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                                    :                       :   :       *
Pavo_muticus                --------------MLLH--------------------LAAEFDLRRDVVP----------    17
Pavo_cristatus              --------------MLLH--------------------LAAEFDLRRDVVP----------    17
Gallus_gallus               --------------MLLQ--------------------LAAEFDLQRDVVP----------    17
Anolis_carolinensis         MAALPQGALLPEAMPLLR--------------------LSARFEPAKEVAP----------    31
Mus_musculus                --------------MALR--------------------LVTHFDVLEDVLP---------S    18
Rattus_norvegicus           --------------MALR--------------------LVTHFDVLADVLP---------S    18
Homo_sapiens                --------------MALR--------------------LVADFDLGKDVLP-----WLRAQ    22
Pan_troglodytes             --------------MALR--------------------LVADFDLGKDVLP-----WLRAQ    22
Macaca_mulatta              --------------MALR--------------------LVADFDLGKDVLP-----WLRAQ    22
Callithrix_jacchus          --------------MMMEEDETENVPVWGSTGRLWCSLLLQMLLFLLCLPSGGGANEQAR    46
Canis_lupus_familiaris      --------------MALR--------------------LVCDFDLRKDVLP-----GLRAR    22
Equus_caballus              --------------MALR--------------------LAADFDLRKDVLP-----GLRA-    21
Bos_taurus                  --------------MALR--------------------LIADFDLEKDVLP-----WLRVQ    22
Heterocephalus_glaber       --------------MALR--------------------LVTDFDLAADALP----------    17
Rhinatrema_bivittatum       --------------MVLR--------------------FHAAFDLRRDVLP----------    17
Xenopus_tropicalis          --------------MVLD--------------------FCASFSLQRDVMP----------    17
                            1.......10........20........30........40........50........60

                                        .     * ::*:**.  :::*:*. .   . :*::*    .:*:
Pavo_muticus                --WLAAR--GWAEALGTSENSSALYIVNVERNGKIIYTWKGNQRSTHIGLYDLQTKENEH    73
Pavo_cristatus              --WLAAR--GWAEALGTSENSSALYIVNVERNGKIIYTWKGNQRSTHIGLYDLQTKENEH    73
Gallus_gallus               --WLAAR--GWAVALDTSEKSSALYIVNVERNGKIIYTWKGNQRSTHIGLYDLQMKENEH    73
Anolis_carolinensis         --WLAAGPGDSGVAEAVDNYLETLHIVNVERNGNIIYTWKGNQGYTHIGLYDHHTEKNQH    89
Mus_musculus                LLTQAATTDEGDRAGVLETTYGSLRVLNIERNGNIIYTYKDNKGNAVFGLYDCQTRQNEH    78
Rattus_norvegicus           LLVQAATADEGDEG--AETTLGSLRVLNIERNGDIIYTYKDNKGNAVFGIFDCQTRENEH    76
Homo_sapiens                RAVSEASGAGSGGADVLENDYESLHVLNVERNGNIIYTYKDDKGNVVFGLYDCQTRQNEL    82
Pan_troglodytes             RAVSEASGAGSGGAGVLENDYESLHVLNVERNGNIIYTYKDDKGNVIFGLYDCQTRQNEL    82
Macaca_mulatta              RAVSEASEAGSGGADVLENDYESLRVLNVERNGNIIYTYKDDKGNVIFGLYDCQTRQNEL    82
Callithrix_jacchus          RQARAIKENSEKDQDVVENDYESLRVLNIERNGNIIYTYKDDKGNVVFGLYDCQTRQNEL   106
Canis_lupus_familiaris      RAASLASGARGGGPGILEDNYESLRILNVERNGNIIYTYKDDKGNVAFGLYDCRTRQNEH    82
Equus_caballus              -----AAGARGGGAGILENNYESLRVLNVERNGNIIYTYKDDKGNVFFGLFDCHTRQNEH    76
Bos_taurus                  LAASAAAGARGGGPGVLENNYECLRVLNVERNRNIIYTYKDNKGNVFFGLYDYQTKQNEH    82
Heterocephalus_glaber       ----ALRAARAGGADVLETNYESLHLLNVERNGNIIYTYKDGKGNVVFGLYDCQTRQNEH    73
Rhinatrema_bivittatum       ------WLRPPEGNDVFEKISETLHIINVERSRTVLYTWKGIQGYTHIGLYDLEAKQNEV    71
Xenopus_tropicalis          ------WILAREASEISKRNSRTLRIVNVERNGRVLFTWKGGDGLTNIGLYDPDLRQNEM    71
                            ........70........80........90.......100.......110.......120

                            **:*:**:  .***:* *:::** *  : .        ::. *: *:**:** *.*** *
Pavo_muticus                LYTFEKDLRIISCSINSERTLLAVSFRQYTEEERVTQLLQSVSKYLTLLIEIHPINNVRV   133
Pavo_cristatus              LYTFEKDLRIISCSINSERTLLAVSFRQYTEEERVTQLLQSVSKYLTLLIEIHPINNVRV   133
Gallus_gallus               LYTFEKDLRIISCSINSERTLLAVSFRQYTEEERVTHLLQSVSKYLALLIEIHPINNVKV   133
Anolis_carolinensis         LYTFEKDLQVISCSVNSEKTLLAVSFLQSAKEERVNLVFQPVSKCLTLLIEIHPVNNVKV   149
Mus_musculus                LYTFEKDMQAVSCSVNSERTVLAASFIQYTTEGVKN-DLQPGSKCLTLLVEIHPVNNVKV   137
Rattus_norvegicus           LYTFEKDMQAVSCSVNSERTVLAASFIQYT-EGVRS-ELQPGSKCLTLLVEIHPVNNVTV   134
Homo_sapiens                LYTFEKDLQVFSCSVNSERTLLAASLVQSTKEGKRN-ELQPGSKCLTLLVEIHPVNNVKV   141
Pan_troglodytes             LYTFEKDLQVFSCSVNSERTLLAASLVQSTKEGKRN-ELQPGSKCLTLLVEIHPVNNVKV   141
Macaca_mulatta              LYTFEKDLQVFSCSVNSERTLLAASLVQSTKEKRKN-ELQPGSKCLTLLVEIHPVNNVKV   141
Callithrix_jacchus          LYAFEKDLEVFSCSVNSERTLLAASLIQSTKEGKRN-ELQPGSKCLTLLVEIHPVNNVKV   165
Canis_lupus_familiaris      LYTFEKDLHVISCSINSERTLLAASLVHSAKEGRKN-ELQPGSKCLTLLVEIHPVNNVKV   141
Equus_caballus              LYTFEKDLQVVSCSVNRERTLLAASLVQSTKEGRRN-ELQPGSKCLTLLVEIHPVNNVKV   135
Bos_taurus                  LYTFEKDLQVVSCSVNKEKTLLATSLVQAAKEGRSN-ELQPGSKCLTLLVEIHPINNVKV   141
Heterocephalus_glaber       LYTFEKDLQVISCSVNNERTLLAASLVQSTKERRRN-ELQPGSKCLTLLVEIFPVNNVKV   132
Rhinatrema_bivittatum       LYTFEKDLQIISCSINHERTLLAVSYFQSAKGEGVNEPLRPVSRCLTLLIEIHPFNNVKV   131
Xenopus_tropicalis          LYSFDKDLLIISCSVNCEKSLLALSYCNSVKEHQYE-PLRTVSKYLALLIEIKPVNNVRV   130
                            .......130.......140.......150.......160.......170.......180
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                     ***** : ****:*        :.: ***:*:::* *:. :    .    *:: ...:*
Pavo_muticus         LKAVDSCVRVQFLYPVEGRNTSTESH-LLLVSEDKYIEQFDIHVVAEEEHRVVIQNSGQL  192
Pavo_cristatus       LKAVDSCVRVQFLYPVEGRNTSTESH-LLLVSEDKYIEQFDIHVVAEEEHRVVIQNSGQL  192
Gallus_gallus        LKAVDSCVRVQFLYPVEDRNSSTESH-LLLVSEDKYIEQFDIH-VAEEEHRVVIQNSGQL  191
Anolis_carolinensis  LKAVDSCIRVQFLYPVAETHSFLESR-LLLISEDKYAEKVDIR-VVRDGQGVVIANSSQL  207
Mus_musculus         LKAVDSCVWVQFLYPQAESHLLPQNH-LLLISEEKYIERFHIQITREDGDRVVIRNSSHL  196
Rattus_norvegicus    LKAVDSCVWVQFLYPQAESHLLAQNH-LLLISEEKYIERFHIQITREDGNRVVIRNSSHL  193
Homo_sapiens         LKAVDSYIWVQFLYPHIESHPLPENH-LLLISEEKYIEQFRIHVAQEDGNRVVIKNSGHL  200
Pan_troglodytes      LKAVDSYIWVQFLYPHIESHPLPENH-LLLISEEKYIEQFRIHVAQEDGNRVVIKNSGHL  200
Macaca_mulatta       LKAVDSYIWVQFLYPHVESHPLPENH-LLLISEEKYIEQLRIHVAQEDGNRVVIKNSGHL  200
Callithrix_jacchus   LKAVDSYIWVQFLYPHVESHPLPENHLLLLISEEKYIEKFRVRVTQEDGNRVVIKNSGHL  225
Canis_lupus_familiaris LKAVDSSIWVQFLYPQVESHPPPENH-LLLISEEKYIEKFHIHVIQEDGNKVVLRDSGHL  200
Equus_caballus       LKAVDSYIWVQFLHPHVESNPLPENH-LLLISEEKYIEQFHIQVIQEDGNGVVIKNSGHL  194
Bos_taurus           LKAVDSYIWVQFLYPHVESCPQPKNH-LLLLSEEKYIEQFHIQVVQEDGNRVVIKNSGHL  200
Heterocephalus_glaber LKAVDSCVWVQFLYPHGASHPLPQSH-LLLVSEEKYIEQFHIQVTKEDGNRVVIKNSGHL  191
Rhinatrema_bivittatum LKAVDSCVRVQFLYP-AEMVQFPQSR-LLLISEDRYIEQFHISDVTEEGCGVLLQHCGQL  189
Xenopus_tropicalis   LKAVDYDIRVQFLYPTEDVCPFPESH-LLLVSKEKYIEQFHVILTVEGDSSVVIKNSGKL  189
                     .......190.......200.......210.......220.......230.......240

                      : *:*::::*.***   **:.*:  :.*   *.*:**  :. :.  :*  *:: .
Pavo_muticus         PRARVADDLIWAQWDMTEQRLFYIVPKESRSTLKCVQFYPDENFNSTLESQLDISVNDKR  252
Pavo_cristatus       PRARVADDLIWAQWDMTEQRLFYIVPKESRSTLKCVQFYPDENFNSTLESQLDISVNDKR  252
Gallus_gallus        PRARVADDLIWAQWDMTEQRLFYIVPKESRSILRCVQFYPDENFNSTLESQLDISVNDKQ  251
Anolis_carolinensis  SRERIADDLIWAQWDMMEQRLFYIVPKESLDTLNCIQFFPDKNFKLTLEAPLDISLADIA  267
Mus_musculus         PRDRLAEDFVWAQWDLSEQRLYYIELKESRSILKCIQFRADESFNLMFEMPLDITLTGLR  256
Rattus_norvegicus    PRERIAEDFVWAQWDVSEQRIHYIELQESRSILKCVQFWADESFTIMFEMPLDISLSGLR  253
Homo_sapiens         PRDRIAEDFVWAQWDMSEQRLYYIDLKKSRSILKCIQFYADESYNLMFEVPLDISLSNSG  260
Pan_troglodytes      PRDRIAEDFVWAQWDMSEQRLYYIDLKKSRSILKCIQFYADERYNLMFEVPLDISLSNSG  260
Macaca_mulatta       PRDRIAEDFVWAQWDMSEQRLYYIDLKKSRSILKCIQFYADESYNLMFEVPLDVSLSNSG  260
Callithrix_jacchus   QRDRIAENFVWAQWDMSEQRLYYIDLKKSKSILKCIQFYADESYNLMFEVPLDISLSNSG  285
Canis_lupus_familiaris PRERVAEDFVWAQWDMSEQRLYYIVLKKSRSILKCIQFSANEKFNLMFEAPLDITLSASG  260
Equus_caballus       PRERVAEDFVWAQWDTSEQRLYYVELKKSRSILKCIQFYADENFNLMFEAPLDIALSDSG  254
Bos_taurus           PRERIAEDFVWAQWDMSEQRLYYIDLKKSRSVLKCIQFYAEEHFNLMFEAPLDISLSDSG  260
Heterocephalus_glaber RRDRIAEDFVWAQWDMREQRLYYIDLKKSRIILKCIQFNADESFTLMFETPLDIPLSGSE  251
Rhinatrema_bivittatum PKDRVAEDFIWAQWDILGQRLFYIISKDSKPLLKCIQFYPDQNFKELLEVPLDLALADTG  249
Xenopus_tropicalis   PRERIAEDFVWVQWDMLHQRLFYIIPKHSSCVLHCIQFYHEDHFKIIFEVSLEIIFVYQA  249
                     .......250.......260.......270.......280.......290.......300

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Pavo_muticus         VKLVNFGYDGCKDQDVAS-KSLNLQVFTSKAGGLCVCCSLASDIPGEITYCIYFLHKGFS  311
Pavo_cristatus       VKLVNFGYDGCKDQDVAS-KSLNLQVFTSKAGGLCVCCSLTSDIPGEITYCIYFLHKGFS  311
Gallus_gallus        VKLVNFGYNDCEDRDVPS-KSLNLQVFTSKAGGLCVCCSLPSDIPGEISYSIYFLHKGFS  310
Anolis_carolinensis  LKPMNLDYNCHQDREIIP-KPLNIRVITNETGGLCICYSLIPITSEEVTYSVLFLHKGYS  326
Mus_musculus         FKLVNFGYDYRQDREKLC-NQPSLCIFTNHTGSLCMCYSPKSDSREEITYSVFYLHKGYR  315
Rattus_norvegicus    FKLVNFGYDYRQDQAKLC-HQPSLCIFTNHTGSLCVCYSPKSDSWKEITYSVFYLHKGYR  312
Homo_sapiens         FKLVNFGCDYHQYRDKFS-KHLTLCVFTNHTGSLCVCYSPKCASWGQITYSVFYIHKGHS  319
Pan_troglodytes      FKLVNFGCDYHQDRDKFS-KHLTLCVFTNHTGSLCVCYSPKCASWEQITYSVFYIHKGHS  319
Macaca_mulatta       FKLVNFGCDYHQDREKLS-KHLTLCVFTNRTGSLCVCYSPKCASWEQITYSVFYIHKGHS  319
Callithrix_jacchus   FKLVNFGCDYQ-DQEKLS-KHLSLCVFTNHAGSLCVCYSPKCAAWEQITYSVFYIHKGYS  343
Canis_lupus_familiaris FELVNFGCDDLQDQGNLS-KHLTLCVFTNHTGSLCVCYSPKFDSWEKITYSVFYFHKGHS  319
Equus_caballus       FNLVNFGCTDLQDQEKFS-EHPTLCVFTNHTGSLCVCYSPKLDSWEQITYSVFYFHKGHS  313
Bos_taurus           FKLVNFGYSDLQDKEELS-EHLTLCVFTNHTGSLCVCYCPNFDSWEQITYSVFYFHKGHS  319
Heterocephalus_glaber FKLVNFGCGYHEEQEKLS-KHLTLYVFTNHTGSLCACYSQKFDSWEQITYSVFYFHEGYR  310
Rhinatrema_bivittatum LRLVNFGVDTYQDRSP------NVHVFASKEGGLCLCYSGPSD-AAEVKYSVAFLHRGCS  302
Xenopus_tropicalis   VCLINLGFDPYEVKEQESSTSLNIQVFTDNTGGLCLFYLQPFKDAKEVKYMVIFLHRGCS  309
                     .......310.......320.......330.......340.......350.......360
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                          * : .:           .          : * **. :*  * * :*:**:* :****:*: :*
Pavo_muticus              KTFTVSLERPETPQLK--------EVAFLNLDYYVAAYLPGQFLHLLNIQHPDLLCYSLF   363
Pavo_cristatus            KTFTVSLERPETPQLK--------EVAFLNLDYYVAAYLPGQFLHLLNIQHPDLLCYSLF   363
Gallus_gallus             KTFTASLERPETPQLK--------EVAFLNLDYYVAAYLPGQFLHLLNIHHPDLLCYSLF   362
Anolis_carolinensis       KTYTVALDEMNSLEGN--------DLTFLNLDYYVAIYLPGHFLHLLNTRHPDLMCYSFF   378
Mus_musculus              KIFTAAPGSADSQVTNGADSQVTDGIAFLNLGYFVAVYSPGHFLHLLNIQHPDLVCHSLF   375
Rattus_norvegicus         KTFTVAPGSTDSQVAN--------GVTFLNLGYFVAVYSPCRFLHLLNIRHPDLICHSLF   364
Homo_sapiens              KTFTTSLENVGSHMTK--------GITFLNLDYYVAVYLPGHFFHLLNVQHPDLICHNLF   371
Pan_troglodytes           KTFTTSLENVGSHVTK--------GITFLNLDYYVAVYLPGHFFHLLNVQHPDLICHNLF   371
Macaca_mulatta            KTFTTSLENVGSHVTK--------GITFLNLDYYVAVYLPGHFFHLLNVQHPDLICHSLF   371
Callithrix_jacchus        KTFTTSLKNVGSHMTK--------GITFLNLDYYVGVYLPGHFFHLLNVQHPDLICHNLF   395
Canis_lupus_familiaris    KTFTAALGSVDSLVTK--------GLTFLNLDYYVAVYLPGHFFHLLNIQHPDLICHSLF   371
Equus_caballus            KTFTAALGSADSRVTK--------GITFLNLDYFVAVYLPGHFFHLLNIQHPDLVCHSLF   365
Bos_taurus                KTFTTTLGSVDSHVTK--------GITFLNLDYYVAVYLPGHFFHLLNIQHPDLICHSLF   371
Heterocephalus_glaber     KTFTAAPGSGGSHVTK--------DITFLNLDYYVAVYLPGHFFHLLNIQHPDLICHSLF   362
Rhinatrema_bivittatum     KTFAVAITGPLSGHNR--------DVLFANLDYYVVVYLPGHFLHLLNTQHPDLMCYHLF   354
Xenopus_tropicalis        KTFKVALSAEEMKQLK--------KMSFINLGGYVAVYLPDHFLHLINTRHPDLMCYHLF   361
                          .......370.......380.......390.......400.......410.......420

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Pavo_muticus              LTGEDARIDILPNCS-IQSPLVSTVLDCCIGRMYAVSISDSALLKFLQNSKRDSERLAAL   422
Pavo_cristatus            LTGEDARIDILPNCS-IQSPLVSTVLDCCIGRMYAVSISDSALLKFLQNSKRDSERLAAL   422
Gallus_gallus             LTGEDARIDMLPNCS-IQSPLVSTVLDCCIGRLYAMSISDSALLKFLQNSKRDSERLAAL   421
Anolis_carolinensis       LTGGEAKINGLHAST-IISPLKSTVFDRSTGELFTIEINKEALFQFLWNSKCDTYKLAAL   437
Mus_musculus              LTGNNKIAAVLPPSP-LQSLPGSLVLDCYSGKVYRVTLDQSYLLRFLWNAHLDCERMAAL   434
Rattus_norvegicus         LTGNNKTAAVLPPSP-LQSLPGSLILDCSSGKVYRATLDQSYLMGFLWNAQLDCEKMAAL   423
Homo_sapiens              LTGNNEMIDMLPHCP-LQSLSGSLVLDCCSGKLYRALLSQSSLLQLLQNTCLDCEKMAAL   430
Pan_troglodytes           LTGNNEMIDMLPHCP-LQSLSGSLVLDCCSGKLYRALLSQSSLLQLLQNTCLDCEKMAAL   430
Macaca_mulatta            LTGNNEMIDMLPHCP-LQSLSGSLVLDCCSGKLYRALLSQSSLLQLLQNTRLDCEKMAAL   430
Callithrix_jacchus        LTGNNEMIDMLPHSP-LQSLSGSLVLDYCSGKLYRAMLSQSSLLQLLQKTRLDCEKMATL   454
Canis_lupus_familiaris    LTGNNEVVDMLPHSP-LQSLSGSLVLDWCSGKLYRALLNQSYLLQFLWNTQLDCEKMAVL   430
Equus_caballus            LTGNNEVVDMLPHGP-LQSLSGSLILDWCSGRLYRADLNRSYLLEFLWDARLDWEKMAVL   424
Bos_taurus                LTENSEVIDMLPHSP-LQSLSGSLVLDSRSGKLYRVLLNQSYLVEFLRSARLDCERMALL   430
Heterocephalus_glaber     LTGNNSMADVLPQSA-LRPLSGSLVLDWGLGKLYRATLNPPRLLQFLGAAQLDCDRMATL   421
Rhinatrema_bivittatum     LTGEAARLDVLQHSPCTQALLEGALLDCCSGIMFTVNINQSSVLKLLWDSELDCQKLAAL   414
Xenopus_tropicalis        LADTDARIGEICCDGPVQSVLMSSVIEYCQGILFSVSLNHLLLLKYLWTCKRDCERLAVL   421
                          .......430.......440.......450.......460.......470.......480

                          ** *          :                  :: *: :  * *  *: :***::**
Pavo_muticus              HCALLCVSSTTDLEMK-----------------IIWWISENLSTCHSFDPFQEFIIASL   464
Pavo_cristatus            HCALLCVSSTTDLEMK-----------------IIWWISENLSTCHSFDPFQEFIIASL   464
Gallus_gallus             HCALLCVRSTTDLEMK-----------------IIWWISENLSTCHSFDPIQEFIIASL   463
Anolis_carolinensis       HCLLLHIGSTREIESQ-----------------VIQWILDKTSICFTFDPMQEFIIASS   479
Mus_musculus              HCILSCSQDPGFPEEQ-----------------IIQWISEHVSACHSFDLIQEFLIASS   476
Rattus_norvegicus         HCALSCDSDPGFP-EQ-----------------IVQWVSERVSACHSFDLIQEFLIASS   464
Homo_sapiens              HCALYCGQGAQFLEAQ-----------------IIQWISENVSACHSFDLIQEFIIASS   472
Pan_troglodytes           HCALYCGQGAQFLEGQWRQRADLNTNRVLSDFLKIIQWISENVSACHSFDLIQEFIIASS   490
Macaca_mulatta            HCALYCGQGTRFLEGQ-----------------IIQWISENVSACHSFDLIQEFIIASS   472
Callithrix_jacchus        HCALSCGHGAQLLEGQ-----------------IIQWISENVSACHSFDLIQEFIIASS   496
Canis_lupus_familiaris    HCVLSCGRDPRFLEAK-----------------IIQWISENISTCHSFDLIQEFIIASS   472
Equus_caballus            HCVLSCRQDTRFLEAK-----------------IIQWISENISACHSFDLIQEFIIASS   466
Bos_taurus                HCALSHGRDPRRLEAK-----------------IIQWISENISACHSFDLIQEFIIASS   472
Heterocephalus_glaber     HCLLACGRELQPLEAQ-----------------IIQWISENFSTCHSFDLIQEFIIASS   463
Rhinatrema_bivittatum     HCALLHFENPMHWETQ-----------------IIQWICDCASTCATFNPIQEFLVASL   456
Xenopus_tropicalis        HCFLLHLDQKPLWETE-----------------IIEWICENLSVCQMFDPIQEFIIASL   463
                          .......490.......500.......510.......520.......530.......540
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                                *         :. ** ::.:  *   : *:   ::   :* :.     .:* .:   **
Pavo_muticus                    YCRMCPETNNLDKLLPYTSLLDWTGVIPGVACATDIISLPVLEIQNSKGFWEKLDSNLES   524
Pavo_cristatus                  YCRMCPETNNLDKLLPYTSLLDWTGVIPGVACATDIISLPVLEIQNSKGFWEKLDSNLES   524
Gallus_gallus                   YCRMCPETNNLDKLLPYTSLLDWTGVIPGVACATDIISLPVLEMQNSKGFWEKLDSNLES   523
Anolis_carolinensis             YWTMCLDVTNLDKLLPYTPLLQWNEDFPGIICRTQIISMPALKVQHCKDFWEKLSMSLEC   539
Mus_musculus                    YWSVYAELDDMGMLLQYSSVLTWNTEIPGIKFTTEELPLPLMKVYGLKGYWAKLNSNLEY   536
Rattus_norvegicus               YWSVYPGLDDVDLLLPYSSVLTWDTEIPGMKLVTEELPLPLMKVYSLKGYWAKLNSNLEY   524
Homo_sapiens                    YWSVYSETSNMDKLLPHSSVLTWNTEIPGITLVTEDIALPLMKVLSFKGYWEKLNSNLEY   532
Pan_troglodytes                 YWSVYSETSNMDKLLPHSSVLTWNTEIPGITLVTEDIALPLMKVLSFKGYWEKLNSNLEY   550
Macaca_mulatta                  YWSVYSETSNMDKLLPHSSVLTWNTEIPGITLVTEDIALPFMKVLNFKGYWEKLNSNLEY   532
Callithrix_jacchus              YWSVYSETSNVDKLLPHSSVLTWNTEIPGITLVTEDTALPLMKVHSFKGYWETLNSNLEN   556
Canis_lupus_familiaris          YWSIYPETSNIDKLLPYSSVLTWNTEIPGITLVTEEITLPFMKVHSFKGYWEKLNSNLEY   532
Equus_caballus                  YWSIYPETGNMDKLLPYSSVLTWNTEIPGITLVTEEIALPLMRVHSFKGYWEKLHSNLEY   526
Bos_taurus                      YWSIYPETSNMDKLLPYSSLLTWDTEIPGITLVTEEIPLPLMKVHSFKGYWEKLNSNLEY   532
Heterocephalus_glaber           YWSVYPETSNMDMLLQYSSVLTWDSEIPGITLVTEEIPLPLMKVHSFQGYWEKLNSNLEH   523
Rhinatrema_bivittatum           YRRTIPEASNLSKLLPYTSVPCWNMAIPGIMCTTDIIALPIVKRKGLGGFWENLHSGLEY   516
Xenopus_tropicalis              YRRMSLETIYLDKLLPYTSLPFWNQGIEGVLWSSDITDMPILKIGMFKGFWEKFHSELEY   523
                                .......550.......560.......570.......580.......590.......600

                                :* :     .      ::* .   :                      .   * :.*: .*
Pavo_muticus                    VKYAEPHLHYHNNVLRREWRNLSEETE------------------ERRATAYLRNIFENA   566
Pavo_cristatus                  VKYAEPHLHYHNNVLRREWRNLSEETE------------------ERRATAYLRNIFENA   566
Gallus_gallus                   VKYAEPHLHYHNNVLRREWRNLSEETE------------------ERRATAYLRNIFENA   565
Anolis_carolinensis             VKYSEPYLHFNYKMLQKEWDNLLSEER------------------TEERTTYMKNIFGNA   581
Mus_musculus                    IKYTKPHLHYHNSVVRREWHNLISEER----------------TGKRRSTMYVRNILENA   580
Rattus_norvegicus               IKYTKPHLHYHNSVVRREWHNLISEER----------------TGKRRSTMYVRNILDNA   568
Homo_sapiens                    VKYAKPHFHYNNSVVRREWHNLISEEK----------------TGKRRSAAYVRNILDNA   576
Pan_troglodytes                 VKYAKPHFHYNNSVVRREWHNLISEEK----------------TGKRRSAAYVRNILDNA   594
Macaca_mulatta                  VKYAKPHFHYNNIVVRREWHNLISEEK----------------TGKRRSTAYVRTILDNA   576
Callithrix_jacchus              VKYAKPHFHYNNSVVRREWHNLISEEK----------------TGKRRSTAYVRNILDNA   600
Canis_lupus_familiaris          VKCSKPCLLYNNSMVKREWHSLISEEK----------------TGRRRSMVYVRNIFDNA   576
Equus_caballus                  VKYSEPHSHYSNSVVRRQWHSLISEEK----------------TGKRRSMAYVRNILDNA   570
Bos_taurus                      VKYSKPHLHYNNSVVRREWHNLISEEK----------------TGKRRSTVYVRNILDNA   576
Heterocephalus_glaber           VKYATPPSRYTNSVVWREWHNLVAELQGCWGQRLRSPTVWSQETGKRRPTVYVRNILHSA   583
Rhinatrema_bivittatum           VKYAEPCFHFK--TLRRDWWKLISELN----------------TEDKRTTVYHKNILDNA   558
Xenopus_tropicalis              MKHT----HHNNPVHRRDWCKQIADVD----------------TQEWRNIIYQRNILENA   563
                                .......610.......620.......630.......640.......650.......660

                                  *:  :       *: *: *:**  :: *  *:  .*::*: : *  : .. ::::.:*
Pavo_muticus                    KKVLSHLDAWDSEERLVPLFQEEDYQQQLLMGLMVAQLKDHLMRHLQYVGKKKIDQIVLD   626
Pavo_cristatus                  KKVLSHLDAWDSEERLVPLFQEEDYQQQLLMGLMVAQLKDHLMRHLQYVGKKKIDQIVLD   626
Gallus_gallus                   KKVLSHLDAWDSEERLVPLFQEEDYQQQLLMGLMVAQLKDHLMRHLQYVGKKKIDQIVLD   625
Anolis_carolinensis             KRVFSSLNMSNVEGRLVPFFQDEDNQQQLLTGLMVAQLKDHLARHLQYIGTKNMEQIAVD   641
Mus_musculus                    MKVIASMETRTLEPRLIPFLQEEDRHQRLLMGLMVSELRDHLLRHLQGVEKKKIEQMVLD   640
Rattus_norvegicus               VKVISNMEMKTFEPRLIPLLQEEDRHQRLLMGLMVSELRDHLLRHLQGVEKKKIEQMVLD   628
Homo_sapiens                    VKVISNLEARNLGPRLTPLLQEEDSHQRLLMGLMVSELKDHFLRHLQGVEKKKIEQMVLD   636
Pan_troglodytes                 VKVISNLEARNLGPRLTPLLQEEDSHQRLLMGLMVSELKDHFLRHLQGVEKKKIEQMVLD   654
Macaca_mulatta                  IKVISNLEARNLGPRLTPLLQEEDSHQRLLMGLMVSELKDHFLRHLQGVEKKKIEQMVLD   636
Callithrix_jacchus              IKVISNLEARNLEPRLTPLLQEEDSHQRLLMGLMVSELRDHFLRHLQGVEKKKIEQMVLD   660
Canis_lupus_familiaris          MKVISNLEARNLEPRLTPLFQEEDYHQRLLIGLMVSELREHLLRHLQGIEKKKIEQMVLD   636
Equus_caballus                  IKVISKLEARHLEPRLTPLFQEEDNHQRLLVGLMVSELKDHLLRHLRGVEKKRIEQMVLD   630
Bos_taurus                      IKVISNVEAKNLEPRLTPLFQEEDTHQQLLIGLMVSELREHLLRHLQGVEKRKIEQMVLD   636
Heterocephalus_glaber           VKVISNVEARHLEPRLAPLLQEEDTRHRLLVGLMVSELKDHLLRYLQGVEKKKIEQMAVD   643
Rhinatrema_bivittatum           KTVLSHLCTCNSEHRIAPLFQEEDYQQKELIGLIMVRLKDHLTRHLPYLRKNIIDKIALD   618
Xenopus_tropicalis              KKVILNMETWSSDQRIVPLHQEEDYLQKDLMWLMTIKLKDHLSQPLLHVGKNNIDKIVLD   623
                                .......670.......680.......690.......700.......710.......720
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                                 * :: * *:  :::  *: : :    : :            :   *::* :: :::  :
Pavo_muticus                     YVANLLNLVHRIMKEVWKIYQLHSCIFCFD-----ERGSEAEFRVFHIMSRILEAANGMC   681
Pavo_cristatus                   YVANLLNLVHRIMKEVWKIYQLHSCIFCFD-----ERGSEAEFRVFHIMSRILEAANGMC   681
Gallus_gallus                    YVANLLNLVHRIMKEVWKIHQLHSCIFCFD-----ERGSEAEFRVFHIMSRILEAANGMC   680
Anolis_carolinensis              YVSKLLRLIWQIMESVWKKYNLQSHTFSIK-----GQGNSQEVAAFHIMCRILQATNGMC   696
Mus_musculus                     YISKLLDLIWCLLETSWRKHSMHPLVLHLN-----SHCSAADFEVFHLMTRILDAASSLC   695
Rattus_norvegicus                YISKLLDLVWCLLETSWRKHSVHPWVLHLN-----EHGSPADFEVFHLMTRILDAASSLC   683
Homo_sapiens                     YISKLLDLICHIVETNWRKHNLHSWVLHFN-----SRGSAAEFAVFHIMTRILEATNSLF   691
Pan_troglodytes                  YISKLLDLICHIVETSWRKHNLHSWVLHFN-----SRGSAAEFAVFHIMTRILEATNSLF   709
Macaca_mulatta                   YISKLLDLICHILETSWRKHNLHSCILHFN-----SRGSAAEFAVFHIMTRILEATKSLF   691
Callithrix_jacchus               YISKLLDLICHILEASWRKHNLHSWVFHFN-----SRGSAAEFAVFHIMTRILEATNSLF   715
Canis_lupus_familiaris           YISKLLDLICQILETSWRTHHLHPWVLHF------RRASAAEFTVFHIMTRILEATMSLF   690
Equus_caballus                   YISKQLDLICQILEASWRKHNLHPWIFHFN-----RRASAAEFAVFHIMTRILEATHSLF   685
Bos_taurus                       YVSKLLDLICQILEASWRKHNLHPWALHFN-----RQASAAEFAVFHIMTRILEATNTLF   691
Heterocephalus_glaber            YTSKLLHLICCILETSWRKHSLDSWALRLD-----GSGSAAESAVFHLMTRILEATSSLF   698
Rhinatrema_bivittatum            YVAKLLDLIGLIMETVWRKHDLVSRVFRLD-----GKGSEDEFSMFHIMTRVLEAANGLC   673
Xenopus_tropicalis               YISKQLDLICLILEVVWKKYNLDLYAFSFLFICSSSRGCSSDYSAFYMMCHISESAIKLG   683
                                 .......730.......740.......750.......760.......770.......780

                                  ******::*   ***:**** .:*: ** *:* ***  . :*:*:**:. ..*:** *:
Pavo_muticus                     MPLPPGFHTLHLGLGVRCLPLHTLLHYIDNGVLHLTETCVRKLLKDLDDNEKNEKLKFSI   741
Pavo_cristatus                   MPLPPGFHTLHLGLGVRCLPLHTLLHYIDNGVLHLTETCVRKLLKDLDDNEKNEKLKFSI   741
Gallus_gallus                    MPLPPGFHSLHLGLGVRCLPLHTLLHYIDNGVLHLTETCVRKLLKDLDDNEKNEKLKFSI   740
Anolis_carolinensis              MPLPPGFHTLLMGLGVRCLPLHTFLHYIDHGVLHLTEMNAIKLLKELDDTVKNEKLKLSI   756
Mus_musculus                     LPLPPGFHSLHTILGVHCLPLYSLLHYIDNGVLLLTETAVTRLMKDLDNSEKNEQLKFSI   755
Rattus_norvegicus                FPLPPGFHSLHTILGVHCLPLYNLLHYIDNGVLLLTETVVTRLMKDLDNSEKNEKLKFSI   743
Homo_sapiens                     LPLPPGFHTLHTILGVQCLPLHNLLHCIDSGVLLLTETAVIRLMKDLDNTEKNEKLKFSI   751
Pan_troglodytes                  LPLPPGFHTLHTILGVQCLPLHNLLHCIDSGVLLLTETAVIRLMKDLDNTEKNEKLKFSI   769
Macaca_mulatta                   LPLPPGFHTLHTILGVHCLPLHNLLHCIDSGVLLLTETAVVRLMKDLDNTEKNEKLKFSI   751
Callithrix_jacchus               LPLPPGFHTLHTILGVHCLPLHNLLHCIDSGVLLLTETAVTRLMKDLDNTEKNEKLKFSI   775
Canis_lupus_familiaris           LPLPPGFHTLHTILGVHCLPLHNLLHYIDSGVLLLTETAVIRLMKDLDNSENNEKLKFSI   750
Equus_caballus                   LPLPPGFHTLHTVLGVRCLPLHNLLHYIDNGVLLLTETAVTRLMKDLDNTEKSEKLKFSI   745
Bos_taurus                       LPLPPGFHTLHMILGVRCLPLHNLLHYIDHGVLLLTEAAVTRLMKDLDNTEKNEKLKFSI   751
Heterocephalus_glaber            LPLPPGFHTLHTILGVHCLPLHSLLNYIDNGVLLLTETAVTRLLKDLDNTEKNEKLKFSV   758
Rhinatrema_bivittatum            APLPPGFQTLHTVLGVRCLPLHTLLHYIDNGVLQLTEACVTRLLKDLDDTKNNEKLKFSI   733
Xenopus_tropicalis               MPLPPGFQTLHLVLGVRCLPLGNLLHYIDAGILQLTEAFAVKLLKELDDNESNEKLKYSI   743
                                 .......790.......800.......810.......820.......830.......840

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Pavo_muticus                     VTRLPEVTLDALGLKARHFWDHPINANFLARKYVKLLLEKLGNRQCSRP-VPE--RHPVP   798
Pavo_cristatus                   VTRLPEVTLDALGLKARHFWDHPINANFLARKYVKLLLEKLGNRQCSRP-VPE--RHPVP   798
Gallus_gallus                    VTRLPEVTLDALGLKARQFWDHPVNANFRARKYVKLLLEKLGNRQCSRP-VPE--RHPVC   797
Anolis_carolinensis              LTRLP----EEIGHKICHIWSHPARSNAVARNYVKFLLEKCRNKQQRML-VVD--GLSAR   809
Mus_musculus                     IVRLP----PLIGQKVCRLWDHPMSSNIISRNHVARLLKNYR-KEPRNS-MID--KSSFP   807
Rattus_norvegicus                IVRLP----PLIGQKVCRLWDHPMSSNIISRNHVAQLLKNYK-KEPQSS-MID--KSSFP   795
Homo_sapiens                     IVRLP----PLIGQKICRLWDHPMSSNIISRNHVTRLLQNYK-KQPRNS-MIN--KSSFS   803
Pan_troglodytes                  IVRLP----PLIGQKICRLWDHPMSSNIISRNHVTRLLQNYK-KQPRNS-MIN--KSSFS   821
Macaca_mulatta                   ILRLP----PLIGQKICRLWDHPMSSNIISRNHVTRLLQNYK-KQPRNS-MID--KSSFS   803
Callithrix_jacchus               IVRLP----PLIGQKICRLWDHPMSSNIISRNHVMQLLQNYK-KRPRNS-MID--KSSFS   827
Canis_lupus_familiaris           IVRLP----PHIGQKICRLWDHPMSSNIISRNHVKQLLLNYK-KQPQSS-MID--KSPGS   802
Equus_caballus                   IVRLP----PLIGQKICRLWDHPMSSNIISRNHVKRLLQDYK-KQPRSS-VID--KSSYS   797
Bos_taurus                       IMRLP----PLTGQKICRLWDHPVSSNIISRNHVKRLLQNYN-KQPWSS-VMD--KSSFS   803
Heterocephalus_glaber            IVRLP----PLIGQKIYRLWDHPVSSNVIARNHVTRLLQNYK-KQPWSS-VIN--KSSFS   810
Rhinatrema_bivittatum            VTRLP----EEFCQKIYQVWDHPVSSSFIARSYVRLLLVKLAKRPLEQR-SVSDRRLSVC   788
Xenopus_tropicalis               IVRLP----ERICQNIHRLWDHAISNNCIARKYVEQLLCKLKKRECHLAGQAACSQSALS   799
                                 .......850.......860.......870.......880.......890.......900
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Pavo_muticus             VEFLPLNYLTNVLAEIEN--QGVHPYEKQDHINVRFVEEAALKHTMMLLGLRYS   850
Pavo_cristatus           VEFLPLNYLTNVLAEIEN--QGVHPYEKQDHINVRFVEEAALKHTMMLLGLRYS   850
Gallus_gallus            VEFLPLNYLTNVLAEIES--QGVHLYEKQDHINVRFVEEAALKHTMMLLGLRYS   849
Anolis_carolinensis      IEFLPLNYLINILAEVEC--QGWAASVQPENMNVKLVEELALKHTTMLLGL---   858
Mus_musculus             VEFLPLNYFIEILMGLESSNQALYGFEGHDNVDAEFVEEAALKHTTMLLGL---   858
Rattus_norvegicus        VEFLPLNYFIEILMHLESSNQALHGFEGHDNVDAEFVEEAALKHTTSLLGL---   846
Homo_sapiens             VEFLPLNYFIEILTDIESSNQALYPFEGHDNVDAEFVEEAALKHTAMLLGL---   854
Pan_troglodytes          VEFLPLNYFIEILTDIESSNQALYPFEGHDNVDAEFVEEAALKHTAMLLGL---   872
Macaca_mulatta           VEFLPLNYFIEILTDIESSNQALYPFEGHDNVDAEFVEEAALKHTTMLLGL---   854
Callithrix_jacchus       VEFLPLNYFIEILTDIESTNQALYPFEQHDNVDAKFVEEAALKHTTMLLGL---   878
Canis_lupus_familiaris   VEFLPLNYFIEILTDIESSNQALYAFEGHDNVDAKFVEEAALKHTTMLLGL---   853
Equus_caballus           VEFLPLNYFTGILTDIESSSRALNAFEGHDNVDAKFVEEAALKHTTVLLGL---   848
Bos_taurus               VEFLPLNYFIHILTDIESSNPALYAFEGHDNVDAKFVEEAALKHTAMLLGL---   854
Heterocephalus_glaber    VDFLPLNYLIEILTSLESSTQALNDFEGHDNVDAEFVEEAALKHTTMLLGL---   861
Rhinatrema_bivittatum    LEFLPLNYLVTVLSEVEER--ALNPFE-EDNVDMKFVEETALKQTTILLGL---   836
Xenopus_tropicalis       MNFLPLNYLIKMLSTIEE--QALNPFE-EDNIDAAFLEEIALKQTTVLLRLHKS   850
                         .......910.......920.......930.......940.......950....
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