FSSDRAI	QSLTI	QTACAFE	QLVVLMKH	WLSDLL	PCTN-	IARLE	DELRO	EVKKLG					1350
Canis_lupus_familiaris	ESPDNL	FSSDRAA	QALTI	QVTCAFE	QLVVLK	HWLDD	FLPCTS-	IARLEE	DELRO	EVKKLG					1350
Equus_caballus	DSPCNL	FSSDRAT	QSF	TIQVAGAFE	QLVVLT	THWLS	DSV	SCTS-	TASLG	DELRO	EVKNLG				1340
Rattus_norvegicus	ESQDNV	FSSDRAA	QALTI	QVACAFE	QLVVL	FKHWL	DDFP	PCSG-	SARLEE	ELRO	DIKKLG				1380
Mus_musculus	ESQDNL	FSSDRAA	QALTI	QVACAFE	QLVVL	FKHWL	GD	FLPCTG-	SARLE	DELRO	DIKKLG				1382
Pavo_muticus	ERQKNF	ISLDHDA	QSYSIKI	TSAFD	QLVVL	IKTWL	NNVQ	KCTG-	SIKT	DEEIK	QEVKNLG				1344
Pavo_cristatus	ERQKNF	ISLDHDA	QSYSIKI	TSAFD	QLVVL	IKTWL	NNVQ	KCTG-	SIKT	DEEIK	QEVKNLG				1344
Gallus_gallus	ECQKNF	ISLDHDA	QSYSIKI	TSAFD	QLVVL	IKTWL	NNVQ	KCTG-	SMKT	DEEIK	QEVKNLG				1377
Anas_platyrhynchos	ECQKNF	FSTDPAA	QSYSIKI	TSVFG	QLVVL	VKWWL	NHVQ	KSPS-	SVKT	DEELK	QEVKNLG				1341
Chelonia_mydas	ESQENF	FLDRAT	QSCSIRI	TSAFE	QLVVL	TKHWL	NSFQ	KCTD-	SLKID	EELRO	GVKNLG				1365
Latimeria_chalumnae	ESQENL	FASNQAA	QYHC	IKVTS	SLERL	VVLK	HWL	DGS---	FSEHP	---	NEELQ	NEVRKL			1344
Rhinatrema_bivittatum	DSHENL	FSFDY	TAQVH	SVAMT	SAFE	QLAVL	AKHWL	DSFP-	QFVE	PIKM	NGELH	QDVKKLG			1355
Xenopus_tropicalis	DSTD	MLFLAN	REAQ	SHSV	QVLTSA	FQ	QLVVL	NKHW	PRLL	PEIQE-	MTKPAD	NVSLY	IRKL		1342
	.....	1450.....	1460.....	1470.....	1480.....	1490.....	1500								

	* ***:**** ** *:.*:.*:.. . . .:.*:.. .:..	
Homo_sapiens	GYLQFLFLOGCCLDISSMIKEAQKNAIQIVQOAVKYVGGQLAVLKGSKLHFLENGNNKAASV	1409
Pan_troglodytes	GYLQFLFLOGCCSDISSMIKEAQKNAIQIVQOAVKYVGGQLAVLKGSKLHFLENGNNKAAGV	1409
Macaca_mulatta	GYLQFLFLOGCCSDISSMIKEAQKNAIQIVQOAVKYVGGQLAVLKGSKLHFLENGNNKAASV	1410
Canis_lupus_familiaris	GYLQFLFLOGCCSDISSMVKEAQKKIIITIQOAVKYVGGQLAVLKGSKLHFLRNSNKAASV	1410
Equus_caballus	GYLQFLFLOGCCSDISSMVKEARKEVTQIVQOAVKSVGGQLAALKGSQLRFLEGLSKAAGV	1400
Rattus_norvegicus	GYLQFLFLOGCCSDISSMVKEAQNKVTEIIIQOAVGHVAQLAVLKGSKLCVLEDSNK--VSS	1438
Mus_musculus	GYLQFLFLOGCCSDISSMVKEAQNKVMKIIQOAVQCVGGQLAVLKGSKLCVLENSSK--VSS	1440
Pavo_muticus	GCLQLLLQGCSSDISSMVTEAQSKVNEAVKQTMKCIGHLAVFTKTDISVFEE--NSISTIS	1403
Pavo_cristatus	GCLQLLLQGCSSDISSMVTEAQSKVNEAVKQTMKCIGHLAVFTKTDISVFEE--NSISTIS	1403
Gallus_gallus	GYLQLLLQGCSSDISSMVTEAQSKVNEAVRQTMKCIGHLAVLTRTDISVFEE--NSISTIS	1436
Anas_platyrhynchos	GYLQLLLQGCSSDISSMVTEAQSKVNEAVKQTIKCIGHLAVFTRTDISIFEE--NDIPATS	1400
Chelonia_mydas	GYLQLLLQGCCSDISSMVTEAHNKIIQIVKQAGKHVGHGLTALIGSDLHLSEDIKEDATIS	1425
Latimeria_chalumnae	GYLQLLLQGCCSDISSMVKEAQNKASQAVKRAARHLGQLAAFTGMELHLSSEKREEKMSE	1404
Rhinatrema_bivittatum	GYLQLLLQGCCSDILSMVTEARDKALQTVQOAVKHVGHGLATFTGSELHLPSESTTDVKEH	1415
Xenopus_tropicalis	GYLQLLLQGCTSDIASMVTEARDKSFHIAEQILNIGQLAALTNTLHFLLEELKDEKDL	1402
	.....1510.....1520.....1530.....1540.....1550.....1560	

	:	*	*:	:	:	:	:	:	:	:		
Homo_sapiens	QEEFMDAVCDGVGLGMIILLDSGLEKAKELQHLELFROCT-----K	1449										
Pan_troglodytes	QEEFMDAVCDGVGLGMIILLDSGLEKAKELQHLELFROCT-----K	1449										
Macaca_mulatta	QEEFMDAICDGVGLGMIILLDSGLEKAKELQHLELLROCT-----K	1450										
Canis_lupus_familiaris	QEDFDALCDGVSLGMKIILLDSGLEKAKELQHELLROSVPKMRYSGVTAASGVYFCQILS	1470										
Equus_caballus	REEVFDAVCEGVGMGVKITLLDSGLEKARELQRQEVLMQCA-----Q	1440										
Rattus_norvegicus	AQELMAALQDGITASGMRSLLDSGLETAQELRQDVSRQSA-----P	1478										
Mus_musculus	TQEFMAALQDGVTSGMKSLLDSGLETAQLRLQDLRSQSA-----R	1480										
Pavo_muticus	LQDFVHAVYGGVGSGLEMLSDTVQEKAARMQKELVQQYP-----Q	1443										
Pavo cristatus	LQDFVRAYVGGVGSGLEMLSDTVQEKAARMQKELVQQYP-----Q	1443										
Gallus_gallus	LQDFVRAAYDVGVSGLLEVLMIDLQEKARMLNELLVQOYP-----Q	1476										
Anas platyrhynchos	LQDFVLAVYDGVGLGLDFLFTETVQEKAARTVQEELLKHQP-----Q	1440										
Chelonia mydas	QEDFILAIYDVGVSGLKSLDSVQKKTREMOKEILLKOYQ-----Q	1465										
Latimeria_chalumnae	KWGVILAIYNIGIGLEDLLCTLGLKRAKDMMYGLOQLGFEP-----	1444										
Rhinatrema bivittatum	PS---FAIYDVGVSGLDCLFHSCINTAKEMORELLKCYSQT-----	1453										
Xenopus_tropicalis	QKLFSRSVSEGLRFGLQSIMESVLKATHDIYTHIQRFIV-----Q	1442										
1570.....1580.....1590.....1600.....1610.....1620											

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      .      :      ::      .      :      :
Homo_sapiens      NEVTKEMKTNAMGLIRSLNIFAESKIKSFRRVQEE--FEYQDFKRMVNRAPFLK 1507
Pan_troglodytes   NEVTKEMKTNAMGLIRSLNIFAESKIKSFRRVQEE--FEYQDFKRMVNRAPFLK 1507
Macaca_mulatta    NEVTKEMKTNAMGLIRSLNIFAESKIKSFRRVQEE--FEYQDFKRMVNRAPFLK 1508
Canis_lupus_familiaris VVTVKOMKAKATELIGCLNMFAEWTKSFRTQLQC-N--SGYQDVKKMVFAPFLK 1527
Equus_caballus     DEATEQLSARAVRLIGSLNIFAEWRTKSFRTHVQEE--SGYQDLKEMLDLAPFLK 1498
Rattus_norvegicus  EEVTROMKANAVELVGSLENIFAEWRTKSFRTOVEE----GSROQGSKVLNLASEFLK 1534
Mus_musculus       EEVTROMKASTVEWVGSLNIFAEWRTKSFRTOAQE----GSROQVSKLLSLASEFLK 1536
Pavo_muticus       NEIQSRIKDNAVALARFLESNVSHCRKKAIQSPLPEED--CLYQEIKRSTNIAAKYLELE 1501
Pavo_cristatus     NEIQSRIKDNAVALARFLESNVSHCRKKAIQSPLPEED--CLYQEIKRSTNIAAKYLELE 1501
Gallus_gallus      NEIQSQIKDSTVALARFLESNVSHCRKTGIQSOLPEEE--CLYQEIKRSTNIAAKYLELE 1534
Anas_platyrhynchos NEIQNRIRDDAVALARFLENNISSCRKKEVESQLPEED--YVYMEIKRSTKIAVKYLELE 1498
Chelonia_mydas     NEIQNIKNNAVAFARCLNTISECKKREMGTOLTKEE--SAHQELKKATNLASEYLELE 1523
Latimeria_chalumnae ---QHEEMNIAVNFVSIQNYLMENKKKDIGATLRQEDKLCEYQDLKTANAVAVELVKFN 1501
Rhinatrema_bivittatum -EFQKQIKNNAIFLTVFLQDSMAACLKVDMDRTQLRKES---RCQDLKKISRLAEELLKLN 1509
Xenopus_tropicalis  DEHLTEIKTNAIRLTTFLOKCLANCVKLDLNLILKDSV-----FSIRSSLITGLRNLNR 1495
      .....1630.....1640.....1650.....1660.....1670.....1680

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      :      .      :      :      :      *      :      :
Homo_sapiens      HCLEKAIEIIISALKGCHSDINLLQTCVESIRNLASDFYSDFS-----VPSTS 1555
Pan_troglodytes   HCLEKAIEIIISALKGCHSDINLLQTCVESICNLANDFYSDFS-----VPSTS 1555
Macaca_mulatta    HCLEKTIEIIISALKGCSSDVNLLQNCVESIRNLASDFYSDFG-----VPSTS 1556
Canis_lupus_familiaris HCLEQTIQIIISALRGCHSDKNLLQNCVESLCSLAKDFHDDL-----MCSTS 1575
Equus_caballus     CLEQTVEMVISALRGCRGDVGLLRRLLESLSLARGLRDDSR-----LCAAS 1546
Rattus_norvegicus  SCLQQTIVEMVVSALRGCPDLRLCLRSCTETICGLAHLKHGGFS-----ALSDS 1582
Mus_musculus       SCLQQTIVEMIVSALRGCPDLHLCLRSCTETICSLARKLHSDFS-----AHSAS 1584
Pavo_muticus       RCLSEVHQIVSSTLQGSFRNTSLLRSSAGEISIIAGYFNMYFS-----LLALS 1549
Pavo_cristatus     RCLSEVHQIVSSTLQGSFRNTSLLRSSAGEISIIAGYFNMYFS-----LLALS 1549
Gallus_gallus      RCLSEVHQIVSSTLQGSFRNTSLLRSSAGEISIIAGYFNMYFS-----LLALS 1582
Anas_platyrhynchos QCLAEVYQIVSSTLQGSFRNTSLPLRSFAGEICFIAGCLYNYFS-----SFPLA 1546
Chelonia_mydas     QCIDKVCQIIITTSLOGSYRNTTQLRSYTEKICILVGHFNMYCT-----LFSLP 1571
Latimeria_chalumnae ESVGQVCQTVVSALKGEYEDVYQLRKHTQLICSLAKSIHDCFSSLLNTSSGDIIVNSTAS 1561
Rhinatrema_bivittatum HCVQDVHQIVVSTLKETYKDCNLLMRHLNLCSTAGQINENAN-----LFTFL 1557
Xenopus_tropicalis  SIMDRLRLAVVSALLEGADADVPILLSLKHDIVECSSQINRNLL-----LLSPQ 1543
      .....1690.....1700.....1710.....1720.....1730.....1740

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      *::      .      *      :
Homo_sapiens      VGSYESRVTHIVH-----QELSLAKSLLFCFESEESPDLLKPWETYNQNTKEEHQ-QSK 1609
Pan_troglodytes   VGSYESRVTHIVH-----QELSLAKSLLFCFESEESPDLLKPWETYNQNTKEEHQ-QSK 1609
Macaca_mulatta    VDSYESRVTVNVH-----KELESLAKSLLFCFESEESPDLLKPWETYNQNTKEEHQ-QSK 1610
Canis_lupus_familiaris LDNCEKRIPQVGH-----GGLESVVKSLLLCLESEERPDLKSWETCQNTREEGQ-QSK 1629
Equus_caballus     AAGPESSDPQADP-----RELESLASSLLFSFEAGERPDLLRPWEVCHQOTRAGGAGPSE 1601
Rattus_norvegicus  AGSCGNEQPRVW-----EELESLAKSLLLCFEHGERPSFLKPWESCTSNSTEEQR---E 1634
Mus_musculus       AGSCGNELPRADC-----EELESLAKSLLLCFECGESPLSKPWESCSNSKEEQC---K 1636
Pavo_muticus       SASANNPFQRTPIPFMNLDELDSLVDLILSFELEQGQPKPKSQVVCNETTETEGRRVET 1609
Pavo_cristatus     SASANNPFQRTPIPFMNLDELDSLVDLILSFELEQGQPKPKSQVVCNETTETEGRRVET 1609
Gallus_gallus      --SANNPFQRTPIPFMNLDELDSLVDLILSFELEQGQPKPKSQVACNGTETEGRRVET 1640
Anas_platyrhynchos STSTNNPIQRTPIPFMNLDELDSLVDLIVNFELDQGQNLKSQPLCNET-ETEGSQSET 1605
Chelonia_mydas     SASANSP-HRTTKSFMVTSLEDSLAKSLIISFELEQGRNSLASQTICMONSKTEKQLET 1630
Latimeria_chalumnae AEKANSITTNLSLI-----MELNSTSKMLNTAFSQLR-EEQKNVYDHIEQKTEGRGKPTNT 1615
Rhinatrema_bivittatum MENVKTSKTLIET-----AELNSLTALIGSFEPE--EDLKQLEPQYTCSQRNKDLRKDS 1610
Xenopus_tropicalis  VIG-----LQDLEALTQSLMQCLCREQVAGPRRSKEQVAGHGRSREK---- 1585
      .....1750.....1760.....1770.....1780.....1790.....1800

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Homo_sapiens	SSGIDGSKNKGVPKRVYELHG	--SSPAV	SSECTPSRIQWV	1648
Pan_troglodytes	SSGIDGSKNKGVPKRVYELHG	--SSPAV	SSECTPSRIQWV	1648
Macaca_mulatta	SSRIDGSKNKGVPKRVYELHG	--SSPAV	SSECTPSRIQWV	1649
Canis_lupus_familiaris	SSRTDSVRNKGVPKRVYELHG	--SPAGT	SEESTPRRIQWV	1668
Equus_caballus	GPRPASGGSKGVPTRVSELQG	---AAPAR---	-----RVQWV	1632
Rattus_norvegicus	SDRADCSRS--VPGRACEPHRDP	TPAES	SGDGTPSRIQWV	1672
Mus_musculus	SDRADCGKS--GPRRACEPHGDAT	PAVSS	SGDCTPNRIQWV	1674
Pavo_muticus	GEAELPWKQKGVPKHIYKLQS	--PPALP	GGELSPDRVIEWW	1647
Pavo_cristatus	GEAELPWKQKGVPKHIYKLQS	--PPALP	GGELSPDRVIEWW	1647
Gallus_gallus	GEAELSWKQKGVPKHTYKLHS	--PPALP	GGKLSPDRMIEWW	1678
Anas_platyrhynchos	GGDEFPLKLKGIPKHTYKLQS	--PPTFP	EELSLG-KIQWV	1642
Chelonia_mydas	G--ESTWKQKGVPKREYKQP	--SATSS	GGKLSGSS-GIQWV	1665
Latimeria_chalumnae	VGVAFSHRSRMVPKHVYKLT	TP--ETTAG	VIELSSTGIKWV	1653
Rhinatrema_bivittatum	RTDASTWKQAI	VPKRIYTLQA--QTAN-	SMWCSASGIQWV	1647
Xenopus_tropicalis	-----MDEHARNLHT	-----WQHN	TFSAPS	1609
	.....1810.....1820.....1830.....1840			