

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /home/ceglab2/Desktop/ajinkya/pavo/MSData/MSData_Feb15_15:07:41_2022

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                                     :  :
Homo_sapiens                      -----MIPARFAGVLLALALILP      18
Pan_troglodytes                   -----MIPARFARVLLALALILP      18
Macaca_mulatta                    -----MIPARLAGVLLALALVLP      18
Callithrix_jacchus                -----MIPARFARVLLALALTLF      18
Equus_caballus                    -----MVPARLARVLLALALTLF      18
Pteropus_alecto                   -----MIPARLARVLLALALTLF      18
Mus_musculus                      -----MNPFRYEICLLVLAITWP      18
Bos_taurus                       -----MFPTRLARLLLAVALTLP      18
Ornithorhynchus_anatinus MASGCGPGSEPRPLGAVGTRSRCHGLWRLRILGPWRRPAGKMAGDGVPLVLLHLVLGAA 60
Pavo_muticus                      -----MLLLAVLTTELLVTVATGSP      20
Pavo_cristatus                   -----MLLLAVLTTELLVTVATGSP      20
Gallus_gallus                    -----MLLLAVLTTELLVTVATGSS      20
Anas_platyrhynchos               -----MCKRSLTQKKMLLLEVLLTNLLLGAVITGSS      31
Chelonia_mydas                   -----MQLNCAQKKMICFTVLLMQALPIVITGSS      30
Anolis_carolinensis              -----MIGSWVFILLAILPKLD      19
Xenopus_tropicalis               -----MNTEEFEDGAEIILQKYSQAQIFANWSNSPRFQMKHLLFLALGLIYKFTT      51
Rhinatrema_bivittatum            -----MNYPPG-----LPVLIIVAILTPGPS      21
Latimeria_chalumnae              -----MNCYPLR-----LLMWALMLLSLRL      21
1.....10.....20.....30.....40.....50.....60

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Homo_sapiens                      GTLCAEGTRGRSSSTARCSLFGSDFVNTFDGSMYSFAGYCSYLLAGGCQKRSFSIIIGDFON      78
Pan_troglodytes                   GTLCAEGTRGRSSSMARCSLFGNDFVNTFDGSMYSFAGYCSYLLAGGCQKRSFSIIIGDFON      78
Macaca_mulatta                    GTLCAEGTRGRSSSMARCSLFGSDFINTFDGSMYSFAGYCSYLLAGDCQKRSFSIIIGDFON      78
Callithrix_jacchus                GILCAEGTRGRSSMARCSLFGSDVINTFDGSMYSFAGYCSYLLAGDCQKHSFSIIIGDFON      78
Equus_caballus                    GTFCAEGTLGRSSMGRCSLFGGDFVNTFDESMYSFAGDCSYLLAGDCQKRSFSLIGAFON      78
Pteropus_alecto                   GTLCTEATHGRSSMARCSLFGADFINFDESMYSFAGDCSYLLAGDCQKHSFSLIGDFON      78
Mus_musculus                      GTLCTEKPRDRPSTARCSLFGDDFINFDETMYSFAGGCSYLLAGDCQKRSFSILGNFQD      78
Bos_taurus                       GALCGEGALGKSSMARCSLFGADFINFDESMYSFSGDCSYLLAGDCRTHSFSIVGDFQ      78
Ornithorhynchus_anatinus GFRLVEGGISGPWAARCSLFGRDHLKTFDENVSFSGDCSYMLAGDCRHTFSLIGTFER      120
Pavo_muticus                      GSLLQD-----SSVSRCSLFGNDHIKTFDGSFYFAGDCSYLLAGDCHKHSFTLLGNKYD      75
Pavo_cristatus                   GSLLQD-----SSVSRCSLFGNDHIKTFDGSFYFAGDCSYLLAGDCHKHSFTLLGNKYD      75
Gallus_gallus                    GSLLQE-----SSVSRCSLFGKDHKTFDGSFYFAGDCSYLLAGDCHKHSFTLLGNKYD      75
Anas_platyrhynchos               GSLLQE-----SSVSRCSLFGNDHIKTFDDSFYNFAGDCSYLLAGDCHKRSFTLLGDYQD      86
Chelonia_mydas                   SFLLADGQTEEPSLSRCSLFGDDHIKTFDESFYDFAGDCSYLLAGDCHKRSFTLLIGDYQN      90
Anolis_carolinensis              GTEVAQ-----PFGHCSLFGSNHIKTFDEYLYDFAGDCSYLLAGDCQKRSFSLGNKYEN      73
Xenopus_tropicalis               GPLVAEGKLDWSVLARCSLFGENHIQTFDGTIFYDFYGDSCSYMLAGDCNKHSFSLLDYRN      111
Rhinatrema_bivittatum            HSFFTEGKPEWAKASHCSLFGDDHVRTFDGSFYDFAGDCSYLLAGDCVKRSFSLLDYQH      81
Latimeria_chalumnae              EIMQVEGK-EELPVSHCSLFGDYHIQTFDGTIFYDFPGDCSYKLAGDCQKRSFSILGDYQN      80
.....70.....80.....90.....100.....110.....120

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Homo_sapiens                      GKRVSLSVYLGEFFDIHLFVNGTVTQGDQ-----RVSMPLYASKGLYLETEAGYYK      128
Pan_troglodytes                   GKRVSLSVYLGEFFDIHLFVNGTVTQGDQ-----RVSMPLYASKGLYLETEAGYYK      128
Macaca_mulatta                    GKRVSLSVYLGEFFDIHLFVNGTVTQGDQ-----SVSMPLYASKGLYLETEAGYYK      128
Callithrix_jacchus                GKRVSLSVYLGEFFDIHLFVNGTVTQGDQ-----RVSMPLYASKGLYLETEAGYYK      128
Equus_caballus                    GKRVSLSVYLGEFFDIHLFVNGTVLQGDQ-----SVSMPLYASKGLYLETEAGYYK      128
Pteropus_alecto                   GKRMSLSVYLGEFFDIHLFVNGTVLQGDQ-----SVSMPLYASKGLYLETEAGYYK      128
Mus_musculus                      GKRMSLSVYLGEFFDIHLFANGTVTQGDQ-----SISMPYASQGLYLEREAGYYK      128
Bos_taurus                       GRRMGLSVYLGEFFDIHVFVNGTVLQGGQ-----HVSMPYATRGLYLETEVGHKK      128
Ornithorhynchus_anatinus GRRTGISVYLGEFFDIHLFANGSVIQTGTRPSMPSTPLDSVSMPLYASRGLHLENEAGYYK      180
Pavo_muticus                      GEKIGLSVYLGEYFNLRFLLDGSVIEDK-----RVSIPFASNGIFVEKEAGYYK      125
Pavo_cristatus                   GEKIGLSVYLGEYFNLRFLLDGSVIEDK-----RVSIPFASNGIFVEKEAGYYK      125
Gallus_gallus                    GEKTGFSVYLGEYFNLFLLGGSVMEDEK-----RVSIPFASNGIFIEKEAGYYK      125
Anas_platyrhynchos               GEKIGFSVYLGEYFNVHFLSLNGSVTQEDK-----RVSIPFASNGFLFIEKEAGYYK      136
Chelonia_mydas                   GRRNSFSVYLGEYFDIHLALDGTVTQGDQ-----RVSMFPASHGIFVETESGYK      140
Anolis_carolinensis              GKRTSLTLYLGEYFDVHLFLDGTVTLSDK-----RIPVPYASNGIFVENEAGYYK      123
Xenopus_tropicalis              GKKKSVSLLYLGEYFDIHLFLDGTATQGEK-----HISMPYASNGIFLESEAGYYK      161
Rhinatrema_bivittatum            GKRKSISLLYLGEYFDLHLFLDGSVTQGEK-----RMHTPYASNGIFLETEAGSYK      131
Latimeria_chalumnae              GKRKSISLLYLGEYFDIHMLLDGTVITQDK-----RISLPYASSGIFVETETGYK      130
.....130.....140.....150.....160.....170.....180

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Homo_sapiens      LSGEAYGFVARIDGSGNFQVLLSDRYFNKTCGLCGNFNIFAEDDFMTQEGTLTSDPYDFA 188
Pan_troglodytes   LSGEAYGFVARIDGSGNFQVLLSDRYFNKTCGLCGNFNIFAEDDFMTQEGTLTSDPYDFA 188
Macaca_mulatta    LSGEAYGFVARIDGSGNFQVLLSDRYFNKTCGLCGNFNIFAEDDFMTQEGTLTSDPYDFA 188
Callithrix_jacchus LSGEAYGFVARIDGSGNFQVLLSDRYFNKTCGLCGNFNIFAEDDFMTQEGTLTSDPYDFA 188
Equus_caballus    LSSEAYGFVARIDSGGNFQVLLSDRYFNKTCGLCGNFNIFAEDDFITQEGTLTSDPYDFA 188
Pteropus_alecto   LSSETYGFVARIDGSGNFQVLLSDRYFNKTCGLCGDFNIFAEDDFRTQEGTLTSDPYEFA 188
Mus_musculus      LSSETFGFAARIDGNGNFQVLLSDRHFNKTCLCGDFNIFAEDDFRTQEGTLTSDPYDFA 188
Bos_taurus        LSSESYGFVARIDGSGNFQVLLSDRHFNKTCLCGDFNIFAEDDFRTQEGTLTSDPYDFA 188
Ornithorhynchus_anatinus VSSTVYGFVEVRMDTGGDLQFLAGRHNLATCGLCGNANRFAEDDLQTQEGTLTSDPYDFA 240
Pavo_muticus      ISSSDYGFVVKIDISGNIQIFLQEKYNNKTCGLCGNFNKFAEDDFRTQEGTLVGNSYDFA 185
Pavo_cristatus    ISSSDYGFVVKIDISGNIQIFLQEKYNNKTCGLCGNFNKFAEDDFRTQEGTLVGNSYDFA 185
Gallus_gallus     ISSNDYGFVVKIDISGNIQIFLQEKYNNKTCGLCGNFNKFAEDDFRTQEGTLVGNSYDFA 185
Anas_platyrhynchos MSSDEHGFVVKIDISGNIQIFLQEKYNNKTCGLCGNFNKFAEDDFRTQEGTLVGNSYDFA 196
Chelonia_mydas    LSSDEHGFVVKIDISANIQILFREKHYNNKTCGLCGNFNKFAEDDFRTQEGTLVGNSYDFA 200
Anolis_carolinensis LSSSEHGLVVKADISGNIQIFLANSHYNNKTCGLCGNFNKFAEDDFRTQEGTLVGNSYDFA 183
Xenopus_tropicalis LSSQEHGFVVKIDASGNVQVLLPSKHFNKTCLCGNYNQFAEDDFMTQEGTLVGNSYDFA 221
Rhinatrema_bivittatum LSSYEHGFVVRIDTSGNVQVLLPSKHFNKTCLCGNMNLAEDDFMTQEDIFVLNSYDFA 191
Latimeria_chalumnae LSSSEYGFVVRIDTSRNVHILLSEHFNKTCLCGNFNKFAEDDFRTQEDIFLAENSYDFA 190
.....190.....200.....210.....220.....230.....240

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****: . * * .*: .: : : *::: . * :** *::: :
Homo_sapiens      NSWALSSGEQWCERASPPSSSCNISSGEMQKGLWEQCQLLKSTSVFARCHPLVDPEPFVA 248
Pan_troglodytes   NSWALSSGEQWCERASPPSSSCNISSGEMQKGLWEQCQLLKSTSVFARCHPLVDPEPFVA 248
Macaca_mulatta    NSWALSSGEQWCERASPPSSSCNISSGEMQKGLWEQCQLLKSTSVFARCHPLVDPEPFVA 248
Callithrix_jacchus NSWALSSGEQWCERASPPSSSCNISSGEMQKGLWEQCQLLKSTSVFARCHPLVDPEPFVA 248
Equus_caballus    NSWALSSGEERCKRASPPSSPCNVSSSEEMQKDMWEQCQLLKTVSVFARCHPLVDPEPFVA 248
Pteropus_alecto   NSWALSSGEORCKRASAPSSIRCNASSEEMQKGLWEQCQLLKSTSVFARCHPLVDPEPFVA 248
Mus_musculus      NSWALSSSEORCKRASPPSSRNCESSGDMHQAMWEQCQLLKSTSVFARCHPLVDPEPFVA 248
Bos_taurus        NSWALSSSEORCKRASPPSSRNCESSGDMHQAMWEQCQLLKSTSVFARCHPLVDPEPFVA 248
Ornithorhynchus_anatinus NSWALSSGEORCKRASPPSSRNCESSGDMHQAMWEQCQLLKSTSVFARCHPLVDPEPFVA 248
Pavo_muticus      NSWALSSSEORCKRASPPSSRNCESSGDMHQAMWEQCQLLKSTSVFARCHPLVDPEPFVA 248
Pavo_cristatus    NSWALSSSEORCKRASPPSSRNCESSGDMHQAMWEQCQLLKSTSVFARCHPLVDPEPFVA 248
Gallus_gallus     NSWALSSSEORCKRASPPSSRNCESSGDMHQAMWEQCQLLKSTSVFARCHPLVDPEPFVA 248
Anas_platyrhynchos NSWALSSSEORCKRASPPSSRNCESSGDMHQAMWEQCQLLKSTSVFARCHPLVDPEPFVA 248
Chelonia_mydas    NSWALSSSEORCKRASPPSSRNCESSGDMHQAMWEQCQLLKSTSVFARCHPLVDPEPFVA 248
Anolis_carolinensis NSWALSSSEORCKRASPPSSRNCESSGDMHQAMWEQCQLLKSTSVFARCHPLVDPEPFVA 248
Xenopus_tropicalis NSWALSSSEORCKRASPPSSRNCESSGDMHQAMWEQCQLLKSTSVFARCHPLVDPEPFVA 248
Rhinatrema_bivittatum NSWALSSSEORCKRASPPSSRNCESSGDMHQAMWEQCQLLKSTSVFARCHPLVDPEPFVA 248
Latimeria_chalumnae NSWALSSSEORCKRASPPSSRNCESSGDMHQAMWEQCQLLKSTSVFARCHPLVDPEPFVA 248
.....250.....260.....270.....280.....290.....300

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Homo_sapiens      LCEKTLCECAGGLECACPALLEYARTCAQEGMVLYGWTIDHSACSPVCPAGMEYKQCVSPC 308
Pan_troglodytes   LCEKTLCECAGGLECACPALLEYARTCAQEGMVLYGWTIDHSACSPVCPAGMEYKQCVSPC 308
Macaca_mulatta    LCEKTLCECAGGLECACPALLEYARTCAQEGMVLYGWTIDHSACSPVCPAGMEYKQCVSPC 308
Callithrix_jacchus LCEKTLCECAGGLECACPALLEYARTCAQEGMVLYGWTIDHSACSPVCPAGMEYKQCVSPC 308
Equus_caballus    LCEKTLCECAGGLECACPALLEYARTCAQEGMVLYGWTIDHSACSPVCPAGMEYKQCVSPC 308
Pteropus_alecto   LCEKTLCECAGGLECACPALLEYARTCAQEGMVLYGWTIDHSACSPVCPAGMEYKQCVSPC 308
Mus_musculus      LCEKTLCECAGGLECACPALLEYARTCAQEGMVLYGWTIDHSACSPVCPAGMEYKQCVSPC 308
Bos_taurus        LCEKTLCECAGGLECACPALLEYARTCAQEGMVLYGWTIDHSACSPVCPAGMEYKQCVSPC 308
Ornithorhynchus_anatinus LCEKTLCECAGGLECACPALLEYARTCAQEGMVLYGWTIDHSACSPVCPAGMEYKQCVSPC 308
Pavo_muticus      LCEKTLCECAGGLECACPALLEYARTCAQEGMVLYGWTIDHSACSPVCPAGMEYKQCVSPC 308
Pavo_cristatus    LCEKTLCECAGGLECACPALLEYARTCAQEGMVLYGWTIDHSACSPVCPAGMEYKQCVSPC 308
Gallus_gallus     LCEKTLCECAGGLECACPALLEYARTCAQEGMVLYGWTIDHSACSPVCPAGMEYKQCVSPC 308
Anas_platyrhynchos LCEKTLCECAGGLECACPALLEYARTCAQEGMVLYGWTIDHSACSPVCPAGMEYKQCVSPC 308
Chelonia_mydas    LCEKTLCECAGGLECACPALLEYARTCAQEGMVLYGWTIDHSACSPVCPAGMEYKQCVSPC 308
Anolis_carolinensis LCEKTLCECAGGLECACPALLEYARTCAQEGMVLYGWTIDHSACSPVCPAGMEYKQCVSPC 308
Xenopus_tropicalis LCEKTLCECAGGLECACPALLEYARTCAQEGMVLYGWTIDHSACSPVCPAGMEYKQCVSPC 308
Rhinatrema_bivittatum LCEKTLCECAGGLECACPALLEYARTCAQEGMVLYGWTIDHSACSPVCPAGMEYKQCVSPC 308
Latimeria_chalumnae LCEKTLCECAGGLECACPALLEYARTCAQEGMVLYGWTIDHSACSPVCPAGMEYKQCVSPC 308
.....310.....320.....330.....340.....350.....360

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Homo_sapiens      ARTCSLHINEMCQERCVDGCSCEPQQLLDEGLCVESTECPCVHSGKRYPPGTSLSRDCN 368
Pan_troglodytes   ARTCSLHINEMCQERCVDGCSCEPQQLLDEGLCVESTECPCVHSGKRYPPGASLSRDCN 368
Macaca_mulatta    ARTCSLHINEVCQERCVDGCSCEPQQLLDEGLCVESTECPCMHSGKRYPPGASLSRDCN 368
Callithrix_jacchus TRTCQSLHINEVCQQQCVDGCSCEPQQLLDEGLCVESTECPCMHSGKRYPPGTNLSQDCN 368
Equus_caballus    TRTCQSLHINEVCQEQCVDGCSCEPQQLLDEGRCVESAECPCVHSGKRYPPGASLSQDCN 368
Pteropus_alecto   TRNCQSLHINEVCQEQCVDGCSCEPQQLLDEGRCVESTECSCVHSGKRYPPGASLSRDCN 368
Mus_musculus      PRTCQSLSINEVCQQQCVDGCSCEPEGELLDDEGRVCQSSDCPCVHAGKRYPPGTSLSQDCN 368
Bos_taurus        HRTCRLSITEVCREQCVDGCSCEPQQLLDEGRCVESTECPCVHAGKPYPPGASLSRDCN 367
Ornithorhynchus_anatinus AETCQSLNIHEVCQGPGCTDGTCTPEGKLLDGDRCVDSADSCVHSGQHYPGASIAIDCN 419
Pavo_muticus      AKTCQSLNINEVCHGQCVDGCSCEPEGKLLDGEHCVESSDCSCIHSGRHYPPGFTIFQDCN 365
Pavo_cristatus    AKTCQSLNINEVCHGQCVDGCSCEPEGKLLDGEHCVESSDCSCIHSGRHYPPGFTIFQDCN 365
Gallus_gallus     AKTCQSLNINEVCHGQCIDGCSCEPEGKLLDGERCVESDDSCSCIHSGRHYPPGFTIFQDCN 365
Anas_platyrhynchos AKTCQSLNINEVCHGQCVDGCSCEPEGKLLDGEHCIESSDCSCIHSGRHYPPGFTISRDCN 376
Chelonia_mydas    VKTCQSLNINEVCQGCADGCSCEPVGKLLNGDSCVDSSECSCVHSGMRYPGSSISQDCN 380
Anolis_carolinensis AKTCQSLNVNEVCQEKQVDGCSCEPEGKLLDGDVCDVDSSECSCTHSGKRYAPGSSVYQDCN 363
Xenopus_tropicalis VKTCQSLNINEVCQEQCIDGCSCEPDGKVLDDGRCIPVFECSCIHSGRHYPPGSAIRDCN 401
Rhinatrema_bivittatum AOTCQSLNINEICSEQCVDGCSCEPEGKFLDGDRCVDASECSCLHSGRRYPGSSISRDCN 371
Latimeria_chalumnae TKKCQSLNINEVCQEQCIDGCSCEPVGKVLDDGQVEASECSCTHKGKHYPGSSISQDCN 370
.....370.....380.....390.....400.....410.....420

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Homo_sapiens      TCICRNSQWICSNEECPGECCLVTGQSHFKSFDNRYFTFSGICQYLLARDCQDHSFSIVIE 428
Pan_troglodytes   TCICRNSQWICSNEECPGECCLVTGQSHFKSFDNRYFTFSGICQYLLARDCQDHSFSIVIE 428
Macaca_mulatta    TCICRNSQWICSNEECPGECCLVTGQSHFKSFDNRYFTFSGICQYLLARDCEDHSFSIVIE 428
Callithrix_jacchus TCICRNSQWVCSNEDCPGECCLVTGQSHFKSFDNRYFTFSGICQYLLARDCQDHSFSIVIE 428
Equus_caballus    TCICRNSLWICSNEECPGECCLVTGQSHFKSFDNRYFTFSGVCQYLLARDCQDHSFSIVIE 428
Pteropus_alecto   TCICRNSLWICSNEECPGECCLVTGQSHFKSFDNRYFTFSGVCQYLLARDCEDHSFSIVIE 428
Mus_musculus      TCICRNSLWICSNEECPGECCLVTGQSHFKSFDNRYFTFSGICQYLLARDCEDHTFSIVIE 428
Bos_taurus        TCICRNSQWVCSNEDCPGECCLVTGQSHFKSFDNRYFTFSGVCQYLLARDCQDHSFSVIE 427
Ornithorhynchus_anatinus TCICRHSVWVCSNQECPGECCLVTGQSHFKSFDNRYFTFSGVCQYLLARDCQDHSFSIVIE 479
Pavo_muticus      SCICRRGIWICSNGECPGECSTGQSHFKSFDNKHFTFSGICQYLFADKDCVENSFSVIE 425
Pavo_cristatus    SCICRRGIWICSNGECPGECSTGQSHFKSFDNKHFTFSGICQYLFADKDCVENSFSVIE 425
Gallus_gallus     SCICRHGIWICSNGECPGECSTGQSHFKSFDNKHFTFSGICQYLFADKDCVENSFSVIE 425
Anas_platyrhynchos SCICRRGIWICSNGECPGECSTGQSHFKTFTDNKYFTFSGICQYLFADKDCVENSFSVIE 436
Chelonia_mydas    SCICRRGIWICSNEECPGECSTGQSHFKSFDNRYFTFSGICQYLFADKCEENSFSVIE 440
Anolis_carolinensis SCICRHGLWICDNELCPGECFVTGQSHFKSFDNKHFTFSGICHYVFARDCEENKFSVFIE 423
Xenopus_tropicalis SCTCQNGAWECSNEDCPGECFVTGQSHFKSFDNKHFTFSGICQYLLATDAMDSTFSVIE 461
Rhinatrema_bivittatum TCICRHGLWVCSNEDCPGECFIAGQSHFKSFDNRYFTFSGICQYLLAKDTQDNSFAVTIE 431
Latimeria_chalumnae TCVCRRHGAWVCTNEDCPGDCFVTGQSHFKSFDNRYFTFSGVCQYLLAKDCQDNSFAVVIE 430
.....430.....440.....450.....460.....470.....480

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Homo_sapiens      TVQCADDRDAVCTRSVTVRLPGLHNSLVKLKHGAGVAMDGQDVQLPLLKGLDLRIQHTVTA 488
Pan_troglodytes   TVQCADDRDAVCTRSVTVRLRGLHNSLVKLKHGAGVAMDGQDVQLPLLKGLDLRIQHTVTA 488
Macaca_mulatta    TVQCADDPDAVCTRSVTVRLPGLHNSLVKLKHGGGVAMDGQDVQLPLLKGLDLRIQHSVTA 488
Callithrix_jacchus TVQCADDPDAVCTRSVTIRLPGLHNSLVKLKHGGGVAMDGQDVQLPLLKGLDLRIQHTVTI 488
Equus_caballus    TVQCADDPDAVCTRSVTIRLPSPHNSLVRLKHGGGVAMDGQDVQIPLLOGLDLRIQHTVMG 488
Pteropus_alecto   TVQCADDPDAVCTRSVTVRLPSPHNSLVKLKHGGGVAVDGDQDIQIPLLOGLDLRIQHTMMA 488
Mus_musculus      TVQCADDPDAVCTRSVSVRLSALHNSLVKLKHGGGAVGIDQDVQLPFLQGLDLRIQHTVMA 488
Bos_taurus        TVQCADDPDAVCTRSVTVRLPSPHGLLKLKHGGGVALDGDQDIQIPLLOGLDLRIQHTVTA 487
Ornithorhynchus_anatinus TIQCADDPDAVCTRSATVRLADQPHSVLKLKHGGGVSLDGDQDIQVPLVRGALRVQHTIMA 539
Pavo_muticus      TVQCADDPDAVCTRSASVRIQDMNSFIKMKHGGGISLNGQDIQIPLLOGLALRIQVVRT 485
Pavo_cristatus    TVQCADDPDAVCTRSASVRIQDMNSFIKMKHGGGISLNGQDIQIPLLOGLALRIQVVRT 485
Gallus_gallus     TVQCADDPDAVCTRSASVRIQDMNSLIKMKHGGGISLNGQDIQIPLHGIILRIQRLVGT 485
Anas_platyrhynchos TVQCADDPDAVCTRSASVRIQDMNSLIKMKHGGGISLNGQDIQIPLLOGLALRIQHMMRT 496
Chelonia_mydas    TVQCADDPDAVCTRSASVRLQDMNSIIMKHGGGVISLNGQDVQIPLTOGALRIQIRIMS 500
Anolis_carolinensis TVQCADDPDAVCTHSVFVQLQD-ENYTIKLKHGGGISLNGQDIQIPLPFMOGALHIWHTVMS 482
Xenopus_tropicalis TVQCADDIDAVCTRSASLRLLDMHNIITIKLKHGGGVSLDGDQDILLPLVQGLRIQTTVLS 521
Rhinatrema_bivittatum TVQCADDPDAVCTRSASVRLLDVQNVIIKLKHGGGVSVGDQDIQIPLTOGALRIQRTVMS 491
Latimeria_chalumnae TVQCADDPDSVCTRSALIRVQELVNSTIKLKHGGGAVSLDGDQDIQIPLMHGAVHIQHTVMA 490
.....490.....500.....510.....520.....530.....540

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	SVRLSYGEDLQMDWDGRGRLLVKLS	SPVYAGKT	CGLCGNYNGN	QGGDFLTP	SLAEPRVED	
Homo_sapiens	SVRLSYGEDLQMDWDGRGRLLVKLS	SPVYAGKT	CGLCGNYNGN	QGGDFLTP	SLAEPRVED	548
Pan_troglodytes	SVRLSYGEDLQMDWDGRGRLLVKLS	SPVYAGKT	CGLCGNYNGN	QGGDFLTP	SLAEPRVED	548
Macaca_mulatta	SVRLSYGEDLQMDWDGRGRLLVKLS	SPVYAGKT	CGLCGNYNGN	QGGDFLTP	SLAEPRVED	548
Callithrix_jacchus	SVHVSYGEDLQMDWDGRGRLLVKLS	SPVYSGKT	CGLCGNYNGN	QGGDFLTP	SLAEPRVED	548
Equus_caballus	SVRLSYGEDLQMDWDGRGRLLVKLS	PLYAGKT	CGLCGNYNGN	KGGDFLTP	PAGLVEALVEA	548
Pteropus_alecto	SVRLSYGEDLQVDWDGRGRLLVKLS	SPVYAGRM	CGLCGNYNGN	KGGDFLTP	PAGLVEPLVED	548
Mus_musculus	SVRLSYAEDLQMDWDGRGRLLVKLS	SPVYSGKT	CGLCGNYNGN	KGGDFLTP	PAGLVEPLVVD	548
Bos_taurus	SLQLNFGEDELQIDWDGRGRLLLKLS	SPVYAGKT	CGLCGNYNGN	QGGDFLTP	PAGLVEPLVEH	547
Ornithorhynchus_anatinus	SVRLTYGEDLQVDWDGRGRLLVKLS	PIYFDKT	CGLCGNYNGN	QGGDFLTP	SGLEEPSVEG	599
Pavo_muticus	SVRLTYGEDLQIDWDGHGELLVKVLS	LAYTERM	CGLCGNYNGN	QGGDFLTP	SGLVEVLLED	545
Pavo_cristatus	SVRLTYGEDLQIDWDGHGELLVKVLS	LAYTERM	CGLCGNYNGN	QGGDFLTP	SGLVEVLLED	545
Gallus_gallus	LVRLTYGEDLQIDWDGRGGLLVKVS	LAYTERM	CGLCGNYNGN	QGGDFLTP	SGLVEVLLED	545
Anas_platyrhynchos	SVRLTYGEDLQIDWDGHGELLVKLS	SPVYTERM	CGLCGNYNGN	QGGDFLTP	SGMVEVLLED	556
Chelonia_mydas	SVLLTYGEDLQIDWDGRGKLLVKLS	SPMYTDR	CGLCGNYNGN	EGGDFLTP	SGLVEALVED	560
Anolis_carolinensis	AVRLSYGENMQIDWDGHGSLIMKLS	SEYTERT	CGLCGNYNGD	QGGDFLTP	SGLVETRVED	542
Xenopus_tropicalis	AVRLTYKEDLQVDWDGHGKLLIKLS	PIYSGLI	SGLCGNYNGN	QGGDFLTP	SLIETSVED	581
Rhinatrema_bivittatum	AVRLAYKDDLQIDWDGHGKLLLVKS	PLYAGAT	CGLCGNYNGN	QGGDFLTP	SGLVEALVED	551
Latimeria_chalumnae	SVRLTYKEDLQIDWDGYGKLLLGPTY	SSKICGL	CGNYNGN	QKDDFLTP	SGLIEAHVED	550

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Homo_sapiens	FGNAWKLHGDCDQLQKHSDPCALNPRMTRFSEEEACAVLTS-PTFEACHRAVSPLPYLRLN	607
Pan_troglodytes	FGNAWKLHGDCDQLQKHSDPCALNPRMTRFSEEEACAVLTS-PTFEACHRAVSPLPYLRLN	607
Macaca_mulatta	FGNAWKLHADCDQLQKHSDPCALNPRMTRFSEEEACAVLTS-PTFEACHRAVSPLPYLRLN	607
Callithrix_jacchus	FGNAWKLHGDCDQLQKHSDPCALNPRMTRFAEEACAVLTS-PTFEACHRAVSPLPYLRLN	607
Equus_caballus	FGNSWKLRADCEDLQKHSDPCSLNPRLSRFAEEACALLTS-PTFEACHGAVGPGPYLRLN	607
Pteropus_alecto	FGNAWKLHGDCEDLRQPSDPCILNPRLTKFAEEACALLTS-SKFEACHHVAAPLPYLQN	607
Mus_musculus	FGNAWKLGDCSDLRROHSDPCSLNPRLTRFAEEACALLTS-SKFEACHHVAVSPLPYLQN	607
Bos_taurus	FGNSWKLRRADCEDLQEPSDPCSLNPRLTKFADACAILTS-PKFEACHSAVSPLPYLRLN	606
Ornithorhynchus_anatinus	FGNAWKLRDDCQNLQKQSDPCHLNPRLARFAEQACSVLTSSTKFEACHRLVSVAPYRRN	659
Pavo_muticus	FGNSWKLNADCDDLKQDNDPCNLNPRLAKYAEESCSVLIS-SVFEPCHREVSPTPYVKN	604
Pavo_cristatus	FGNSWKLNADCDDLKQDNDPCNLNPRLAKYAEESCSVLIS-SVFEPCHREVSPTPYVKN	604
Gallus_gallus	FGNSWKLNADCDDLKQDNDPCNLNPHLAKYAEESCSVLIS-SVFERCHHEVSPTPYVKN	604
Anas_platyrhynchos	FGNSWKLNADCDDLKQDNDPCNLNPHLAKYAEESCSVLMS-SVFEPCHREVSPPIPYMKN	615
Chelonia_mydas	FGNAWKLNGDCDDLKQSDPCSLNPRLAKYAEEDCSILMS-SMFEPCHHEVSPPIPYLKN	619
Anolis_carolinensis	FGNSWKLKGDQDQLQKQDSNSCSLSPOLAKFAENSCSLLLS-LLFQPCCHKVDPSPIYKN	601
Xenopus_tropicalis	FGNSWKLNGDCTDLMQDTPCNLNPKRARFSEEVCFALMD-SAFQSCHNEVNPAPYLKN	640
Rhinatrema_bivittatum	FGNSWKLTDGCADLVKQDADPCNLNPKRARYAEDACSLMS-PKFQPCHQEVNPSPYVKN	610
Latimeria_chalumnae	FGNSWKLNGDCLDVVKQSDPCSLNPKRARYAEELCSVLMS-AEFEPCHHEVNPAPYVKN	609
610.....620.....630.....640.....650.....660	

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Homo_sapiens	CRYDVCSCSDGRECLCGALASYAAACAGRGVVRVAWREPGRCELNCPKGOVYLQCGTPCNL	667													
Pan_troglodytes	CRYDVCSCSDGRECLCGALASYAAACAGRGVSVAWREPGRCELNCPKGOVYLQCGTPCNL	667													
Macaca_mulatta	CRYDVCSCSDGRECLCGALASYAAACAGRGVVRVAWREPGRCELCCKPGOVYLOCGTIPCNL	667													
Callithrix_jacchus	CRYDVCSCSDGRECLCGALASYAAACAGRGVRIAWAREPGRCELNCPKGOVYLQCGTIPCNL	667													
Equus_caballus	CRYDVCSCSDGRDCLCGAVANYAAAACARKGVHIGWREPGFCALSCPQGOVYLQCGTIPCNR	667													
Pteropus_alecto	CHYDVCSCSNGRDCLCNAVANYAAAACARKGVHVAWREPSFICALSCPQGOVYLQCGI PCNL	667													
Mus_musculus	CRYDVCSCSDSRDCLCNAVANYAAECARKGVHIGWREPGFCALGCPQGOVYLQCGNSCNL	667													
Bos_taurus	CRYDVCACSDGRDCLCDAVANYAAAACARRGVHVWGWRPFSCALSCTHGOVYQQCGTIPCNL	666													
Ornithorhynchus_anatinus	CHYDVCSCADGPGLCTAIAAYAAAAACAORGVVVDWREPGFCAVSPAGRVFQSGCTPCNQ	719													
Pavo_muticus	CHFDVCSCSSGKDCLCSSITNYATACARKNVVVQWRAPDFCPMTCPDGOIYQQCGTILCNQ	664													
Pavo_cristatus	CHFDVCSCSSGKDCLCSSITNYATACARKNVVVQWRAPDFCPMTCPDSOIYQQCGTILCNQ	664													
Gallus_gallus	CHFDVCSCSSGKDCLCSSITANYATACAMKNVVVQWRAPDFCSMTCPGEIOIYQQCGTILCNQ	664													
Anas_platyrhynchos	CRFDVCSCSNGKDCLCSAIANYATACARKNVLVQWREPNLCPMTCPGEOIYRCGTIPCNQ	675													
Chelonia_mydas	CRYDVCSCSDGKDCLCAAVSYATACARKGVLIIEWREPDLFCMSISEGOIYQQCGTIPCNQ	679													
Anolis_carolinensis	CHFDVCSCSDGKDCLCAAVSTYALACARRNVLINWRKLDFCAFRCPEGOIYQQCGSPCNQ	661													
Xenopus_tropicalis	CRYDVCSCSNGKECLCSALSTYAAACSRKGILIDWRTPEFCPIQCSEGGKIYQQCGSPCNQ	700													
Rhinatrema_bivittatum	CRYDVCSCSTDGRECLCSAVSTYATACARKGVLIAWRDPDICSMSCSEGOIYQQCGTIPCNQ	670													
Latimeria_chalumnae	CRYDVCACSDGKECLCSAVSTYATACSRKGVLINWRTSNFCAMKCSKDQVYQLCGTIPCNQ	669													
670.....680.....690.....700.....710.....720														

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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Homo_sapiens      TCRSLSPDEECNEACLEGCFPPGLYMDERGDVCPKAQCPCYDGEIFQPEDIFSDHHT 727
Pan_troglodytes   TCRSLSPDEECNEACLEGCFPPGLYMDERGDVCPKAQCPCYDGEIFQPEDIFSDHHT 727
Macaca_mulatta    TCRALSPDEECNEACLEGCFPPGLYMDERGDVCPKAQCPCYDGEIFQPEDIFSDHHT 727
Callithrix_jacchus TCRSLSPDEECSEDCLEGCFPPGLYMDERGDVCPKAQCPCYDGEIFQPEDIFSDHHT 727
Equus_caballus    TCHSLSHPDDEECDEVCLGCFPPGLYLDERGDVCPKAQCPCYDGEIFQPEDIFSDHHT 727
Pteropus_alecto   TCRSLSHPDDEECNEVCLGCFPPGLYLDERGDVCPKAQCPCYDGEIFQPEDIFSDHHT 727
Mus_musculus      TCRSLSLPDDEECSEVCLGCFPPGLYQDERGDVCPKAQCPCYDGEIFQPADIFSDHHT 727
Bos_taurus        TCRSLSHPDDEECTEVCLGCFPPGLFLDETGSCVCPKAQCPCYDGEIFQPEDIFSDHHT 726
Ornithorhynchus_anatinus TCRSLSHPDGDCEDLCLGCFPPGLFANERGDVCPRAQCPSCYDGEIFQPEDVFSDHHT 779
Pavo_muticus      TCRSLSPDENCDEFCEMGCYCPPGHYLDENEKCVPKSQSCYDGEIFQPEDIFSDHHT 724
Pavo_cristatus    TCRSLSPDENCDEFCEMGCYCPPGHYLDENEKCVPKSQSCYDGEIFQPEDIFSDHHT 724
Gallus_gallus     TCRSLSPDENCDEFCEMGCYCPPGHYLDSEKCVPKSQSCYDGEIFQPEDIFSDHHT 724
Anas_platyrhynchos TCRSLSPDENCDEFCEMGCYCPPGHYLDSEKCVPKSQSCYDGEIFQPEDVFSDHHT 735
Chelonia_mydas    TCRSLSPDVGCNEFCMEGCYCPHGQYIDEHGDVCPKSCYDGEIFQPDVFSDHHT 739
Anolis_carolinensis TCRSLSPDTCSEICMEGCYCPDGLYLDEQGGCLPKSQPCYDGEIFQPDVFSDHHT 721
Xenopus_tropicalis TCRSLSHPDVDCREFCEMGCYCPPGLYTDHEDGECVPSKSDSCYDGEIFQPDVFSNHHT 760
Rhinatrema_bivittatum TCRSLSPDADCEFCMEGCYCPPGLYTDHEDGECVPSKSDSCYDGEIFQPDVFSNHHT 730
Latimeria_chalumnae TCRSLSPFEPACKKEVCEMGCYCPPGLFAMEDGECVPSKQACAYDGEIYQPDVFSNHHT 729
.....730.....740.....750.....760.....770.....780

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Homo_sapiens      MCYCEDGFMHCTMSGVPGSLLPDAVLS SPLSHRSKRSLSCRPPMVKLVC PADNLR AEGLE 787
Pan_troglodytes   MCYCEDGFMHCTMSGVPGSLLPDAVLS SPLSHRSKRSLSCRPPMVKLVC PADNLR AEGLE 787
Macaca_mulatta    MCYCEDGFMHCTMSGVPGSLLPDAVLS SPLSHRSKRSLSCRPPMVKLVC PADNLR AEGLE 787
Callithrix_jacchus VCYCEGDFMHCMTMSGVPGSLLPDAVLS SPLSHRSKRSLSCRPPMVKLVC PADNLR AEGLE 787
Equus_caballus    MCYCEDGFMHCTMSGVPGSLLPDAVLS SPLSHRSKRSLSCRPPMVKLVC PADNLR AEGLE 787
Pteropus_alecto   VCYCEDGFMHCTMSGVPGSLLPDAVLS SPLSHRSKRSLSCRPPMVKLVC PADNLR AEGLE 787
Mus_musculus      MCYCEDGFMHCTMSGVPGSLLPDAVLS SPLSHRSKRSLSCRPPMVKLVC PADNLR AEGLE 787
Bos_taurus        MCYCEDGFMHCTMSGVPGSLLPDAVLS SPLSHRSKRSLSCRPPMVKLVC PADNLR AEGLE 786
Ornithorhynchus_anatinus LCYCEDGFMHCTMSGVPGSLLPDAVLS SPLSHRSKRSLSCRPPMVKLVC PADNLR AEGLE 839
Pavo_muticus      MCYCEDGFMHCTMSGVPGSLLPDAVLS SPLSHRSKRSLSCRPPMVKLVC PADNLR AEGLE 784
Pavo_cristatus    MCYCEDGFMHCTMSGVPGSLLPDAVLS SPLSHRSKRSLSCRPPMVKLVC PADNLR AEGLE 784
Gallus_gallus     MCYCEDGFMHCTMSGVPGSLLPDAVLS SPLSHRSKRSLSCRPPMVKLVC PADNLR AEGLE 784
Anas_platyrhynchos ICYCEGLMHCTMSGVPGSLLPDAVLS SPLSHRSKRSLSCRPPMVKLVC PADNLR AEGLE 795
Chelonia_mydas    MCYCEGLMHCTMSGVPGSLLPDAVLS SPLSHRSKRSLSCRPPMVKLVC PADNLR AEGLE 799
Anolis_carolinensis MCYCEGLMHCTMSGVPGSLLPDAVLS SPLSHRSKRSLSCRPPMVKLVC PADNLR AEGLE 781
Xenopus_tropicalis MCYCEGLMHCTMSGVPGSLLPDAVLS SPLSHRSKRSLSCRPPMVKLVC PADNLR AEGLE 819
Rhinatrema_bivittatum MCYCEGLMHCTMSGVPGSLLPDAVLS SPLSHRSKRSLSCRPPMVKLVC PADNLR AEGLE 789
Latimeria_chalumnae ICYCEGLMHCTMSGVPGSLLPDAVLS SPLSHRSKRSLSCRPPMVKLVC PADNLR AEGLE 789
.....790.....800.....810.....820.....830.....840

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Homo_sapiens      CTKTCQNYDLECMMSGCVSGCLCPPGMVRHENRCVALERCPCFHQGEYAPGETVKIGCN 847
Pan_troglodytes   CTKTCQNYDLECMMSGCVSGCLCPPGMVRHENRCVALERCPCFHQGEYAPGETVKIGCN 847
Macaca_mulatta    CTKTCQNYDLECMMSGCVSGCLCPPGMVRHENRCVALERCPCFHQGEYAPGETVKIGCN 847
Callithrix_jacchus CTKTCQNYDLECMMSGCVSGCLCPPGMVRHENRCVALERCPCFHQGEYAPGETVKIGCN 847
Equus_caballus    CTKTCQNYDLECMMSGCVSGCLCPPGMVRHENRCVALERCPCFHQGEYAPGETVKIGCN 847
Pteropus_alecto   CTKTCQNYDLECMMSGCVSGCLCPPGMVRHENRCVALERCPCFHQGEYAPGETVKIGCN 847
Mus_musculus      CTKTCQNYDLECMMSGCVSGCLCPPGMVRHENRCVALERCPCFHQGEYAPGETVKIGCN 847
Bos_taurus        CTKTCQNYDLECMMSGCVSGCLCPPGMVRHENRCVALERCPCFHQGEYAPGETVKIGCN 846
Ornithorhynchus_anatinus CMRTTCQNYDLECMMSGCVSGCLCPPGMVRHENRCVALERCPCFHQGEYAPGETVKIGCN 899
Pavo_muticus      CTKTCQNYDLECMMSGCVSGCLCPPGMVRHENRCVALERCPCFHQGEYAPGETVKIGCN 844
Pavo_cristatus    CTKTCQNYDLECMMSGCVSGCLCPPGMVRHENRCVALERCPCFHQGEYAPGETVKIGCN 844
Gallus_gallus     CTKTCQNYDLECMMSGCVSGCLCPPGMVRHENRCVALERCPCFHQGEYAPGETVKIGCN 844
Anas_platyrhynchos CTKTCQNYDLECMMSGCVSGCLCPPGMVRHENRCVALERCPCFHQGEYAPGETVKIGCN 855
Chelonia_mydas    CTKTCQNYDLECMMSGCVSGCLCPPGMVRHENRCVALERCPCFHQGEYAPGETVKIGCN 859
Anolis_carolinensis CMKTCQNYDLECMMSGCVSGCLCPPGMVRHENRCVALERCPCFHQGEYAPGETVKIGCN 841
Xenopus_tropicalis CTKTCQNYDLECMMSGCVSGCLCPPGMVRHENRCVALERCPCFHQGEYAPGETVKIGCN 879
Rhinatrema_bivittatum CARTCQNYDLECMMSGCVSGCLCPPGMVRHENRCVALERCPCFHQGEYAPGETVKIGCN 849
Latimeria_chalumnae CTKTCQNYDLECMMSGCVSGCLCPPGMVRHENRCVALERCPCFHQGEYAPGETVKIGCN 849
.....850.....860.....870.....880.....890.....900

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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Homo_sapiens	TCVCQDRKWNCTDHVCDATCSTIGMAHYLTFDGLKYLFPGECQYVLVDYCGS---NPGT	904
Pan_troglodytes	TCVCRDRKWNCTDHVCDATCSMIGMAHYLTFDGLKYLFPGECQYVLVDYCGS---NPGT	904
Macaca_mulatta	TCVCRDRKWNCTDHVCDATCSTIGMAHYLTFDGLKYMFPGECQYVLVDYCG---NPGT	904
Callithrix_jacchus	TCVCRDRKWNCTDHMCATCSTIGMAHYLTFDGLKYMFPGECQYVLVDYCD---NPGT	904
Equus_caballus	TCVCRDRKWNCTDHVCDATCSAIGMAHYLTFDGLKYMFPGECQYILVDYCGS---NSGT	904
Pteropus_alecto	TCVCRDRKWNCTDHVCDATCSTIGMAHYLTFDGLKYMFPGECQYVLVDYCGS---NPGT	904
Mus_musculus	TCVCRERKWNCTNHVCDATCSAIGMAHYLTFDGLKYLFPGECQYVLVDYCGS---NPGT	904
Bos_taurus	SCVCQDRKWNCTDHVCDASALGLAHYFTFDGLKYLFPGECQYVLVDHCGS---NPGT	903
Ornithorhynchus_anatinus	ICVCRARWECTDHVCDATCSALGPAHYLTFDGLHYLFSGVCQYVLAQDYCGGP---DPGT	957
Pavo_muticus	TCVCRGRKWECKNTCDGTCTVIGTAHYLTFDGMKYKFPGECQYVLVDYCFCKNN---SGT	901
Pavo_cristatus	TCVCRGRKWECKNTCDGTCTVIGTAHYLTFDGMKYKFPGECQYVLVDYCFCKNN---SGT	901
Gallus_gallus	TCVCRGRKWECKNTCDGTCTVIGTAHYLTFDGMKYKFPGECQYVLVDYCFCKNN---SGT	901
Anas_platyrhynchos	TCVCRGRKWECKTNSCDGTCTVIGTAHYLTFDGLKYRFPGDCQYVLAQDYCFCKDD---SGT	912
Chelonia_mydas	TCVCRGRMWDCDNDVCDATCSVIGTAAYSFTDGLKYRFPGDCQYVLVDYCADE---SGT	916
Anolis_carolinensis	TCVCRGQKWECKENICDGTCSVIGTAHYLTFDGLKYKFPGNCQYVLVDYCDNDVASGT	901
Xenopus_tropicalis	TCVCENRKWKCTENICDATCSAIGVSHYLTFDGFRYKFPGDCQYVLAQDYCGGV---TGT	936
Rhinatrema_bivittatum	TCTCRNRKWNCTDNCVCDGTCSVIGMAHYLTFDGLQYTFPGDCQYVLVDYCSGV---SGT	906
Latimeria_chalumnae	TCVCHNRKWECKTENVCDSCKTIGEAHYLTFDGMKYTFPGYCYVLVDYCSNH---DGT	906
910.....920.....930.....940.....950.....960	

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Homo_sapiens	FRILVGNKGCSHP SVKCKKRVITILVEGGEIELFDGEVNVKRP MKDETHFEVVESGRYIIL	964
Pan_troglodytes	FRILVGNKGCSHP SVKCKKRVITILVEGGEIELFDGEVNVKRP MKDETHFEVVESGRYIIL	964
Macaca_mulatta	FRILVGNKGCSHP SVKCKKHVTILVEGGEIELFDGEVNVKRP MKDETHFEVVESGRYIIL	964
Callithrix_jacchus	FRILVGNEGCSYP SVKCKKRVITILVEGGEIELFDGEVNVQRP MKDETHFEVVESGRYIIL	964
Equus_caballus	FRILVANEGCVYP SVKCKKRVITILVEEGEIELFNGEVVKVRP MRDSDHFEVVESGRYIIL	964
Pteropus_alecto	FRILVANEECGYP SVKCKKRVITILVEGGEIELFDGEVNVKRP MKDETHFEVVESGRYIIL	964
Mus_musculus	FQILVGNEGCSYP SVKCRKRVTILVDGGELELFDGEVNVKRP LRDESHFEVVESGRYVIL	964
Bos_taurus	FRVLVGNEGCSVP SLKCRKRITILVEGGEIELFDGEVNVKTP MKDETHFEVVESGRYITV	963
Ornithorhynchus_anatinus	FRILVANDGCGFAASKNRRVITVLFAGGEIELSNGEVVVTKPPSDEASLEVLVESGRYIIL	1017
Pavo_muticus	FRILISNEGCSFTGEKCTKRVIIILYRNGEIELFNNGNVNIKVSPKDS DLVEMKSGRYYII	961
Pavo_cristatus	FRILISNEGCSFTGEKCTKRVIIILYRNGEIELFNNGNVNIKVSPKDS DLVEMKSGRYYII	961
Gallus_gallus	FRILISNEGCSFTGEKCSKRVIIILYKSGEIELLNGNVNIKVPKDS GDLEVEMKSGRYYII	961
Anas_platyrhynchos	FRILISNEGCGFTGEKCSKRVIIILYKSGEIELFSGNVNIKVPKDSNDLEVEMKSGRYYII	972
Chelonia_mydas	FRVLISNEGCGFTGEKCTKKITILFDNGEIELFSGNVDIKKPLRDETINVEVLKSGRYYIL	976
Anolis_carolinensis	FRILVANEGCGFTGEKCTKRITILIDSGEIELYNGNVNILTSPREANFEVLKSGRYYIL	961
Xenopus_tropicalis	FRILVGNEGCGFSGEKCTKRITILFRNGEIELTNEQIHKKPLSDETSFVDVLKSGNYFII	996
Rhinatrema_bivittatum	FRVLIENEGCGFSEKCSKRILILFGGGEIELFNAMVNIKKPLADESDFEVQSSGRYYIL	966
Latimeria_chalumnae	FRILLENDGCGLLGEKCSKHITVLYDGGEIELSNRKVKIIPLRDESDEILRSQGYFII	966
970.....980.....990.....1000.....1010.....1020	

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Homo_sapiens	LLGKALS	VVWDRHLS	ISVVLKQTYQ	EKVCGLCGN	FDDGIQ	NNDLTSS	NLOVEED	PVDFGNS	1024			
Pan_troglodytes	LLGKALS	VVWDRHLS	ISVVLKQTYQ	EKVCGLCGN	FDDGIQ	NNDLTSS	NLOVEED	PVDFGNS	1024			
Macaca_mulatta	LLGKAIS	VVWDRHLS	ISVVLKQTYQ	EKVCGLCGN	FDDGIQ	NNDLTSS	NLOVEED	PVDFGNS	1024			
Callithrix_jacchus	LLGKALS	VVWDRHLS	ISVVLKQTYQ	EKVCGLCGN	FDDGIQ	NNDLTSS	NLOVEED	PVDFGNS	1024			
Equus_caballus	LVNKALS	VVWDHHLGIS	VVLKQTYQ	EQVCGLCGN	FDDGIQ	NNDFTSS	RLOVEEN	PVDFGNS	1024			
Pteropus_alecto	LLGKALS	VVWDRHLS	ISVVLKQTYQ	EQVCGLCGN	FDDGIQ	NNDFTSS	NLRVEED	PVDFGNS	1024			
Mus_musculus	LLGQALS	VVWDHHLGIS	VVLKHTYQ	EQVCGLCGN	FDDGIQ	NNDFTSS	LOVEED	PVDFGNS	1024			
Bos_taurus	LLGKALS	VVWDGHLAVS	VFLKRTYQ	ERVCGLCGN	FDDGVQ	NNDLTSS	NLOVEEN	PVDFGNS	1023			
Ornithorhynchus_anatinus	LLGPGMSLT	WDRNMGVS	VILKQTHQ	GRVCGLCGN	FDDGIQ	NNDLTSS	NLOVEED	PVDFGNS	1077			
Pavo_muticus	LLSKSIT	VTWDLAMGVS	VILKANFND	RVCGLCGN	FDDGIQ	NNDLTSS	NEHLEVD	PVDFGNS	1021			
Pavo_cristatus	LLSKSIT	VTWDLAMGVS	VILKANFND	RVCGLCGN	FDDGIQ	NNDLTSS	NEHLEVD	PVDFGNS	1021			
Gallus_gallus	LLSKSIT	VTWDLAMGVS	VILKADFND	RVCGLCGN	FDDGIQ	NNDLTSS	NEHLEVD	PVDFGNS	1021			
Anas_platyrhynchos	LLGNSIS	VTWDLAMGVS	VILKANFKD	QVCGLCGN	FDDGIQ	NNDLTSS	NEHLEVD	PVDFGNS	1032			
Chelonia_mydas	LLKGKIS	VTWDLAMGVS	VILKEHFKD	QVCGLCGN	FDDGIQ	NNDLTSS	SKHLEVD	PVDFGNS	1036			
Anolis_carolinensis	LLSRLIS	LIWDQDMGIS	VILKENYKD	QVCGLCGN	FDDGIQ	NNDLTSS	RKOLEVD	PVDFGNS	1021			
Xenopus_tropicalis	LLGNQMS	VTWDKGM	RVYVILKET	YRDKVCG	LCGNFDDGIQ	NNDLTSS	NQIEMD	PVDFGNS	1056			
Rhinatrema_bivittatum	LLGKSIS	LAWDRAMS	VS	VTVKEMFRD	QVCGLCGN	FDDGVQ	NNDLTSS	NQIEMD	PVDFGNS	1026		
Latimeria_chalumnae	MLGKGIS	ITWDLTTR	VTVHLKQY	YRGKVCGL	CGNFDDGIQ	NNDLTSS	NQIEMD	PVDFGNS	1026			

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Homo_sapiens      WKVSSQCADTRKVPLDSSP--ATCHNNIMKQTMVDSSCRILTSDFVQDCNKLVDPEPYLD 1082
Pan_troglodytes   WKVSSQCADTRKVPLDSSP--ATCHNNIMKQTMVDSSCRILTSDFVQDCNKLVDPEPYLD 1082
Macaca_mulatta    WKVSSQCADTRKVPLDSSP--ATCHNNIMKQTMVDSSCRILTSDFVQDCNKLVDPEPYLD 1082
Callithrix_jacchus WKVSSQCADTRRVPLDSSP--ATCRNNIMKQTMVDSSCRILTSDFVQDCNKLVDPEPYLD 1082
Equus_caballus    WKVSPQCADTRKVPLDSSP--ASCHNNIMKQTMVDSSCRILTSDFVQDCNKLVDPEPYLD 1082
Pteropus_alecto   WKVSPQCADTRKVSLDSSP--ATCHNNIRKQTMVDSSCRILTSDFVQDCNKLVDPEPYLD 1082
Mus_musculus      WKVSSQCADTRKLSLDVSP--ATCHNNIMKQTMVDSSACRILTSDFVQDCNKLVDPEPYLD 1082
Bos_taurus        WKVSPQCADTQKVRLDSAP--AICHNVNMKQTMVDSSCRVLTSDVFRECNRNLVNPEPYLD 1081
Ornithorhynchus_anatinus WKVTPQCADAPRTF--DSSL--ATCRDNVMKQTMVDSSCRILTSDFVQDCNKLVDPEPYLD 1134
Pavo_muticus      WKVNTYCADVEKFNWEQALMSPLCNDNALKQVMVETSCNILSGGLFEECKKLVNPEPYLD 1081
Pavo_cristatus    WKVNTYCADVEKFNWEQALMSPLCNDNALKQVMVETSCNILSGGLFEECKKLVNPEPYLD 1081
Gallus_gallus     WKVNTYCADVEKFNWEQALVSPCLCNDNALKQVMVETSCSILSGGLFEECKKLVNPEPYLD 1081
Anas_platyrhynchos WKVNTYCADVKKHNQEQALVFPLCNGNVLKQVMVETSCSILSGGLFEECKKLVDPEPYLD 1092
Chelonia_mydas    WKVNPQCADVRKLPQGGTMTTSLCNDNVVKQMMVETSCSILTSEIFKECKKLVNPEPYMD 1096
Anolis_carolinensis WKINSQCADVRK---EQTLASSLCNGNVVKQVMVETACSILTSELFNECKKMIDPEPYMD 1078
Xenopus_tropicalis WKVNPLCADAAKFGAVSPL--SLCKDNLMKQMAAENACNLMGDLFAECAKVVNPEPYWE 1114
Rhinatrema_bivittatum WKVNFQCADASKFSAGSSV--SACSSNVMKQMMVENACNLLIGDLFKECAKLVNPEPYWE 1084
Latimeria_chalumnae WKVNSGCADVSEFP-----SLCNGNVFKQVAENSCNILVSDIFQECTQLIDPEPYWE 1079
.....1090.....1100.....1110.....1120.....1130.....1140

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* * : : * : * * * * : : : : * : * : * * * : * * * : * *
Homo_sapiens      VCIYDTCSCESIGDCACFCDTIAAYAHVCAQHKGKVVWTRTATLCPQSCSEERNLRENGYEC 1142
Pan_troglodytes   VCIYDTCSCESIGDCACFCDTIAAYAHVCAQHKGKVVWTRTATLCPQSCSEERNLRENGYEC 1142
Macaca_mulatta    VCIYDTCSCESIGDCACFCDTIAAYAHVCAQHKGKVVWTRTATLCPQSCSEERNLRENGYEC 1142
Callithrix_jacchus ACIYDTCSCESIGDCTCFCDTIAAYAHVCAQHKGKVVWTRTATLCPQSCSEERNLRENGYEC 1142
Equus_caballus    VCIYDTCSCESIGDCACFCDTIAAYAHVCAQHKGKVVWTRTATLCPQSCSEERNLRENGYEC 1142
Pteropus_alecto   VCIYDTCSCESIGDCACFCDTIAAYAHVCAQHKGKVVWTRTATLCPQSCSEERNLRENGYEC 1142
Mus_musculus      ICIYDTCSCESIGDCACFCDTIAAYAHVCAQHKGKVVWTRTATLCPQSCSEERNLRENGYEC 1142
Bos_taurus        VCIYDTCSCESIGDCSCFCDTIAAYAHVCAQHKGKVVWTRTATLCPQSCSEERNLRENGYEC 1141
Ornithorhynchus_anatinus ACIYDTCSCDSVGDGCGFCDAVAAAHVCAQHKGKVVWTRTATLCPQSCSEERNLRENGYEC 1194
Pavo_muticus      ICMYDTCACESTGDCACFCDAIAAYAHVCAQKGVIVHWRSPDLCPQSCSEENLNKQELDYQC 1141
Pavo_cristatus    ICMYDTCACESTGDCACFCDAIAAYAHVCAQKGVIVHWRSPDLCPQSCSEENLNKQELDYQC 1141
Gallus_gallus     ICMYDTCACESIGDCACFCDAIAAYAHVCAQKGVIVHWRSPDLCPQSCSEENLNKQELDYQC 1141
Anas_platyrhynchos ICMYDTCACESTGDCACFCDAIAAYAHVCAQKGVIVHWRSPDLCPQSCSEENLNKQELDYQC 1152
Chelonia_mydas    ICMYDTCACESIGDCACFCDAIATYAHICAQKGVIVHWRSPDLCPQSCSEENLNKQELDYQC 1156
Anolis_carolinensis ICMYDTCACESIGDCACFCDAIAAYAHVCAQKGVIVHWRSPDLCPQSCSEENLNKQELDYQC 1138
Xenopus_tropicalis ICTYDTCCTCESAGDCACFCDSLAAYAHVCAQKGVIVHWRSPDLCPQSCSEENLNKQELDYQC 1174
Rhinatrema_bivittatum ICTYDTCACESIGDCACFCDSVAFAAHVCAQKGVIVHWRSPDLCPQSCSEENLNKQELDYQC 1144
Latimeria_chalumnae ICTYDTCACESIGDCACFCNAVAAYAQECTQGGIIVQWRSNNLCPPLSCOEKNKAEPEYEC 1139
.....1150.....1160.....1170.....1180.....1190.....1200

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***** * . ** **** : : : : * : * : * : * : * : * : * :
Homo_sapiens      EWRYNSCAPACQVTCQHPEPLACPVCVEGCHAHCPPGKILDELLQTCVDPEDCPVCEVA 1202
Pan_troglodytes   EWRYNSCAPACQVTCQHPEPLACPVCVEGCHAHCPPGKILDELLQTCVDPKDCPVCEVA 1202
Macaca_mulatta    EWRYNSCAPACRVTCQHPEPLACPVCVEGCHAHCPPGKILDELLQTCVSPEDCPVCEAA 1202
Callithrix_jacchus EWRYNSCAPACRITCQHPEPLACPVCVEGCHAHCPPGKILDELLQTCVNPEDCPVCEVA 1202
Equus_caballus    EWRYNSCAPACPVTCQHPEPLACPVCVEGCHAHCPPGKILDELLQTCVDPEDCPVCEVA 1202
Pteropus_alecto   EWRYNSCAPACPVTCQHPEPLACPVCVEGCHAHCPPGKILDELLQTCVDPEDCPVCEVA 1202
Mus_musculus      EWRYNSCAPACPVTCQHPEPLACPVCVEGCHAHCPPGKILDELLQTCVDPEDCPVCEVA 1202
Bos_taurus        EWRYNSCAPACPVTCQHPEPLACPVCVEGCHAHCPPGKILDELLQTCVNPEDCPVCEVA 1201
Ornithorhynchus_anatinus EWRYNSCAPACPVTCQHPEPLACPVCVEGCHAHCPPGKILDELLQTCVNPEDCPVCEVA 1254
Pavo_muticus      EWRYNSCGPACPVTCQHPEPLACPVCVEGCHAHCPPGKILDELLQTCVNPEDCPVCEVA 1201
Pavo_cristatus    EWRYNSCGPACPVTCQHPEPLACPVCVEGCHAHCPPGKILDELLQTCVNPEDCPVCEVA 1201
Gallus_gallus     EWRYNSCGPACPVTCQHPEPLACPVCVEGCHAHCPPGKILDELLQTCVNPEDCPVCEVA 1201
Anas_platyrhynchos EWRYNSCGPACPVTCQHPEPLACPVCVEGCHAHCPPGKILDELLQTCVNPEDCPVCEVA 1212
Chelonia_mydas    EWRYNSCGPACPVTCQHPEPLACPVCVEGCHAHCPPGKILDELLQTCVNPEDCPVCEVA 1216
Anolis_carolinensis EWRYNNGSACPVTCQHPEPLACPVCVEGCHAHCPPGKILDELLQTCVNPEDCPVCEVA 1198
Xenopus_tropicalis EWRYNNGSACPVTCQHPEPLACPVCVEGCHAHCPPGKILDELLQTCVNPEDCPVCEVA 1234
Rhinatrema_bivittatum EWRYNNGSACPVTCQHPEPLACPVCVEGCHAHCPPGKILDELLQTCVNPEDCPVCEVA 1204
Latimeria_chalumnae EWRYNACAPACPVTCQHPEPLACPVCVEGCHAHCPPGKILDELLQTCVNPEDCPVCEVA 1199
.....1210.....1220.....1230.....1240.....1250.....1260

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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      .  .  *: : *. * * * * *
Homo_sapiens      GRRFASGKKVTLNPSDPEHCQICHCDVNLTCACQEPGGLVVPPTDAPVSPPTTLVVED- 1261
Pan_troglodytes   GRRFASGKKVTLNPSDPEHCQICHCDVNLTCACQEPGGLVVPPTDGPVSPPTTPYVED- 1261
Macaca_mulatta    GRRFASGKKVTLNPSDPEHCQICHCDVNLTCACQEPGGLVVPPTDAPVSPPTTPYVED- 1261
Callithrix_jacchus GRRLASGKKVTLNPSDPEHCQICHCDVNLTCACQEPGLVMPPTDAPVSPPTTPYVED- 1261
Equus_caballus    GQRLAPGRKVTLNPSDPQHCHQICHCDGVSLMCEACGKAGVLEVPPTTEGPVGPPTTAYVED- 1261
Pteropus_alecto   GQRLAPGKKITLNPSPDKHCQICHCDGVNLTCACGEPGGLDVPPTEVPGSPPTTPYVED- 1261
Mus_musculus      GRRRAPGKKITLNPSPDPAHCNCHCDGVNLTCACQEPGGLVAPPTDAPVSPPTTPYVED- 1261
Bos_taurus        GRRLASGKKVTLNPGDPEHCQICHCDGVSLTCACKEPGG--PPPTTEGPVIPTTPYVED- 1258
Ornithorhynchus_anatinus GRRLAAGKRIVLNREDPGLCOMCHCDGGLNLTCEACLAPGPATAPPPTSTPTTEEQEEEEEE 1314
Pavo_muticus      DVKIPHGRRIVLSRDDPQHCHQICHCDGVNLTCACQEPGGLVVPPTDAPVSPPTTPYVED- 1252
Pavo_cristatus    DVKIPHGRRIVLSRDDPQHCHQICHCDGVNLTCACQEPGGLVVPPTDAPVSPPTTPYVED- 1252
Gallus_gallus     GVKIPHGRRIVLSRDDPQHCHQICHCDGVNLTCACQEPGGLVVPPTDAPVSPPTTPYVED- 1252
Anas_platyrhynchos DVKIPHGRRIVLNREDPQHCHQICHCDGVNLTCACQEPGGLVVPPTDAPVSPPTTPYVED- 1263
Chelonia_mydas    GARIPHGKTVVLNKKDDDEHCHSCHCEGKNLTCSACESKEK----EEEEIITSTPASTEET- 1271
Anolis_carolinensis GHRVPHGKRIILNPEDTHLCKSCHCVGNLTCHACSPKE----SAEILPTTTIAPED-- 1251
Xenopus_tropicalis GHTVPHGRKIILNHDDPQRCOLCHCEGKNLQCNACEISVITTVAPTTLVVDITPTTEVV- 1293
Rhinatrema_bivittatum GRRIPHGKKIILNRDDPERCHSCHCEGNRLCETCVIPATLLPTPAATELPLSPPTPEEI- 1263
Latimeria_chalumnae GRHIPHGKMIILNRDDPDHCHCHCEGNTLSCSPCKDMTTLVPPVVSSTTTTTTTTATP- 1258
.....1270.....1280.....1290.....1300.....1310.....1320

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      * : : : * : : : * : : : * : : : * : : : * : : :
Homo_sapiens      -----ISEPPLHDFYCSRLLDLVFLLDGSSRLSEAEFEVLKAFVVDMMERLRISQKWVRV 1316
Pan_troglodytes   -----ISEPPLHDFYCSRLLDLVFLLDGSSRLSEAEFEVLKAFVVDMMERLRISQKWVRV 1316
Macaca_mulatta    -----ISEPPLHDFYCSRLLDLVFLLDGSSRLSEAEFEVLKAFVVDMMERLRISQKWVRV 1316
Callithrix_jacchus -----VSEAPLHDFYCSRLLDLVFLLDGSSRLSEAEFEVLKAFVVDMMERLRISQKWVRV 1316
Equus_caballus    -----TPEPPLHDFYCSKLLDLVFLLDGSSKLSEAEFEVLKAFVVGMMERLHISQKRIRV 1316
Pteropus_alecto   -----TPEPPLHDFYCSKLLDLVFLLDGSSKLSEAEFEVLKAFVVGMMERLHISQKRIRV 1316
Mus_musculus      -----TPEPPLHDFYCSKLLDLVFLLDGSSKLSEAEFEVLKAFVVGMMERLHISQKRIRV 1316
Bos_taurus        -----IPEPPLHDFYCSKLLDLVFLLDGSSKLSEADFETLKAFFVVGMMERLHISQKRIRV 1313
Ornithorhynchus_anatinus EEEGASPEPPLHDFYCSKLLDLVFLLDGSSKLSEADFETLKAFFVVGMMERLHISQKRIRV 1374
Pavo_muticus      -----DREFAPSEYSCSKMMDLAFLVDGSSKLSEEDFEQLKTFITGMMKKLHISQKKIRV 1307
Pavo_cristatus    -----DREFAPSEYSCSKMMDLAFLVDGSSKLSEEDFEQLKTFITGMMKKLHISQKKIRV 1307
Gallus_gallus     -----DREFAPSEYSCSKMMDLAFLVDGSSKLSEEDFEQLKTFITGMMKKLHISQKKIRV 1307
Anas_platyrhynchos -----DIELPPSEYSCSKMMDLAFLVDGSSKLSEEDFEQLKTFITGMMKKLHISQKKIRV 1318
Chelonia_mydas    -----DIDTGTIRVYSCSKMMDLAFLVDGSSKLSEEDFEQLKTFITGMMKKLHISQKKIRV 1326
Anolis_carolinensis -----EMIYSEYSCSKMMDLAFLVDGSSKLSEEDFEQLKTFITGMMKKLHISQKKIRV 1303
Xenopus_tropicalis -----D-----TSIYECNKMMDLVFLVDGSSKLSEEDFEQLKTFITGMMKKLHISQKKIRV 1344
Rhinatrema_bivittatum -----DN-VPSPDKYYCSKMDLAFLVDGSSKLSEEDFEQLKTFITGMMKKLHISQKKIRV 1317
Latimeria_chalumnae -----EHTVMVPEENVCSKMDLAFLVDGSSKLSEEDFEQLKTFITGMMKKLHISQKKIRV 1313
.....1330.....1340.....1350.....1360.....1370.....1380

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      : : : : : : : * : : : : * : : : * : : : * : : :
Homo_sapiens      AVVEYHDG-SHAYIGLKDRKRPSSELRRIASQVKYAGSQVASTSEVLKYTLFQIFSKIDRP 1375
Pan_troglodytes   AVVEYHDG-SHAYIGLKDRKRPSSELRRIASQVKYAGSQVASTSEVLKYTLFQIFSKIDRP 1375
Macaca_mulatta    AVVEYHDG-SHAYIGLKDRKRPSSELRRIASQVKYAGSQVASTSEVLKYTLFQIFGKIDRP 1375
Callithrix_jacchus AVVEYHDG-SHAYIGLKDRKRPSSELRRIASQVKYAGSQVASTSEVLKYTLFQIFGKIDRP 1375
Equus_caballus    AVVEYHDG-SHAYIELRDRKRPSSELRRIASQVKYAGSEVASTTEVLKYTLFQIFGKIDRP 1375
Pteropus_alecto   AVVEYHDG-SHAYLELRERKRPSSELRRIASQVKYAGSSVASTSEVLKYTLFQIFSKIDRP 1375
Mus_musculus      AVVEYHDG-SRAYLELKARKRPSSELRRITTSQIKYTGSAVASTSEVLKYTLFQIFGKIDRP 1375
Bos_taurus        AVVEYHDG-SHAYLALQDRKRPSSELRRITTSQIKYTGSAVASTSEVLKYTLFQIFGRIDRP 1372
Ornithorhynchus_anatinus AVVEYHDG-AHSYIALRDRKRPSSELRRITTSQIKYTGSAVASTSEVLKYTLFQIFGRIDRP 1433
Pavo_muticus      SILVY-RAGPTIYLGKDIKTQSOMKKIVQSIKYTGDEVASVVEVLKYIVFQVFGKAERT 1366
Pavo_cristatus    SILVY-RAGPTIYLGKDIKTQSOMKKIVQSIKYTGDEVASVVEVLKYIVFQVFGKAERT 1366
Gallus_gallus     SILVY-RAGPTIYLGKDIKTQSOMKKIVQSIKYTGDAVASVAEVLKYIVFQVFGKAERT 1366
Anas_platyrhynchos SVLVYRVGTTIYLGKDVKKQSOMRKIVQNIKYTGDEVASAAEALKYIVFVFGKAERT 1378
Chelonia_mydas    SILEY-RTGSNIYLGKDIKTQSOMRKIVQNIKYTGGEVASATEVLKYIVFVFGKAERT 1385
Anolis_carolinensis SILEY-RTGSHIYLGKDVKKQSOMRRIVQNIKYTGGEVASATEVLKYIVFVFGKAERT 1362
Xenopus_tropicalis SVVHYYSATDRSFGKDNKKLSELVKMVKSMKYVGSLSAPAEALKYASHYVFGAEPD 1404
Rhinatrema_bivittatum AVIQYHSG-SHLYFAFDHKKIDELIRIVQGMKYTGSAVASTSEVLKYIVFVFGKAERT 1376
Latimeria_chalumnae AVLQFHSG-IQKYFGLQEKSPPELRKIVEDMEYSGAEAAFIQEALKYAAHYVFGKAERT 1372
.....1390.....1400.....1410.....1420.....1430.....1440

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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*:.. :*: ** . . . . . :*: : :*:*** . :. :
Homo_sapiens      EASRIITLLLLMASQEPQRMARNFVRVYVQGLKKKK-VIVIPVGIGIPHANLKOIRLIEKQAPE 1434
Pan_troglodytes   EASRIALLLLMASQEPQRMARNFVRVYVQGLKKKK-VIVIPVGIGIPHANLKOIRLIEKQAPE 1434
Macaca_mulatta    EASRIALLLLMASQEPQRMARNFVRVYVQGLKKKK-VIVIPVGIGIPHANLKOIRLIEKQAPE 1434
Callithrix_jacchus EASRIIILLLLMASQEPQRMARNFVRVYVQGLKKKK-VIVIPVGIGIPHANLKOIRLIEKQAPE 1434
Equus_caballus    EASRIALLLLMASQEPRLARNLVRNLYVRLNKKKKQVIVIPVGIGIPHANVKOIRLIEKQAPE 1435
Pteropus_alecto   EASRIVLLLTASQEPKRLARNLVRVYVQGLKKKK-VIVVPVGIGIPHANLKOIRLIEKQAPE 1434
Mus_musculus      EASHITLLLLTASQEPRLARNLVRVYVQGLKKKK-VIVIPVGIGIPHASLKOIRLIEKQAPE 1434
Bos_taurus        EASRIALLLTASQEPRLARNLVRVYVQGLKKKK-VSVVPVGIGIPHASLKOIRLIEKQAPE 1431
Ornithorhynchus_anatinus NAARVALLLSASEEPRRSARNLARYAQLRQKK-ITVVAVGIGIPHASARQVRLLEQAPD 1492
Pavo_muticus      NAAQIAMLFIAASKSP---GKVRSIIPALKNKK-ITLIPVGIGIPYVNVQIRFIEKQLHS 1421
Pavo_cristatus    NAAQIAMLFIAASKSP---GKVRSIIPALKNKK-ITLIPVGIGIPYVNVQIRFIEKQLHS 1421
Gallus_gallus     NAAQIAMLFIAASKSP---GKVRTIIPALKNKK-ITLIPVGIGIPYVNVQIRFIEKQLHS 1421
Anas_platyrhynchos NAAKIAVLFIASKSP---GKVRTIIPALKNKK-ITVIPVGIGIPHVSEEQIRFIEKQLHT 1433
Chelonia_mydas    NAARIALLLTASQSP---GNIQIRILPLLKKKK-VTVIPVGIGIPSVISMEQIKLIERQWPE 1440
Anolis_carolinensis NAARMAVLFTASKDP---KRVQITIFPLLKKKK-IIVIPVGLGPHISIEQIRQIENQSP 1417
Xenopus_tropicalis NAPKFAMLLTASQSP---KSVAGIMKATHKKK-ITVIPVGLGPDINMEEINIIQKMSPK 1459
Rhinatrema_bivittatum NAAKIAILLTASASP---RSIKPILPLVAKHK-VTVISVGLGPYISKEQINLITSQSPK 1431
Latimeria_chalumnae NAPKIGILLTASTSP---RKFDLSALGLSRKK-MTIIPIGVGPFIISRQIKLITSQSPS 1427
.....1450.....1460.....1470.....1480.....1490.....1500

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.:. :.* ** . . :. :*
Homo_sapiens      NKAFVLSSVDELEQQRDEIVSYLCDLAPEAPPF-----TLPPDMAQV 1476
Pan_troglodytes   NKAFVLSSVDELEQQRDEIVSYLCDLAPEAPPF-----TLPPHVAQV 1476
Macaca_mulatta    NKAFVLSSVDELEQQRDEIVSYLCDLAPEAPPF-----TLSPDMAQV 1476
Callithrix_jacchus NKAFVLSSVDELEQQRDEIVSYLCDLAPEAPPF-----TMPPHMAQV 1476
Equus_caballus    NKAFVLSSVDELEQRRDIIISYLCDLAPEAPPF-----TQRPRMPQV 1477
Pteropus_alecto   NKAFVLSSVDELEQRRDIIISYLCDLAPEVPGP-----TQPPPVAQV 1476
Mus_musculus      NKAFLLSGVDELEQRRDIIISYLCDLAPEAPPF-----TQPPQVAHV 1476
Bos_taurus        NKAFVLSSVDELEQRRDIIISYLCDLAPEVPAPT-----LTQHPLAAQV 1475
Ornithorhynchus_anatinus NRAFLLASVALEARRDDIVAGLCEQAPDLPPA-----TAAIVPGPR 1534
Pavo_muticus      -RAFQMNNVLELIDNRDLLIDYLCDLGPAES-----SPVPTP-----TMSNDIFP 1465
Pavo_cristatus    -RAFQMNNVLELIDNRDLLIDYLCDLGPAES-----SPVPTP-----TMSNDIFP 1465
Gallus_gallus     -RAFQMNNVLELMDNRDLLIDYLCDLGPAES-----SPEPTP-----TMSNDIFP 1465
Anas_platyrhynchos -RSFLMNVLELTDNRDLLIDYLCDLGPEENPLL-----EAISTP-----TMSNIRYP 1480
Chelonia_mydas    NKAFIMNVQELTMDNRDIIINYLCDLAPESDVLTTTQKPTTTPP---RAAKVTVPYQ 1496
Anolis_carolinensis NKAFIMNVVLELREHRDEIIDYFCGLVPEIS-----SVFTTP-----NPAATLPT 1462
Xenopus_tropicalis NKPYIFGSVYELLDRDEIHYLCDLVPEPPKPTIPSTKKPTVTEKPVQKVTIAPVEKG 1518
Rhinatrema_bivittatum NKAYILDNVYELLQORDEIINYLCDLVPTESPVALRPATQRPPTTLTPGLKKKTAPHTFG 1491
Latimeria_chalumnae SQAFIMDNVDELKDHASEIIRYLCGLGVVPTAKP-----LKVATTAVPAI 1472
.....1510.....1520.....1530.....1540.....1550.....1560

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:.. :.**:..*:.* * :. :
Homo_sapiens      TVGPGLLGVLSTLGPKRNSMVLDAFVLEGS DKIG EADFNRSKEFMEEVIQRMVGDGSIH 1536
Pan_troglodytes   TVGLGLLGLSTLGPKRNSMVLDAFVLEGS DKIG EADFNRSKEFMEEVIQRMVGDGSIH 1536
Macaca_mulatta    TVGPGLLGVLSTLGPKRNSMVLDAFVLEGS DKIG EADFNRSKEFMEEVIQRMVGDGSIH 1536
Callithrix_jacchus TVGPGLLGVSPLGPKRNSMVLDAFVLEGS DKIG EADFNRSKEFMAEVIQRMVGDGSIH 1536
Equus_caballus    TKSP EISGISLAPKRN SMVL DVVFVLEGS DKIG EAFNRSREFMEEVIQRMVGDGSIH 1537
Pteropus_alecto   TMGP ELLGVLSEGPKRN SMVL DVVFVLEGS DKIG EAFNRSREFMEEVIQRMVGDGSIH 1536
Mus_musculus      TVSPGIAGISSPGPKRNSMVL DVVFVLEGS DEVGEANFNKSKEFMEEVIQRMVSDATR 1536
Bos_taurus        TVAPQLLGPSLPGPKRSSMVL DVAFVLEGS DEVGEANFNRSAEFVEEVIRRMVGDGSIH 1535
Ornithorhynchus_anatinus ATSPAAPSTSSARPG--LEAPDVVFVLEGS DRVGEANFNLSKDFLQRVVRLDVAWDRAH 1592
Pavo_muticus      QWVLT--VPPHFSENPTPKSLDIAFVVEGSDNVGQENFNIIKKFLEKVLTEMNIGQENIH 1523
Pavo_cristatus    QWVLT--VPPHFSENPTPKSLDIAFVVEGSDNVGQENFNIIKKFLEKVLTEMNIGQENIH 1523
Gallus_gallus     QWVLT--VPPHFSENPTPKSLDIAFVVEGSDNVGQENFSIIKKFLEKVLTEMNIGQENIH 1523
Anas_platyrhynchos PWMLT--APPPLSEKPTPKSLDIAFVVEGSDNVGEENFNIIKKFLERVITGMNIGKENIH 1538
Chelonia_mydas    GWEFTRLATPLPRKAVSKVLDIAFVVEGSEKVGEEFNIIKEFIKVIKREMDIGEETIH 1556
Anolis_carolinensis ATVPGVREAIPTAFTYIHKTIINIAFLIEGSDKVGRENFNLVKEFIIRTIKEMNMEQETIY 1522
Xenopus_tropicalis PLATQIPEVKPTTQASWDKTIIDLVFIEGSDKVG EINFNKT KIFLEKMIQKLQISEETIH 1578
Rhinatrema_bivittatum RPNASVPTHLPQTWTSTSKVLDIVICFEGSDKVG EENFNKTKTFIENITIEKLDVREESI 1551
Latimeria_chalumnae TTSHTTSPPLTLTSTSPAKRIKDIVIVIEGSDKVG EENFIETKKFVEEVVRLNVGTETTH 1532
.....1570.....1580.....1590.....1600.....1610.....1620

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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	VT	TV	LQ	YS	YM	VT	VE	YF	PF	SE	AA	Q	SK	GD	IL	Q	R	V	R	E	I	R	Y	Q	G	G	N	R	T	N	T	G	L	A	L	R	Y	L	S	D	H	S	F	L	V	S	Q	G	D										
Homo_sapiens	VT	TV	LQ	YS	YM	VT	VE	YF	PF	SE	AA	Q	SK	GD	IL	Q	R	V	R	E	I	R	Y	Q	G	G	N	R	T	N	T	G	L	A	L	R	Y	L	S	D	H	S	F	L	V	S	Q	G	D										
Pan_troglodytes	VT	TV	LQ	YS	YM	VT	VE	YF	PF	SE	AA	Q	SK	GD	IL	Q	R	V	R	E	I	R	Y	Q	G	G	N	R	T	N	T	G	L	A	L	Q	Y	L	S	D	H	S	F	L	V	S	Q	G	D										
Macaca_mulatta	VT	TV	LQ	YS	YM	VT	VE	YF	PF	SE	AA	Q	SK	GD	IL	Q	R	V	R	E	I	R	Y	Q	G	G	N	R	T	N	T	G	L	A	L	Q	Y	L	S	D	H	S	F	L	V	S	Q	G	D										
Callithrix_jacchus	VT	TV	LQ	YS	YM	VT	VE	YF	PF	SE	A	T	K	G	D	I	L	Q	R	V	R	D	I	R	Y	Q	G	G	N	R	T	N	T	G	L	A	L	Q	H	L	S	E	H	S	F	L	V	S	Q	G	D								
Equus_caballus	IT	TV	LQ	YS	Y	R	V	T	M	E	Y	T	F	L	E	T	Q	S	K	R	D	V	L	Q	R	V	R	E	I	R	Y	Q	G	G	N	R	T	N	T	G	L	A	L	Q	Y	L	S	E	H	S	F	L	A	S	Q	G	D		
Pteropus_alecto	VM	V	L	Q	Y	S	Y	V	V	T	V	E	S	T	F	L	E	A	Q	S	K	G	D	I	L	Q	R	V	R	E	I	R	Y	R	G	G	N	R	T	N	T	G	L	A	L	Q	Y	L	S	E	H	S	F	S	A	S	Q	G	D
Mus_musculus	IS	V	L	Q	Y	S	Y	T	V	M	E	A	F	N	G	A	Q	S	K	E	E	V	L	R	H	V	R	E	I	R	Y	Q	G	G	N	R	T	N	T	G	A	L	Q	Y	L	S	E	H	S	F	S	P	S	Q	G	D			
Bos_taurus	VT	TV	LQ	YS	Y	V	V	T	V	E	H	S	F	R	E	P	Q	S	K	D	V	V	L	Q	R	L	R	E	V	R	Y	R	G	G	N	Q	T	N	T	G	L	A	L	Q	Y	L	S	E	H	S	F	S	A	S	Q	G	D		
Ornithorhynchus_anatinus	V	S	V	L	Q	F	A	D	A	V	T	V	E	H	A	F	S	E	A	Q	T	E	R	D	V	L	R	K	V	R	D	I	P	F	R	G	G	H	A	T	N	A	G	R	A	L	R	H	V	A	E	T	T	L	A	P	G	H	R
Pavo_muticus	VT	V	M	Q	Y	S	D	T	I	T	L	E	Y	S	F	R	E	I	Q	S	K	E	S	I	I	E	R	V	R	S	I	P	Y	Q	G	G	K	A	T	N	T	G	H	A	L	D	Y	I	S	E	H	T	F	T	S	A	N	G	G
Pavo_cristatus	VT	V	M	Q	Y	S	D	T	I	T	L	E	Y	S	F	R	E	I	Q	S	K	E	S	I	I	E	R	V	R	S	I	P	Y	Q	G	G	K	A	T	N	T	G	H	A	L	D	Y	I	S	E	H	T	F	T	S	A	N	G	G
Gallus_gallus	VT	L	M	Q	Y	S	D	T	I	T	L	E	Y	S	F	R	E	I	Q	S	K	E	S	I	I	E	K	V	R	S	I	P	Y	Q	G	G	K	A	T	N	T	G	H	A	L	D	Y	I	S	K	H	T	F	T	S	A	N	G	G
Anas_platyrhynchos	VT	L	M	Q	Y	S	D	T	I	T	L	E	Y	S	F	R	E																																										

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Homo_sapiens	REQAPNLVYVMVTGNPASDEIKRLPGDIOVVPIGVGPNANVQELERIGWPNAP--ILIIDDFE	1655																								
Pan_troglodytes	REQAPNLVYVMVTGNPASDEIKRLPGDIOVVPIGVGPNANVQELERIGWPNAP--ILIIDDFE	1655																								
Macaca_mulatta	REQAPNLVYVMVTGNPASDEIKRLPGDIOVVPIGVGPHANVQELERIGWPNAP--ILIIDDFE	1655																								
Callithrix_jacchus	REQAPNLVYVMVTGNPASDEIKRLPGDIOVVPIGVGPHANVQELITIGWPNAP--ILIIDDFE	1655																								
Equus_caballus	REQAPNLVYVMVTGNPASDVIKRMPGDIIHVVPISVGPHADVQELERIGWPNAP--ILIIDDFE	1656																								
Pteropus_alecto	REQAPNLVYVMVTGNPASDEIKRMPGDIOVVPIGVGPQADVQELERIGWPNAP--ILIIDDFE	1655																								
Mus_musculus	RVEAPNLVYMTGNPASDEIKRLPGDIOVVPIGVGPHANMQELERISRPTAP--IFIRDFE	1655																								
Bos_taurus	REQAPNLVYMTGPSADKIQRMPGDILVPIGVGPRVDVQELERSWPQTPIFIIDDFE	1654																								
Ornithorhynchus_anatinus	RERAPHLYVMVGGPVSDRIERPDRDLQVAIGVGPPAHARELSRLGWPNAP--ILLIPDDF	1711																								
Pavo_muticus	RQNVPHLVYMVSNNPSTDVITRHPTSINVIPIGIIPSANIQLRMISQPNRP--IILQSYS	1642																								
Pavo_cristatus	RQNVPHLVYMVSNNPSTDVITRHPTSINVIPIGIIPSANIQLRMISQPNRP--IILQSYS	1642																								
Gallus_gallus	RQNVPHLVYMVSNNPSTDVIIRHPTSINVIPIGITPRANVQELRMISQPNRP--IILQSYS	1642																								
Anas_platyrhynchos	RQDVPHLYMVSANPSTDVITRHPTSINVIPGITPNVNVLKRSIQNSP--IILHSYS	1657																								
Chelonia_mydas	RGQVPHLYMVMTANPATDVISSVAGDINVIPGITPNANIQLEKISRHTP--IIEEGYN	1675																								
Anolis_carolinensis	KROAPEFYVMVTSNSATDTVSRLPHDINLIPIGIAPNVNIQELCQLSQPHTP--IILDGYN	1641																								
Xenopus_tropicalis	RNDIPHLVYMTSNPATDIITKGPSDINMVPIAVGPNVDIQELELIANSRDEIILLIEDYD	1698																								
Rhinatrema_bivittatum	RDQVPHLYMVTSNPASDIINKVSEIDIVPIGVGQNVNTYELELISQRTP--ILLIDDYD	1669																								
Latimeria_chalumnae	RDOVPHLVFMVTSNPPSDEVITRISKNEIIPIGVGPNVNITELDISYPNKP--TLVDGYE	1651																								
1690.....1700.....1710.....1720.....1730.....1740																									

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Homo_sapiens	TLPREAPDLVLRCCSG	-----	EGLOIPTLSPPAP	-DCSQPLDVILLLDG	1698
Pan_troglodytes	SLPREAPDLVLRCCSG	-----	EGLOIPTLSPAS	-DCSQPLDVILLLDG	1698
Macaca_mulatta	TLPREAPDLVLQSCCSG	-----	EGLKIPTLSPPAP	-DCSQPLDVILLLDG	1698
Callithrix_jacchus	TLPREAPDLVLRCCSG	-----	EGLQMPKLADDP	-DCSQPLDVILLLDG	1698
Equus_caballus	TLPREAPDLVLRCCSG	-----	EGLOIPTLPPAP	-DCSQPLDVLVLLLDG	1699
Pteropus_alecto	TLPREAPDLVLQMCCSG	-----	EGLOIPTLSPPAP	-DCGOALDVLVLLDG	1698
Mus_musculus	TLPREAPDLVLQTCCSK	-----	EGLQLPTLPPLP	-DCSQPLDVLVLLDG	1698
Bos_taurus	RLPREAPDLVLRCCSE	-----	DGPHLPTLAPAP	-DCSQPLDVLVLLDG	1697
Ornithorhynchus_anatinus	ALPREAPDLVLQSCCSGG	-----	LPQETPTLSPPAD	CVRPVDFIFLLDG	1756
Pavo_muticus	TLIEEAPELVLQSCCASHKA	-----	WTEIP-	ELCNKPMDMVFLLDG	1681
Pavo_cristatus	TLIEEAPELVLQSCCASHKA	-----	WTEIP-	ELCNKPMDMVFLLDG	1681
Gallus_gallus	TLIEEAPELVLQSCCASHKT	-----	WTEIP-	ELCNKPMDIMFLLDG	1681
Anas_platyrhynchos	TLIEEAPELVLQSCCSHKR	-----	WTEIP-	ELCNKPMDIMFLLDG	1696
Chelonia_mydas	KLIREAPDLVLKTCSSNKS	-----	SMALATSGLC	SRPMDIMFLLDG	1716
Anolis_carolinensis	KLLQEGPDVLKTCSSRE	-----	GT	CNKPMDIVIFLLDG	1674
Xenopus_tropicalis	VLI SDAPVLVLEKCSRKS	-----	LSTTFPPPTTTPATQPITDNCEK	PMDIVIFVLDG	1750
Rhinatrema_bivittatum	KLIK-IPDLVLQTCSSDH	-----	IPTTEKIMTTPETLPIMTVPCSK	PMDIILILDG	1720
Latimeria_chalumnae	KLT T IVHTLLESCEIEIRSMITVSPOVITTLKPAAVTTLAPLPAAVPCDEPMD	IVVLLDG			1710
1750.....1760.....1770.....1780.....1790.....1800				

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Homo_sapiens      SSSFPASYFDEMKSFAKAFISKANIGPRLTQVSVLOYGSITTIDVPWNVPEKAHLLSLV      1758
Pan_troglodytes   SSSFPASYFDEMKSFAKAFISKANIGPRLTQVSVLOYGSITTIDVPWNVPEKAHLLSLV      1758
Macaca_mulatta    SSSFPAAFYDEMKSFAKAFISKANIGPHLTQVSVLOYGSITTIDVPWNVAPEKAHLLSLV      1758
Callithrix_jacchus SSSSPASYFDEMKSFAKAFISKAKLGPHLTQVSVLOYGSITTIDVPWNAAMEKAHLLSLV      1758
Equus_caballus    SSSFPASDFDKMKSFAKAFISKANIGPQLTRVSVLOYGSITTIDVPWNVPEKASLLSLV      1759
Pteropus_alecto   SSGFPASEFDEMKSFAKAFISKANIGPQLTQVSVLOYGSITTIDVPWNVAQEKHLLSLV      1758
Mus_musculus      SSSLPESSFDKMKSFSAKAFISKANIGPHLTQVSVLOYGSINTIDVPWNVPEKAHLQSLV      1758
Bos_taurus        SSTSPASYFDEMKSFAKAFISKANLGPQLTQVSVLOYGSNTNVDVPWDIHVDKAHLLSLV      1757
Ornithorhynchus_anatinus TSRVPPDHFENMKSFKAFIEKADIGPHATQVSVLOYGSANTLDVPWSTPQKASLLSLV      1816
Pavo_muticus      SPSIGASEFEEMKNFVRAFIESADISNTSVHVSVLQYARENNLEISLNKPQETENLVEMV      1741
Pavo_cristatus    SPSIGASEFEEMKNFVRAFIESADISNTSVHVSVLQYARENNLEISLNKPQETENLVEMV      1741
Gallus_gallus     SPSIGASEFEEMKNFVRAFIESADISNTSVHVSVLQYARENNLEISLNKPQETEKLIEMV      1741
Anas_platyrhynchos SSNIGASEFEEMKNFVAFIESADISNTSIHVSVLQYARENNLEISWNMPQETVNLVEMV      1756
Chelonia_mydas    SSNVGASEFEEMKSFVKAFIGNYGINNLTQVSVLOYARANTLEISWNMPQESENLLNRV      1776
Anolis_carolinensis SPNVDESQFEKMKRFVKAFIEHTDIGHTAQVAVLOYGNVNTLEMSWKVPQEKANLLSLV      1734
Xenopus_tropicalis SSSVRASQFEEMKTFVKAFIKKVNIGVGATQVSVLOYGWRNILEIAWTDPOEKESLLKAV      1810
Rhinatrema_bivittatum SSNIKAAQFEEMKTFKAFIEKADIGNTTTQVAVLOYGRNTLEISWIDPOEKESLLRAV      1780
Latimeria_chalumnae STNIMEPQFEEMKTFVKELIKKVDIGNNGTQISVVOYGKTNLTLEISWTDLQNKESLLDKV      1770
.....1810.....1820.....1830.....1840.....1850.....1860

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Homo_sapiens      DVMQ-REGGPSQIGDALGFAVRYLITSEMHGARGPASKAVVILVTDVSVDSVDAADAARS      1817
Pan_troglodytes   DVMQ-REGGPSQIGDALGFAVRYLITSEMHGARGPASKAVVILVTDVSVDSVDAADAARS      1817
Macaca_mulatta    DVMQ-REGGPSQIGDALGFAVRYLITSEMHGARGPASKAVVILVMDVSDVDAADAARS      1817
Callithrix_jacchus DVMQ-REGGPSQIGNALDFAVRYLTSEVHGARGPASKAVVILVTDVSVDSVGAADAARA      1817
Equus_caballus    DLMQ-REGGPSQVGDALAFAVRYVTSEIHGARGPASKVVVILVMDVSTDVDAADAARA      1818
Pteropus_alecto   DFMQ-REGGPSQIGDALGFAVRYYITSEIHGARGPASKAVVILVTDVSTDVAAVDAARS      1817
Mus_musculus      DLMQ-QEGGPSQIGDALAFAVRYVTSQIHGARGPASKAVVIIIMDTSLDPVDTAADAARS      1817
Bos_taurus        DPMH-REGGPSQVGQALSFAARYITSQVHGARPSASKVVVILVTGSSMDSVEAAAAARS      1816
Ornithorhynchus_anatinus DPMQ-REGGPGRIGDALSFAVRYLSEAHGARGPNASKVAVVLVTDSESDSVDAAGAQS      1875
Pavo_muticus      HSIQOREQGPTRLGKAIDFVVQNALSESYGGRPGASKVVIVIVSGKSEDTVETAALTARM      1801
Pavo_cristatus    HSIQOREQGPTRLGKAIDFVVQNALSESYGGRPGASKVVIVIVSGKSEDTVETAALTARM      1801
Gallus_gallus     HSIQOREQGPTRLGKAIDFVVQNALSESYGGRPDASKVVIVIVSGKSEDTVETAALTARM      1801
Anas_platyrhynchos RSIQOREQGPTRLGKAIDFVVQNTMSESHGGRPGASKIVIVIVSGKSEDTVETAALAARM      1816
Chelonia_mydas    SSIQOREQGPSKLGAEAVNFVAVLHAMSEAHGGRPNASKIAVIVSEKSEDPVDFAAYSASI      1836
Anolis_carolinensis SAHRRDQGGPQLGKVIDFTVQHAISEINGGRPNASKAIVIFISDTSQDSVNTAAYSARV      1794
Xenopus_tropicalis DNIQKAEDGPAKIGEALLFGVRTAMSEVHGARGPSTKIAVIVITDVSVQVAAEAANSVI      1870
Rhinatrema_bivittatum DVIQKREDGPSKIGDALFFAVQNAMSEVHGGRANATKIAVIVVSDKSLDSVHTAAYTAGI      1840
Latimeria_chalumnae DAIQORQAGLSRIGEALTVALNLTVEARGGRPGVQKIAVILVTEQSTDNIENAAAYTASV      1830
.....1870.....1880.....1890.....1900.....1910.....1920

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Homo_sapiens      NRVTVFPIGIGDRYDAAQLRILAGPAGDSNVVKLQRIEDLPTMTVTLGNSFLHKLCSGFVR      1877
Pan_troglodytes   NRVTVFPIGIGDRYDAAQLRILAGPAGDSNVVKLQRIEDLPTMTVTLGNSFLHKLCSGFVR      1877
Macaca_mulatta    NRVTVFPIGIGDRYDAAQLRILAGPAGDSNVVKLQRIEDLPTMTVTLGNSFLHKLCSGFVR      1877
Callithrix_jacchus NRVTVFPIGIGDRYDAAQLRLTAGPAADSNVVSRLQRIEDLPTMTVTLGNSFLHKLCSGFVR      1877
Equus_caballus    NRVGVPPIGIGDRYDEAQLRILAGSGASSNLVKLQRIEDLS-TVLLGNSFLRKLCSGFVS      1877
Pteropus_alecto   NRVTVFPIGIGDRYDMAQLRILAGPDASSNIVKLQRIEDLPLVTLGNSFLHKLCSGFVR      1877
Mus_musculus      NRVAVFPIGVGDRYDEAQLRILAGPGASSNVVKLQVEDLSTMTLGNSEFFHKLCSGFSG      1877
Bos_taurus        NRVAVFPIGIGDQYDAAQLRVLAGPGASSNVAELQRIEDLPSMVALGNSFFQRLCSGFVS      1876
Ornithorhynchus_anatinus SRVVVFPIGVGDRYDRAQLRALAGPSPSRVTELQVEDLPLLVSLLDRSFTSLCSDMAG      1935
Pavo_muticus      NKVSLFPIGVGNGYDEQQLTTLTGPSAVNRIMKLQNFEDLSTMTVLNSEFINKVCMDFVR      1861
Pavo_cristatus    NKVSLFPIGVGNGYDEQQLTTLTGPSAVNRIMKLQNFEDLSTMTVLNSEFINKVCMDFVR      1861
Gallus_gallus     NKVSLFPIGVGNGYDEQQLRTLTPSAVNRIMKLQNFEDLSTMTVLNSEFINKVCMDFVR      1861
Anas_platyrhynchos NRVSFLPIGVGNRYDEEQLRILTPSAVNRIMKLQNFEDLSTMITLNSEFINKVCLDFVR      1876
Chelonia_mydas    NRVSFLPIGVGDRYDEEQLRLTAGQSDADRMKLRRFEDLPDMVTLDDAFVNKLCMEPTR      1896
Anolis_carolinensis NRISLLPIGIGDRYDVKQLHTLAGPSASDRIIQLOQFDDLLTTVILG-EFVKKLCTEFLQ      1853
Xenopus_tropicalis NRVSVPPIGIGTRYDSQQLKVLGAPSANKKITKLQIIEDLPTMTVTLNSEFINKICTEFAT      1930
Rhinatrema_bivittatum NRVSVPPIGVGNRYDEEELNLLAGHSPREKVIKLSRFEDLPTMTVTLNSEFINKICTEFIR      1900
Latimeria_chalumnae DRVTVFPIGIGKNYDVKOLETLAGEFNQGNIIHLNRVEDLPTMTVTLTDYGFINKLCKGTNK      1890
.....1930.....1940.....1950.....1960.....1970.....1980

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Homo_sapiens      ICMDEDGNEKRPGDVWTLPDQCHTVCQPDGQTLKSHRVNCDRGLRSPCPNSQSPVKVE 1937
Pan_troglodytes   ICMDEDGNEKRPGDVWTLPDQCHTVCQPDGQTLKSHRVNCDRGLRSPCPNSQSPVKVE 1937
Macaca_mulatta    ICMDEDGNEKRPGDVWTLPDQCHTVCQPDGQTLKSHRVNCDRGLRSPCPNSQSPVKVE 1937
Callithrix_jacchus ICMDEDGNEKRPGDVWTLPDQCHTVCQPDGQTLKSHRVNCDRGLRSPCPNSQSPVKVE 1937
Equus_caballus    VCMDEDGNEKRPGDVWTLPDQCHTVCQPDGQTLKSHRVNCDRGLRSPCPNSQSPVKVE 1937
Pteropus_alecto   VCMDENGNEKR-----NFFGFYDLVDVLR-----VWVM 1905
Mus_musculus      VCVDEDGNEKRPGDVWTLPDQCHTVCQPDGQTLKSHRVNCDHGRPSCAPNSQSPVKVE 1937
Bos_taurus        VCVDEDGNEKRPGDVWTLPDQCHTVCQPDGQTLKSHRVNCDHGRPSCAPNSQSPVKVE 1936
Ornithorhynchus_anatinus FCLDDDGNTTRKPGDWTLPDQCHTVCQPDGQTLKSHRVNCDHGRPSCAPNSQSPVKVE 1995
Pavo_muticus      ECIDEDGNNKKKPGDKWTLPDQCHTVCQPDGQTLKSHRVNCDHGRPSCAPNSQSPVKVE 1921
Pavo_cristatus    ECIDEDGNNKKKPGDKWTLPDQCHTVCQPDGQTLKSHRVNCDHGRPSCAPNSQSPVKVE 1921
Gallus_gallus     KCIDEDGNNKKKPGDKWTLPDQCHTVCQPDGQTLKSHRVNCDHGRPSCAPNSQSPVKVE 1921
Anas_platyrhynchos ECIDEDGNNKKKPGDKWTLPDQCHTVCQPDGQTLKSHRVNCDHGRPSCAPNSQSPVKVE 1936
Chelonia_mydas    ECIDEDGNNKKKPGDKWTLPDQCHTVCQPDGQTLKSHRVNCDHGRPSCAPNSQSPVKVE 1956
Anolis_carolinensis ECVDEDGNNKKKPGDKWTLPDQCHTVCQPDGQTLKSHRVNCDHGRPSCAPNSQSPVKVE 1913
Xenopus_tropicalis VCIDEEGKQKPGDKWTLPDQCHTVCQPDGQTLKSHRVNCDHGRPSCAPNSQSPVKVE 1990
Rhinatrema_bivittatum VCLDEEGKQKPGDKWTLPDQCHTVCQPDGQTLKSHRVNCDHGRPSCAPNSQSPVKVE 1960
Latimeria_chalumnae VCLDDDGNNKKKPGDKWTLPDQCHTVCQPDGQTLKSHRVNCDHGRPSCAPNSQSPVKVE 1950
.....1990.....2000.....2010.....2020.....2030.....2040

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Homo_sapiens      ETCGCRWTCPCVCTGSSSTRHIVTFDGNFKLTGSCSYVLFQNKQDLEVLHNGACSP-- 1995
Pan_troglodytes   ETCGCRWTCPCVCTGSSSTRHIVTFDGNFKLTGSCSYVLFQNKQDLEVLHNGACSP-- 1995
Macaca_mulatta    ETCGCRWTCPCVCTGSSSTRHIVTFDGNFKLTGSCSYVLFQNKQDLEVLHNGACSP-- 1995
Callithrix_jacchus ETCGCRWTCPCVCTGSSSTRHIVTFDGNFKLTGSCSYVLFQNKQDLEVLHNGACSP-- 1995
Equus_caballus    ETCGCRWTCPCVCTGSSSTRHIVTFDGNFKLTGSCSYVLFQNKQDLEVLHNGACSP-- 1995
Pteropus_alecto   SHLSFALPCLGVCMSSTRHIVTFDGNFKLTGSCSYVLFQNKQDLEVLHNGACSP-- 1963
Mus_musculus      ETCGCRWTCPCVCTGSSSTRHIVTFDGNFKLTGSCSYVLFQNKQDLEVLHNGACSP-- 1995
Bos_taurus        EACGCRWTCPCVCTGSSSTRHIVTFDGNFKLTGSCSYVLFQNKQDLEVLHNGACSP-- 1994
Ornithorhynchus_anatinus ETCGCRWTCPCVCTGSSSTRHIVTFDGNFKLTGSCSYVLFQNKQDLEVLHNGACSP-- 2055
Pavo_muticus      ETCGCRWTCPCVCTGSSSTRHIVTFDGNFKLTGSCSYVLFQNKQDLEVLHNGACSP-- 1981
Pavo_cristatus    ETCGCRWTCPCVCTGSSSTRHIVTFDGNFKLTGSCSYVLFQNKQDLEVLHNGACSP-- 1981
Gallus_gallus     ETCGCRWTCPCVCTGSSSTRHIVTFDGNFKLTGSCSYVLFQNKQDLEVLHNGACSP-- 1981
Anas_platyrhynchos ETCGCRWTCPCVCTGSSSTRHIVTFDGNFKLTGSCSYVLFQNKQDLEVLHNGACSP-- 1996
Chelonia_mydas    ETCGCRWTCPCVCTGSSSTRHIVTFDGNFKLTGSCSYVLFQNKQDLEVLHNGACSP-- 2016
Anolis_carolinensis ETCGCRWTCPCVCTGSSSTRHIVTFDGNFKLTGSCSYVLFQNKQDLEVLHNGACSP-- 1973
Xenopus_tropicalis ETCGCRWTCPCVCTGSSSTRHIVTFDGNFKLTGSCSYVLFQNKQDLEVLHNGACSP-- 2050
Rhinatrema_bivittatum ETCGCRWTCPCVCTGSSSTRHIVTFDGNFKLTGSCSYVLFQNKQDLEVLHNGACSP-- 2020
Latimeria_chalumnae ETCGCRWTCPCVCTGSSSTRHIVTFDGNFKLTGSCSYVLFQNKQDLEVLHNGACSP-- 2010
.....2050.....2060.....2070.....2080.....2090.....2100

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Homo_sapiens      ----GARQGCMSIEVKHSALSVELHSDMEVTNGLVSVPYVGGNMEVNVYGAIMHEVR 2051
Pan_troglodytes   ----GARQGCMSIEVKHSALSVELHSDMEVTNGLVSVPYVGGNMEVNVYGAIMHEVR 2051
Macaca_mulatta    ----AARQGCMSIEVKHSALSVELHSDMEVTNGLVSVPYVGGNMEVNVYGAIMHEVR 2051
Callithrix_jacchus ----GARQGCMSIEVKHSALSVELHSDMEVTNGLVSVPYVGGNMEVNVYGAIMHEVR 2051
Equus_caballus    ----GARQGCMSIEVKHSALSVELHSDMEVTNGLVSVPYVGGNMEVNVYGAIMHEVR 2051
Pteropus_alecto   ----GARQGCMSIEVKHSALSVELHSDMEVTNGLVSVPYVGGNMEVNVYGAIMHEVR 2019
Mus_musculus      ----GAKQACMSIEIKHAGSAELHSDMEVTNGLVSVPYVGGNMEVNVYGAIMHEVR 2051
Bos_taurus        ----GARQGCMSIEVKHSALSVELHSDMEVTNGLVSVPYVGGNMEVNVYGAIMHEVR 2050
Ornithorhynchus_anatinus DDSQSGRLNCMRSIRARSGDLTIELNDHMEVTNGLVSVPYVGGNMEVNVYGAIMHEVR 2115
Pavo_muticus      ----KMNCMDAIEVKHSGVSIQLFSNMTVTVDGESVHIPYSSSLFEVTYGAIMHEIK 2035
Pavo_cristatus    ----KMNCMDAIEVKHSGVSIQLFSNMTVTVDGESVHIPYSSSLFEVTYGAIMHEIK 2035
Gallus_gallus     ----KMNCMDAIEVKHSGVSIQLFSNMTVTVDGESVHIPYSSSLFEVTYGAIMHEIK 2035
Anas_platyrhynchos ----KMNCMDAIEVKHSGVSIQLFSNMTVTVDGESVHIPYSSSLFEVTYGAIMHEIK 2050
Chelonia_mydas    ----KLNCMDAIEVKHSGVSIQLFSNMTVTVDGESVHIPYSSSLFEVTYGAIMHEIK 2070
Anolis_carolinensis ----KLNCMDAIEVKHSGVSIQLFSNMTVTVDGESVHIPYSSSLFEVTYGAIMHEIK 2027
Xenopus_tropicalis ----HOTCMSIEVKHSGVSIQLFSNMTVTVDGESVHIPYSSSLFEVTYGAIMHEIK 2104
Rhinatrema_bivittatum ----KQNCMTSIDVKHNGKTIQLFSNMTVTVDGESVHIPYSSSLFEVTYGAIMHEIK 2074
Latimeria_chalumnae N----AMHNCMSIEVKHSGVSIQLFSNMTVTVDGESVHIPYSSSLFEVTYGAIMHEIK 2066
.....2110.....2120.....2130.....2140.....2150.....2160

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Homo_sapiens	Q	E	W	T	V	Q	R	-	P	G	Q	T	C	P	I	L	E	E	O	C	L	-	-	V	P	D	S	S	H	C	Q	V	L	L	L	P	L	F	A	E	C	H	K	V	L	A	P	A	T	F	Y	A	I	C	Q	O	D	S	C	2168	
Pan_troglodytes	Q	E	W	T	V	Q	R	-	P	G	Q	T	C	P	I	L	E	E	O	C	L	-	-	V	P	N	S	S	H	C	Q	V	L	L	L	P	L	F	A	E	C	H	K	V	L	A	P	A	T	F	Y	A	I	C	Q	O	D	S	C	2168	
Macaca_mulatta	Q	E	W	T	V	Q	R	-	P	G	Q	T	C	P	I	L	E	E	O	C	L	-	-	V	P	N	S	S	H	C	Q	V	L	L	L	S	A	L	F	A	E	C	H	K	V	L	A	P	A	T	F	Y	A	I	C	Q	O	D	S	C	2168
Callithrix_jacchus	Q	E	W	T	V	Q	-	S	G	Q	T	C	P	I	L	E	E	O	C	L	-	-	V	S	D	S	S	Q	C	Q	V	L	L	S	T	L	F	A	E	C	H	K	V	L	A	P	A	T	F	Y	A	I	C	Q	O	D	S	C	2168		
Equus_caballus	Q	E	W	T	V	Q	-	P	G	Q	T	C	P	V	P	E	E	O	C	P	-	-	V	S	S	S	S	H	C	Q	V	L	L	S	A	L	F	A	E	C	H	K	I	L	A	P	A	T	F	Y	A	I	C	Q	O	D	S	C	2168		
Pteropus_alecto	Q	E	W	T	A	Q	-	P	G	R	L	C	P	V	A	E	E	O	C	P	-	-	V	S	S	S	S	H	C	Q	V	L	L	S	A	L	F	A	E	C	H	K	V	L	A	P	T	T	F	Y	D	I	C	Q	O	D	S	C	2136		
Mus_musculus	Q	E	W	T	V	Q	-	P	G	Y	T	C	Q	A	V	P	E	E	O	C	P	-	-	V	S	D	S	S	H	C	Q	V	L	L	S	A	S	F	A	E	C	H	K	V	I	A	P	A	T	F	H	T	I	C	Q	O	D	S	C	2168	
Bos_taurus	R	E	W	T	V	Q	-	P	G	Q	T	C	P	L	G	P	E	E	P	C	P	-	-	I	S	Q	S	R	C	Q	V	L	L	S	E	L	F	A	E	C	H	K	V	L	A	P	A	T	F	H	A	M	C	Q	O	D	S	C	2165		
Ornithorhynchus_anatinus	Q	A	W	M	E	S	-	P	G	Q	E	P	L	L	D	T	C	P	-	-	A	S	H	R	C	H	A	L	L	S	P	P	T	A	C	H	P	V	L	A	A	A	F	S	T	C	E	E	N	S	C	2232									
Pavo_muticus	Q	D	W	T	V	K	E	-	L	G	K	V	C	E	V	R	R	E	D	E	C	S	-	-	E	H	A	T	S	H	C	H	L	L	S	D	Q	F	S	A	C	H	R	I	I	P	P	D	M	F	Y	E	A	C	E	E	S	S	C	2152	
Pavo_cristatus	Q	D	W	T	V	K	E	-	L	G	K	V	C	E	V	R	R	E	D	E	C	S	-	-	E	H	A	T	S	H	C	H	L	L	S	D	Q	F	S	A	C	H	R	I	I	P	P	D	M	F	Y	E	A	C	E	E	S	S	C	2152	
Gallus_gallus	Q	D	W	T	V	K	E	-	L	G	K	V	C	E	I	R	R	E	D	E	C	S	-	-	E	H	A	S	S	H	C	H	L	L	S	D	Q	F	S	A	C	H	R	I	I	P	P	D	M	F	Y	E	A	C	E	E	S	S	C	2152	
Anas_platyrhynchos	Q	D	W	T	L	K	E	-	P	G	K	I	C	E	V	R	R	E	D	C	S	-	-	E	H</																																				

		:	**	:::	*	:::	**	.*:	**:	:::	**	:	*	*	:	*	.																																								
Homo_sapiens	HQE	QV	CE	VI	AS	Y	A	H	L	C	R	T	N	G	V	C	V	D	W	R	T	P	D	F	C	A	M	S	C	P	P	S	L	V	Y	N	H	C	E	H	G	C	P	R	H	C	D	G	--N-VS	2225							
Pan_troglodytes	HQE	QV	CE	VI	AS	Y	A	H	L	C	R	T	N	G	V	C	V	D	W	R	T	P	D	F	C	A	M	S	C	P	P	S	L	V	Y	N	H	C	E	H	G	C	P	R	H	C	D	G	--N-VS	2225							
Macaca_mulatta	HRE	QV	CE	VI	AS	Y	A	H	L	C	R	T	N	G	V	C	V	D	W	R	T	P	D	F	C	A	M	S	C	P	P	S	L	V	Y	N	H	C	E	H	G	C	P	R	H	C	D	G	--N-VS	2225							
Callithrix_jacchus	HRE	QV	CE	VI	SS	Y	A	H	L	C	R	S	S	G	V	C	V	D	W	R	T	P	D	F	C	A	M	S	C	P	P	S	L	V	Y	N	H	C	E	H	G	C	P	R	H	C	D	G	--N-VS	2225							
Equus_caballus	HQE	QV	CE	AI	AS	Y	A	H	L	C	R	T	N	G	V	C	V	D	W	R	T	A	D	F	C	A	M	S	C	P	P	S	L	V	Y	N	H	C	E	H	G	C	P	R	H	C	E	G	--N-TS	2225							
Pteropus_alecto	HQE	QV	CE	AI	AS	Y	A	H	L	C	R	N	N	G	V	C	V	D	W	R	T	T	D	F	C	P	M	S	C	P	P	S	L	V	Y	N	H	C	E	H	G	C	P	R	H	C	E	G	--N-TS	2193							
Mus_musculus	HQ	E	R	V	C	E	AI	AS	Y	A	H	L	C	R	T	S	G	V	C	V	D	W	R	T	T	D	F	C	A	M	S	C	P	P	S	L	V	Y	N	H	C	E	H	G	C	P	R	H	C	D	G	--N-TS	2225				
Bos_taurus	Q	Q	E	V	C	E	AI	AS	Y	A	H	L	C	R	T	K	G	V	C	V	D	W	R	T	P	D	F	C	A	V	S	C	P	P	S	L	I	Y	N	H	C	E	S	G	C	P	R	O	C	E	--N-SS	2222					
Ornithorhynchus_anatinus	H	E	E	Q	V	C	E	A	F	AS	Y	A	H	L	C	R	T	G	V	C	V	D	W	R	T	P	A	F	C	A	M	S	C	P	P	A	L	V	Y	N	P	C	H	G	C	P	R	E	C	D	T	N	-TS	2291			
Pavo_muticus	Y	E	E	E	E	A	C	E	M	I	T	S	Y	A	H	I	C	R	E	N	G	I	C	I	D	W	R	T	H	E	F	C	P	M	K	C	P	T	Y	L	I	Y	D	H	C	K	A	C	I	K	I	C	E	N	S	-LN	2211
Pavo_cristatus	Y	E	E	E	E	A	C	E	M	I	T	S	Y	A	H	I	C	R	E	N	G	I	C	I	D	W	R	T	H	E	F	C	P	M	K	C	P	T	Y	L	I	Y	D	H	C	K	A	C	I	K	I	C	E	N	S	-LN	2211
Gallus_gallus	Y	E	E	T	E	C	E	M	I	T	S	Y	A	H	I	C	R	E	N	G	I	C	I	D	W	R	T	P																													

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Homo_sapiens      SCGDHPSEGCFCPPDKVMLEGSCVPEEACTQCIGEDGVQHOFLEAWVPDHQPCQICTCLS 2285
Pan_troglodytes   SCGDHPSEGCFCPPDKVMLEGSCVPEEACTQCIGEDGVQHOFLEAWVPDHQPCQICTCLS 2285
Macaca_mulatta    SCGDHPSEGCFCPPNKMVLEGSCVPEEACTQCIGEDGVQHOFLEAWVPDHQPCQICTCLS 2285
Callithrix_jacchus SCGDHPSEGCFCPPNQVMLEGSCVPKEACTQCIGEDGVRHOFLEAWVPDHQPCQICTCLS 2285
Equus_caballus    SCGDHPSEGCFCPPQHVMLEGSCVPEEACTQCVSEGDGVRHOFLETWVPAHQPCQICTCLS 2285
Pteropus_alecto   SCGDHPSEGCFCPPSHQVMLEGSCVPEEACTQCVGEDGVRHQLLETWIPDHQPCQICTCLT 2253
Mus_musculus      FCGDHPSEGCFCPPQHVMLEGSCVPEEACTQCVGEDGVRHOFLETWVPDHQPCQICMCLS 2285
Bos_taurus        SCGDHPLEGFCFPPHQVMLEGSCVPEEACTQCVGDDGIRHQLLETWVPDHQPCQICTCLS 2282
Ornithorhynchus_anatinus SCADHPTEGFCFCPKGYLLLDGACVPEEACKQCVGEDGTMHKLMETWVPEGQPCQLCVCLD 2351
Pavo_muticus      VCKDYPTTEGFCFCPPNGQVVFNDSCVGEVCTQCISEDGTHROHMETWIPSNPECKICTCLD 2271
Pavo_cristatus    VCKDYPTTEGFCFCPPNGQVVFNDSCVGEVCTQCISEDGTHROHMETWIPSNPECKICTCLD 2271
Gallus_gallus     VCKDYPTTEGFCFCPPNGQVVFNDSCVGEVCTQCISEDGTYHQMHWETWIPSNPECKICTCLD 2271
Anas_platyrhynchos VCKDYPTTEGFCFCPPAGQVIFNDSCVGEVCTQCISEDGMHHQHMETWIPSNPECKICTCLD 2286
Chelonia_mydas    VCKDYPTTEGFCFCPPGQVTLNSNCVDEEVCTQCVAEEDGTHQHMETWIPFNPECKICMCLD 2306
Anolis_carolinensis VCMDYPMEGFCFCPPDGQISLNGSCVHEETCTQCVSEGDGSHHKHLETWIPSEEPCKICVCLD 2263
Xenopus_tropicalis LCSDSSTTEGFCFCPEGDVIVNGKVCVNEKVCSCQTDRYGEEHQLLETWIPTNAPCSICMCLD 2341
Rhinatrema_bivittatum ACADSPTTEGFCFCPPGEVVFNGECTSEEVCSQCVDEEGIYHWRLDTWIPQNEPCKLCVCLD 2312
Latimeria_chalumnae QCPSDPTTEGFCFCPEGKVFFNGECANEDVCTQCIDENGTPROVMETWIPSHHCQICTCLD 2304
.....2350.....2360.....2370.....2380.....2390.....2400

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Homo_sapiens      GRKVNCTTQPCPTAKAPTTCGLCEVARLRONADQCCPEYECVCDPVSCDLPPVPHCERGLQ 2345
Pan_troglodytes   GRKVNCTTQPCPTAKAPTTCGLCEVARLRONADQCCPEYECVCDPVSCDLPPVPHCERGLQ 2345
Macaca_mulatta    GRKANCTMQPCPTAKAPTTCGLCEVARLRONADQCCPEYECVCDPVSCDLPPVPRCEGGLQ 2345
Callithrix_jacchus GRKVNCTTQPCPTAKAPTTCGLCEVARLRONADQCCPEYECVCDPVSCDLPAVPHCEDGLQ 2345
Equus_caballus    GRRVNCTLQPCPTARAPTTCGPCEVTRLRQONAGQCCPEYECVCDLVNCDPPLVPHCEGGLQ 2345
Pteropus_alecto   GRKVNCTSHPCPTARAPTTCGPCEVARLHONADQCCPEYECVCDLVSCDLPPVPHCAGGLQ 2313
Mus_musculus      GRKINCTAQPCPTARAPTTCGPCEVARLQSTNLCCPEYECVCDLVFNCLNPPVPPCEGGLQ 2345
Bos_taurus        GRKVNCTTQPCPSAGVPTTCGPCEVARLRQSTQCCPEYECVCDLVSCDVPVPPNCEGGLQ 2342
Ornithorhynchus_anatinus HRSINCTTQPCPTAKPPPCGCEMPRLRQRPQCCPDFECVCDLDSCEQPPVPLCQGGGLQ 2411
Pavo_muticus      NRKINCTLRPCTTIKTIVQCGPCEVPRLRDPNOCPPMYECVCDLVSCDLPPVPDCEFGGLQ 2331
Pavo_cristatus    NRKINCTLRPCTTIKTIVQCGPCEVPRLRDPNOCPPMYECVCDLVSCDLPPVPDCEFGGLQ 2331
Gallus_gallus     NRKVNCTVPRPCTTIKTIVQCGPCEVPRLRDPNOCPPVYECVCDLVSCDLPPVPDCEFGGLQ 2331
Anas_platyrhynchos NRRVNCTLRPCTNTTKSVQCGPCEVPRLRDPNOCPPYECVCDLVSCDLPPVPVCEGGLQ 2346
Chelonia_mydas    NRIINCTTQPCPTAKPAVCGPCEVSRRLQDSQCCPKYECVCDLVCTCDLPAVPACEDGLQ 2366
Anolis_carolinensis NKITNCTLQTCPTTKSVICGPCEVPLKWLTDSDQCCPVYKVCVCDLDTCLRPVPHCKDGLQ 2323
Xenopus_tropicalis NRMINCTAMPCTPVKPLTCGPCEIPRLKKTSEQCCPDYECVCDLTTCDVNPVPHCENGLV 2401
Rhinatrema_bivittatum NKTINCTTKPCPTAKAAVCDQCEVARLKSSDQCCPDYECVCDLITCDLPPVPNCENGLV 2372
Latimeria_chalumnae NRRINCTTKPCATATPPTCGPCEIPRLTNDHQCCPEFECVCDLVTCVLPVPKCEDGLV 2364
.....2410.....2420.....2430.....2440.....2450.....2460

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Homo_sapiens      PTLTNPGEGRPNFTACACRKEECKRVSPSPCPPHRLPTLRKTQCCDEYECACNCVNSTVSC 2405
Pan_troglodytes   PTLTNPGEGRPNFTACACRKEECKRVSPSPCPPHRLPTLRKTQCCDEYECACNCVNSTVSC 2405
Macaca_mulatta    PTLTNPGEGRPNFTACACRKEECKRVSPSPCPPHRLPTLRKTQCCDEYECACNCVNSTVSC 2405
Callithrix_jacchus PMLTNPGEGRPNFTACACRKEECKRVSPSPCPPHRLPTLRKTQCCDEYECACNCVNSTVSC 2405
Equus_caballus    PTLTNPGEGRPNFTACACRKEECKRVSPSPCPPHRLPTLRKTQCCDEYECACNCVNSTVSC 2405
Pteropus_alecto   PTLTNPGEGRPNFTACACRKEECKRVSPSPCPPHRLPTLRKTQCCDEYECACNCVNSTVSC 2373
Mus_musculus      PTLTNPGEGRPNFTACACRKEECKRVSPSPCPPHRLPTLRKTQCCDEYECACNCVNSTVSC 2405
Bos_taurus        PVLANPGEGRPNFTACACRKEECKRVSPSPCPPHRLPTLRKTQCCDEYECACNCVNSTVSC 2402
Ornithorhynchus_anatinus PVLVNPGEGRPNFTACACRKEECKRVSPSPCPPHRLPTLRKTQCCDEYECACNCVNSTVSC 2471
Pavo_muticus      LALTNPGEGRPNFTACACRKEECKRVSPSPCPPHRLPTLRKTQCCDEYECACNCVNSTVSC 2391
Pavo_cristatus    LALTNPGEGRPNFTACACRKEECKRVSPSPCPPHRLPTLRKTQCCDEYECACNCVNSTVSC 2391
Gallus_gallus     LALTNPGEGRPNFTACACRKEECKRVSPSPCPPHRLPTLRKTQCCDEYECACNCVNSTVSC 2391
Anas_platyrhynchos LALTNPGEGRPNFTACACRKEECKRVSPSPCPPHRLPTLRKTQCCDEYECACNCVNSTVSC 2406
Chelonia_mydas    PVLNTPGEGRPNFTACACRKEECKRVSPSPCPPHRLPTLRKTQCCDEYECACNCVNSTVSC 2426
Anolis_carolinensis LVQTNFGKCRPDYACVCKKEACSLPPAFACPPHRLPTLRKTQCCDEYECACNCVNSTVSC 2383
Xenopus_tropicalis PVLNTPGHCKPNFTACACRKEECKRVSPSPCPPHRLPTLRKTQCCDEYECACNCVNSTVSC 2461
Rhinatrema_bivittatum PTLTNPGEGRPNFTACACRKEECKRVSPSPCPPHRLPTLRKTQCCDEYECACNCVNSTVSC 2432
Latimeria_chalumnae PVLNTPGEGRPNFTACACRKEECKRVSPSPCPPHRLPTLRKTQCCDEYECACNCVNSTVSC 2424
.....2470.....2480.....2490.....2500.....2510.....2520

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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Homo_sapiens      PLGYLASTATNDCGCTTTTCLPDKVCVHRSTIYPVGQFWEEGCDVCTCTDMEDAVMGLRV 2465
Pan_troglodytes   PLGYLASTATNDCGCTTTTCLPDKVCVHRSTIYPVGQFWEEGCDVCTCTDMEDAVMGLRV 2465
Macaca_mulatta    PLGYLASTATNDCGCTTTTCLPDKVCVHRSTIYPVGQFWEEGCDVCTCTDMEDAVMGLRV 2465
Callithrix_jacchus PLGYLASTATNDCGCTTTTCLPDKVCVHRSTIYPVGQFWEEGCDVCTCTDMEDAVMGLRV 2465
Equus_caballus    PLGYLASTATNDCGCTTTTCLPDKVCVHRSTIYPVGQFWEEGCDVCTCTDMEDAVMGLRV 2465
Pteropus_alecto   PLGYLASTATNDCGCTTTTCLPDKVCVHRSTIYPVGQFWEEGCDVCTCTDMEDAVMGLRV 2465
Mus_musculus      PLGYLASTATNDCGCTTTTCLPDKVCVHRSTIYPVGQFWEEGCDVCTCTDMEDAVMGLRV 2465
Bos_taurus        PLGYLASTATNDCGCTTTTCLPDKVCVHRSTIYPVGQFWEEGCDVCTCTDMEDAVMGLRV 2462
Ornithorhynchus_anatinus PLGYLSSSVTNDGCGTTTSCAPDKVCVHRSTIYPVGQFWEEGCDVCTCTDMEDAVMGLRV 2531
Pavo_muticus      PLGYLSRSLTNDGCGISTTCVPDMVCVHNINIVYPIGKTWKNCKECSCTSMRDDITGFQM 2451
Pavo_cristatus    PLGYLSRSLTNDGCGISTTCVPDMVCVHNINIVYPIGKTWKNCKECSCTSMRDDITGFQM 2451
Gallus_gallus     PLGYLSRSLTNDGCGISTTCVPDMVCVHNINIVYPIGKTWKNCKECSCTSMRDDITGFQM 2451
Anas_platyrhynchos PPGYLSRSLTNDGCGISTTCVPDMVCVHNINIVYPIGKTWKNCKECSCTSMRDDITGFQM 2466
Chelonia_mydas    PAGYLSTSVTNDGCGTTTTCIADKVCVHRNVVYPIGKSWEEGCTDCTCTDMEDAVLGLHI 2486
Anolis_carolinensis PAGYLSTSVTNDGCGISTTCIPDKVCVHNINIVYPIGKTWEEGCTECSCTDMEDAVTGLRI 2443
Xenopus_tropicalis PTGYSSSIATNDGCGTSTVTCIPDKVCVHNINIVYPIGKSMWEDGCRSCTCTDKKDSVTGLLI 2521
Rhinatrema_bivittatum PAGYLSVSVTNDGCGTWTNCTIPDKVCVHNINIVYPIGSSWDHGCTTCTCTDMVDSITGLRI 2492
Latimeria_chalumnae PLGYSSSESVTNDGCGTTTTCNPKDKVCVHHEVIYHTGHSWEECKECTCTNEKDSITGLYI 2484
.....2530.....2540.....2550.....2560.....2570.....2580

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Homo_sapiens      AQCQSOKPCEDSCRSGFITYVLHEGECCGRCLPSACEVVTGSPRGDS-----QSSWKS SVGS 2519
Pan_troglodytes   AQCQSOKPCEDSCRSGFITYVLHEGECCGRCLPSACEVVTGSPRGDS-----QSSWKS SVGS 2519
Macaca_mulatta    VQCSQKPCEDSCRSGFITYVLHEGECCGRCLPSACEVVTGSPRGDS-----QSSWKS SVGS 2519
Callithrix_jacchus AQCQSOKPCEDSCRSGFITYVLHEGECCGRCLPSACEVVTGSPRGDS-----QSSWKS SVGS 2519
Equus_caballus    AQCQSOKPCEDSCRSGFITYVLHEGECCGRCLPSACEVVTGSPRGDS-----QSYWQNVGS 2519
Pteropus_alecto   AQCQSOKLCEESQSGFITYVLHEGECCGRCLPSACEVLTGSPRGDS-----QSYLKNVGS 2487
Mus_musculus      VQCSORPCEDSCQPGFSYVLHEGECCGRCLPSACKVVGASLRGDS-----HSSWKS SVGS 2519
Bos_taurus        AQCQSOKPCADICRPGFITYVLHEGECCGRCLPSACEVVTGSPRGDS-----QTQWKS SVGS 2516
Ornithorhynchus_anatinus AQCRPKICDENKCGFTSYVLHEGECCGRCLAAACETKENS LRGT-----EVRLQQVGS 2585
Pavo_muticus      MECHDKICNTFCSRGYNYIVQDGECCGRQKTAEEQQFWSRGDA-----DPLLYEVGT 2505
Pavo_cristatus    MECHDKICNTFCSRGYNYIVQDGECCGRQKTAEEQQFWSRGDA-----DPLLYEVGT 2505
Gallus_gallus     MECHDKICNTFCSRGYKYIVQDGECCGRQKTAEEQQFWSRGDA-----DPLLYEVGT 2505
Anas_platyrhynchos MECHDKICNTFCSRGYKYIIVQDGECCGRQKTAEEQLFWSRGDA-----VPRLHEVGT 2520
Chelonia_mydas    AECLEKECNTICPGGYTYVSQEGECCGKCKQKIMCEEQNSWSRGDV-----DVRLEHVG 2540
Anolis_carolinensis AECLEKKCTNICPLGYKYFNKGS CCGKCKFKIMCDEILHSPRGDAN----EDVHWHEVGS 2499
Xenopus_tropicalis AECLOQRCTNCGQGFTYVKKAECCGKCKKIVCEQKISPRGQGDIDFSGETTRWYNVGA 2581
Rhinatrema_bivittatum SECLQKVCNKICPESAIYVQKEGECCTCKQSVCEEKVIGKGQGDVDISRNFIIRHKVGS 2552
Latimeria_chalumnae AECFEKTCSEICPPGETYTKEEGECCKKCKKANCOEVAFGTD-----GQEIINHWHVVD 2538
.....2590.....2600.....2610.....2620.....2630.....2640

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Homo_sapiens      QWASPENPCLINECVRVKEEVFIQQRNVSCPQLEVPVCPSPGFQLSCKTSA-CCPS CRCEP 2578
Pan_troglodytes   QWASPENPCLINECVRVKEEVFIQQRNVSCPQLEVPVCPSPGFQLNCKTSA-CCPS CRCEP 2578
Macaca_mulatta    HWASPENPCLINECVRVKEEVFVQQRNVSCPQLEVPVCPSPGFQLSCKTSA-CCPS CRCEP 2578
Callithrix_jacchus RWASLENPCLINECVRVKEEVFVQQRNVSCPQLEVPFCPPGFQLSCKTSE-CCPRCRCEP 2578
Equus_caballus    HWASPENPCLINECVRVKEEVFVQQRNVSCPQLDVPTCPTGFQLSCKTSE-CCPS CHCEP 2578
Pteropus_alecto   HWAVPGKPCLINECVRVKQEVFVQQRNVSCPQLDVPTCPTGFQLSCKTSE-CCPS CHCEP 2546
Mus_musculus      RWAVPENPCLVNECVRVEDAVFVQQRNISCPLAVPTCPTGFQLNCKTSE-CCPS CHCEP 2578
Bos_taurus        HWASPENPCLIEHCVRVEEVFVQQRNVSCPQLNVFVCPGLGFQLRCTLG-CCPTCRCEP 2575
Ornithorhynchus_anatinus RWPDPENPCVINECVRVQHEEVFVRRQNVLCGLDLPTCPLGFQLSCKRLEGCCPS CRCEP 2645
Pavo_muticus      EWRSPFNRCIINECVRVNDVVFVQKNLSCSQMDVPDCPDGTELRCQVTDCCPS CRCEP 2565
Pavo_cristatus    EWRSPFNRCIINECVRVNDVVFVQKNLSCSQMDVPDCPDGTELRCQVTDCCPS CRCEP 2565
Gallus_gallus     EWRSPFNRCIINECVRVNDVVFVQKNLSCSQMDVPDCPDGTELRCQVIDCCPS CRCEP 2565
Anas_platyrhynchos EWRSPFNDCIINECVRVNDVVFVQKNLSCSQMDVPDCPEGTELRCQVIDCCPS CRCEP 2580
Chelonia_mydas    VWRSPFSPCIVNKCVRVNDVVFVEKRNVSCHMDIPTCHLGYELRCDRITNCCPS CRCEP 2600
Anolis_carolinensis EWQSLSNPCIIKECVRVNEEVFIQKNVTCQMESLDCPFGTELHCDQKTGCCPTCHCEP 2559
Xenopus_tropicalis MWNSPTDPCIINECAQVNDVFIQKNVSCSEISTSKCPSGYELICMQGTCEPICQCEP 2641
Rhinatrema_bivittatum EWSSPFDPCIINVTQVNDVFIQKNVSCPLPSSRKCPVGFELECLR-NDCCLS CQCEP 2611
Latimeria_chalumnae IWRSLNPNCLINECNMVNGEAFVQKNVSCSHLKVPKCPTGFELQCNRVEDCCPTCECIP 2598
.....2650.....2660.....2670.....2680.....2690.....2700

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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      : . *   *:::      : : * *   * *      : * * . * .** .. : .
Homo_sapiens      MEACMLNGTVIGPGKTVMIDVCTTCRCMVQVGVISGFKLECRKTTTCNPCLGYKEENNTG 2638
Pan_troglodytes   MEACMLNGTVIGPGKTVMIDVCTTCRCMVQVGVISGFKLECRKTTTCNPCLGYKEENNTG 2638
Macaca_mulatta    VEACMLNGTMIGPGKSVIMIDACTTCRCIVQVGIIISGFKLECRKTTTCNPCLGYKEENNTG 2638
Callithrix_jacchus MEACMLNGTIIIGPGKSVIMIDVCTTACHCIVEAGAASGFQLECRKTTCKPCPLGYKEENNP 2638
Equus_caballus    VQACMLNGTIIIGPGKSLMIDPCTTCRCIVQVGAIISGFKLECRKITCEACPVGVEEKEITQG 2638
Pteropus_alecto   VDACILNGTIIIGPGKSLMIDVCTTCHCTVQVGTISGFKLECRKTTCEACPVGVEEKEITQG 2606
Mus_musculus      VEACLLNGTIIIGPGKSVIMIDVCTTCRCIVQVTDASRFKLECRKTTCEACPMGYREEKSQG 2638
Bos_taurus        VQACVLNGTIIIGPGKTVMVDACMTCRCHVQAGVISGFKLECRKTTTCQACPAGYMEEKIQG 2635
Ornithorhynchus_anatinus VQGCVVNGTIIAPGSSLMEDPCTSCHCSSSS-----FQLQCRITTCYSCPRGYREEKVNG 2700
Pavo_muticus      VNGCPLNGTVIGPWKRMMVDQCTTCICSLQSVSSRRYSLTCTKFSCEPCPTNYRROEISG 2625
Pavo_cristatus    VNGCPLNGTVIGPWKRMMVDQCTTCICSLQSVSSRRYSLTCTKFSCEPCPTNYRROEISG 2625
Gallus_gallus     VNGCPLNGTLIGPWKRMMVDQCTTCICSLQSVSSRRYSLTCTKFSCEPCPTNYRROEISG 2625
Anas_platyrhynchos VNGCPLNGTVIGPWKRMMVDQCTTCICSLQSMPSRRYSLTCTKFSCEPCPTNYRROEIPG 2640
Chelonia_mydas    VNGCVLNGTVVGVGEHMLDQCTINCQCSLQRLGPMNYKLTCKRKTTCPCPKNHRMEVISG 2660
Anolis_carolinensis VNGCVLNGTIIIEAGKQVLVDECTSCQCSLQSGLSLKYKLTCKGKKHCEPCPKNYREEKVPD 2619
Xenopus_tropicalis IPGCRYNGSIIAPNTGIMIDECSCECTTPRGLILSYKLTCKKRTCPSPKPNFILKKEEG 2701
Rhinatrema_bivittatum VPGCILNGTVIGPGETLMIDQCTINCQCSVERGGLVKFRLTCEKVTCQPCPKDYRVEKVRG 2671
Latimeria_chalumnae VNGCVLNGTIVGAGKTVIMDACNECECRVENDMITKFLRCKKTTCKPCPDGYIAEKING 2658
.....2710.....2720.....2730.....2740.....2750.....2760

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      .***:*   * :::      : : . : * .***: * . :   *::   **.*:
Homo_sapiens      ECCGRCLPTACTIQLRGGQIMTLKRDETLQDGDTHFCKVNERGEYFWEKRVTCPPFDE 2698
Pan_troglodytes   ECCGRCLPTACTIQLRGGQIMTLKRDETLQDGDTHFCKVNERGEYFWEKRVTCPPFDE 2698
Macaca_mulatta    ECCGRCLPTACTIQLRGGQIMTLKRDETLQDGDTHFCKVNERGEYFWEKRVTCPPFDE 2698
Callithrix_jacchus ECCGRCLPTACTIQLRGGQIMTLKRDETLQDGDTHFCKVNERGEYFWEKRVTCPPFDE 2698
Equus_caballus    ECCGRCLPTACTIQLRGGQIMTLKRDETLQDGDTHFCKVNERGEYFWEKRVTCPPFDE 2698
Pteropus_alecto   ECCGRCLPMACTIQLRGGQIMTLKRDETLQDGDTHFCKVNERGEYFWEKRVTCPPFNE 2666
Mus_musculus      ECCGRCLPTACTIQLRGGQIMTLKRDETLQDGDTHFCKVNERGEYFWEKRVTCPPFDE 2698
Bos_taurus        ECCGRCLPTACTIQLRGGQIMTLKRDETLQDGDTHFCKVNERGEYFWEKRVTCPPFNE 2695
Ornithorhynchus_anatinus SCCGKCVPTACTIIRLKEGRIMELKPNIDLQDGDTHSCWGEQEETIWERQVTRCPAFDA 2760
Pavo_muticus      SCCGKCVPTSCGIRLRDGRFQYLOPNESLQDGDTHFCKISEKGEFIWERRITGCPPFDP 2685
Pavo_cristatus    SCCGKCVPTSCGIRLRDGRFQYLOPNESLQDGDTHFCKISEKGEFIWERRITGCPPFDP 2685
Gallus_gallus     SCCGKCVPTSCGIRLRDGRFQYLOPNESLQDGDTHFCKINEKGEFIWERRITGCPPFDP 2685
Anas_platyrhynchos SCCGKCVPTSCSIRLRDGRLOYNALQDGDTHNCKINEKGEFIWERRITGCPPFDS 2700
Chelonia_mydas    SCCGRCVPTSCGIKLRDGTILYLKPNETIQDGDTHSCKVNEKREFIWEKRITGCPPFDS 2720
Anolis_carolinensis SCCGKCLPTMCAIQLRNRTILYLKPNEMIQDDCDTHSCKVNMKGDFIWEKRITGCPPFDS 2679
Xenopus_tropicalis SCCGQCIQTSCSVKLKNGTIIYVKPNETVRDGDTHSCKINNLGELTREKRITSCPPFNR 2761
Rhinatrema_bivittatum SCCGKCVPTACAIKLDGRILNLPNETIQDGDTHICKANARSEFTWEKRTTGCPPFNR 2731
Latimeria_chalumnae SCCGKCKPTVCSVKLKSGRIVKLKPNETIQDGDTHNCKVNDQGEFVWEKRITSCPPFNR 2718
.....2770.....2780.....2790.....2800.....2810.....2820

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      .***: ** : .   :***. *   : *   : :   :...*   : :   * * : * *.:
Homo_sapiens      HKCLAEGGKIMKIPGTCCDTCEEPECNDITARLQYVKVGSCKSEVEVDIHYCGKCAASKA 2758
Pan_troglodytes   HKCLAEGGKIMKIPGTCCDTCEEPECNDITARLQYVKVGSCKSEVEVDIHYCGKCAASKA 2758
Macaca_mulatta    HKCLAEGGKIMKIPGTCCDTCEEPECSDITARLQYVKVGSCKSEVEVDIHYCGKCAASKA 2758
Callithrix_jacchus HECLAEGGKIMKTPGTCCNRCEVPECKDITARLQYVKVGSCKSEVEVDIHYCGKCAASKA 2758
Equus_caballus    HKCLAEGGKIMSVPGTCCHTCEAPECRDITATLQYVKVGDCQSEEEVDIHYCGKCAASKA 2758
Pteropus_alecto   HKCLAEGGKIMKIPGTCCDTCEEPCDKDITASLQYVKVGNCRSEEEVDIHYCGKCAASKA 2726
Mus_musculus      HKCLAEGGKIVKIPGTCCDTCEEPCDKDITAKVQYIKVGDCKSQEEVDIHYCGKCAASKA 2758
Bos_taurus        HKCLAEGGEIMKIPGTCCDTCEEPECKDITARVKSIVKVGDCCKSEDEVDIHYCGRCTSKA 2755
Ornithorhynchus_anatinus QRCLAEGGSVVKIDNTCCNKCVVSECKQVSGSLQFVEIGDCKSEEKIDIPYCAGKCSSQT 2820
Pavo_muticus      RRCLAEGGRIAKLGNLTCCDTCVEEECRPVSTRLOQKNVNGCVGEKEVPISHCEGKCRSNT 2745
Pavo_cristatus    RRCLAEGGRIAKLGNLTCCDTCVEEECRPVSTRLOQKNVNGCVGEKEVPISHCEGKCRSNT 2745
Gallus_gallus     RRCLAEGGRIAKLGNLTCCDTCVEEECRPVSTRLOQKNVNGCVGEKEVPISHCEGKCRSNT 2745
Anas_platyrhynchos RRCLAEGGRIAKLGNLTCCDTCLEVECRPVSTRLOFRNINGCVAEKEVPISHCEGKCRSST 2760
Chelonia_mydas    RRCLAEGGKIAKIDNTCCETCIEAECRQVSSRLTYLNINGCEAVDGVLFQCEGKCRSKT 2780
Anolis_carolinensis NRCLAEGGKIAKIENTCCKTCEVEPECKEVTGRLEYVKVDDCVNENQLNIHYCEGKCAASKA 2739
Xenopus_tropicalis EKCLTDGGKIKELDDSCCETCEVEPECKQVTGIITYVRVDDCTSDROLNLHYCEGKCTSKS 2821
Rhinatrema_bivittatum ERCLAEGGKIAQLNNTCCETCLESECRPTTGELKYIKIDDCMTEKQVHIQYCEGKCTSKA 2791
Latimeria_chalumnae EKCLAGGGKIAQITETCCERCVEAECKQVTGVIKTIMIDDCVTENNVDNIHYCEGKCTSKA 2778
.....2830.....2840.....2850.....2860.....2870.....2880

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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      *.      :  *  ** . . . . :.*:* **::: * :  *  *  * : *
Homo_sapiens      MYSIDINDVQDQSCCSPTRTEPMQVALHCTNGSVVYHEVLNAMECKCSPRKCSK 2813
Pan_troglodytes   MYSIDINDVQDQSCCSPTRTEPMQVALHCTNGSVVYHEVLNAMECKCSPRKCSK 2813
Macaca_mulatta    MYSIDINDVQDQSCCSPTRTEPMQVPLHCTNGSVVYHEVLNAMQCECSPRKCSK 2813
Callithrix_jacchus IYSIDIEDVQDQSCCSPTRTEPMRVPLHCTNGSVVYHEILNAMQCKCSPRKCSK 2813
Equus_caballus    VYSIDTEDVEEQSCCSPTRKQPMHVPLRCTNGSVVIYHEVLNAMQCTCNPRKCST 2813
Pteropus_alecto   VYNIDTEDVQEQSCCSPTRTEPMQVALHCANGSVVYHEVLNAMQCRCSPRKCSK 2781
Mus_musculus      VYSIDIEDVQEQSCCCLPSRTEPMRVPLHCTNGSVVYHEVINAMQCRCSPRNCSK 2813
Bos_taurus        LYSIDTEDVQDQSCCSPTRTEPMFVPLRCTNGSIIHHVVLNALQCQCSSRKCSF 2810
Ornithorhynchus_anatinus AYSGHTGRVEGLSCCSCSATATEPRQVTLRCANGSLVLHHVLSAQGCSCAAHSCP 2875
Pavo_muticus      RYSIQTEKWEDVCSCTAIRTTTVTIPLQCPNGTVVQHYIPASQCECSLRKCTE 2800
Pavo_cristatus    RYSIQTEKWEDVCSCTAIRTTTVTIPLQCPNGTVVQHYIPASQCECSLRKCTE 2800
Gallus_gallus     RYSIQTEKWEDTCSCTAIRTTTVAIPLQCPNGTVVQHYIPASQCECSLRKCTE 2800
Anas_platyrhynchos RYSVQMGKWEDVCSCTATLTITVTIPLRCANGTVVQHYIPASQCECNLRKCTE 2815
Chelonia_mydas    KYSIEMNRLEDECTCCSATQTVFVNVPLRCANGTVVQHEVPSAVECECFSRQCT- 2834
Anolis_carolinensis IYNITVNDIEDKCTCCSATVKDSMLVPLRCANGSIVQHEVFNARQCECLSRKCMF 2794
Xenopus_tropicalis SYDIETHSMKEQCICCSATHTEPMKVPLRCANGTMIHEEVLQARSCECMCHKCTQ 2876
Rhinatrema_bivittatum IYSIETGGVEDQCICCSATQTEPMKVPLRCANGSLVQHEILHAKQCECLSHACTK 2846
Latimeria_chalumnae VYSLEKEKMENQCICCSATATEPMKVPLRCNGTIVQHEVLNAKQCDLSHECEK 2833
.....2890.....2900.....2910.....2920.....2930.....

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