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CLUSTAL 2.0.3 multiple sequence alignment


Homo_sapie      MAPPSEETPLIPQRSCSLLSTEAGALHVLLPARGPGPP----QRLSFSFGDHLAEDLCVQ
Pan_troglo      MAPPSEETPLIPQRSCSLLSTEAGALHVLLPARGPGPP----QRLSFSFGDHLAEDLCVQ
Canis_fami      MAPPSEETPLIPQRSCSLSSSEAGALHVLLPPRGPGPP----QRLSFSFGDHSAEELCVW
Mus_muscul      MAPPSEETPLIPQRSCSLSSSEAGALHVLLPPRGPGPP----QRLSFSFGDYLAEDLCVR
Rattus_nor      MAPPSEETPLISQRSCSLSSSEAGALHVLLPPRGPGPP----QRLSFSFGDYLAEDLCVR
Gallus_gal      MAPLGEETPLIGERSCSLSSSEPGTLQVYLYHRGPHAPPDSAATLTFTFGEYTAEELCVH
Danio_reri      MSEEEEVPLMKSERAGSQRSSCDSALQVHLYYSPSLNS---ETTFSIPTGHVTAESVCVL
                *:   * . :  :*: *  *:  .:*:* *    .  .      :::. *.  **.:**

Homo_sapie      AAKASGILPVYHSLFALATEDLSCWFPPSHIFSVEDASTQVLLYRIRFYFPNWFGLEK--
Pan_troglo      AAKASGILPVYHSLFALATEDLSCWFPPSHIFSVEDASTQVLLYRIRFYFPNWFGLEK--
Canis_fami      AAKASGILPVYHSLFALATEDLSCWFPPSHIFSMEDSGTQVLVYRLRFYFPNWFGLEK--
Mus_muscul      AAKACGILPVYHSLFALATEDFSCWFPPSHIFCIEDVDTQVLVYRLRFYFPDWFGLET--
Rattus_nor      AAKACGILPVYHSLFALATEDLSCWFPPSHIFSIEDVDTQVLVYRLRFYFPGWFGLET--
Gallus_gal      AAKACGVLPICHPLFALATEDLSCWYPPNHLFTVEDARSQVVVYRIRFFFPNWCGQGQ--
Danio_reri      AAKASGILPVYHNLFALASEDLSYWYPPNHLFKSEE--PVKVYYRVRFFFSSWFGQESRA
                ****.*:**: * *****:**:* *:**.*:*  *:  .  : **:**:*..* *

Homo_sapie      CHRFGLRKDLASAILDLPVLEHLFAQHRSDLVSGRLPVGLSLKEQGECLSLAVLDLARMA
Pan_troglo      CHRFGLRKDLASAILDLPVLEHLFAQHRSDLVSGRLPMGLSLKEQGECLSLAVLDLARMA
Canis_fami      CHRFGLRKDLASAILDLPVLEHLFAQHRNDLVSGRFSVGLSLKEQDEYLSLAVLDLARMA
Mus_muscul      CHRFGLRKDLTSAILDLHVLEHLFAQHRSDLVSGRLPVGLSMKEQGEFLSLAVLDLAQMA
Rattus_nor      CHRFGLHKDLTSAILDVHVLEHLFAQHRSDLVSGRLPVGLSLKDQGEFLSLAVLDLAQMA
Gallus_gal      VHRFQLPSDRPSPVLDYPVIDYLFAQSRSDFIAGRMELALSLAGQEECLSLAVLDMLRIA
Danio_reri      SYRFSLSKGRIFAVLDYAVIDYVFAQSRSDFVTGCGGISPALSLQQECLGLAVLDLWRLA
                 :** * ..   .:**  *:::::*** *.*:::*   :. ::  * * *.*****: ::*

Homo_sapie      REQAQRPGELLKTVSYKACLPPSLRDLIQGLSFVTRRRIRRTVRRALRRVAACQADRHSL
Pan_troglo      REQAQRPGELLKTVSYKACLPPSLRDLIQGLSFVTRRRIRRTVRRALRRVAACQADRHSL
Canis_fami      REQAQQPEELLKTVSYKVCLPPDLRDLIQGLSFVTRKRIRRMVRRALRRVTACQADRHSL
Mus_muscul      REQAQRPGELLKTVSYKACLPPSLRDVIQGQNFVTRRRIRRTVVLALRRVVACQADRYAL
Rattus_nor      RKQAQRPGELLKSVSYKACLPPSLRDLIQGQSFVTRRRIRRTVVQALRRVVACQADRYAL
Gallus_gal      KEKWQSPKEVFSCVSYKTCIPEQLRCQIQQHSFLTRKRIRRRVAQSLRRMGGCRVDGCCL
Danio_reri      KERNQSLAEICNTTSYKSCLPETHRQDIQRMNRLARYQIRKTLKRFLKKLGKCSAGERSL
                ::: *   *: . .*** *:*   *  **  . ::* :**: :   *:::  * ..  .*

Homo_sapie      MAKYIMDLERLDPAGAAETFHVGLPGAL--GGHDGLGLLRVAGDGGIAWTQGEQEVLQPF
Pan_troglo      MAKYIMDLERLDPAGAAETFHVGLPGAL--GGHDGLGLLRVAGDGGIAWTQGEQEVLQPF
Canis_fami      MAKYIMDLERLDPARAVETFLVSFPGAA--GGQDAQGLLRVAGDRGIAWSPGGQEALQPF
Mus_muscul      MAKYILDLERLHPAATTETFRVGLP-----GAQEEPGLLRVAGDNGISWSSGDQELFQTF
Rattus_nor      MAKYILDLERLHPAATTESFLVGLP-----GAQEEPGCLRVTGDNGIAWSSKDQELFQTF
Gallus_gal      KLKYLLDLERLRCCWAEESFHAHGP--------DADIAIHVSTDSGVSWSCVGSESRQHF
Danio_reri      KLKYLMKLSELEPDYGSESFPLHHSGWLEQSEQQRVLAVKVSGEGGIQIQKTDRQEWQTF
                  **::.*..*     .*:*    .        :    ::*: : *:       :  * *

Homo_sapie      CDFPEIVDISIKQAPRVGPAGEHRLVTVTRTDNQILEAEFPGLPEALSFVALVDGYFRLT
Pan_troglo      CDFPEIVDISIKQAPRVGPAGEHRLVTVTRTDNQILEAEFPGLPEALSFVALVDGYFRLT
Canis_fami      CDFPEIVDISIKQAPRAGPAGEHRLVTVTKTDKQILEAEFPGLPAALSFVALVDGYFRLT
Mus_muscul      CDFPEIVDVSIKQAPRVGPAGEHRLVTVTRMDGHILEAEFPGLPEALSFVALVDGYFRLI
Rattus_nor      CDFPEIVDVSIKQAPRVGPAGEHRLVTITRMDGHILEAEFPGLPEALSFVALVDGYFRLI
Gallus_gal      CDFPDIADVSIKQASRDGGPVENRIVTLTKTDNRVLEVEFPTLREALSFMALVDGYYRLT
Danio_reri      CDFPQIIDISIKRLCQEQMPLEGRVVTLTRQDDQCMEAEFQTLTDALSFVSLVDGYFRLT
                ****:* *:***:  :   . * *:**:*: * : :*.**  *  ****::*****:**
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Homo_sapie      TDSQHFFCKEVAPPRLLEEVAEQCHGPITLDFAINKLKTGGSRPGSYVLRRSPQDFDSFL
Pan_troglo      TDSQHFFCKEVAPPRLLEEVAEQCHGPITLDFAINKLKTGGSHPGSYVLRRSPQDFDSFL
Canis_fami      SDSRHFFCKEVAPPRLLEEVAEQCHGPITLDFAINKLKTGGSLPGSYVLRRSPQDFDSFL
Mus_muscul      CDSRHYFCKEVAPPRLLEEEAELCHGPITLDFAIHKLKAAGSLPGTYILRRSPQDYDSFL
Rattus_nor      CDSRHFFCKEVAPPRLLEEEAELCHGPITLDFAIHKLKAAGSLPGSYILRRSPQDYDSFL
Gallus_gal      ADAHHYFCKEVAPPRLLEDMENQCHGPISSEFAVRKLKAAGSHPGLYVLRRSPQDFDSYL
Danio_reri      TDSTHYFCAEVAPPSLLEDIQNYCHGPITSEFAVHKLKKAGGKNGMFLLRHSPKEFDKYF
                 *: *:** ***** ***:  : *****: :**:.*** .*.  * ::**:**:::*.::

Homo_sapie      LTVCVQNPLGPDYKGCLIRRSPTGTFLLVGLSRPHSSLRELLATCWDGGLHVDGVAVTLT
Pan_troglo      LTVCVQTPLGPDYKGCLIRRSPTGTFLLVGLSRPHSSLRELLATCWDGGLHVDGVAVTLT
Canis_fami      LTVCVQTPLGPDYKGCLIRCDPTGTFSLAGLGRPHSSLRELLTACWDGGLHMDGAALNLT
Mus_muscul      LTACVQTPLGPDYKGCLIRQDPSGAFSLVGLSQPHRSLRELLAACWNSGLRVDGAALNLT
Rattus_nor      LTACVQTPLGPDYKGCLIRQDPSGAFSLVGLSQLHRSLQELLTACWHSGLQVDGTALNLT
Gallus_gal      LTVCAETRSGQDYKRCLIRRDEDGSFWLAGLARRFCSLQELLGTYGCCGLQAEGAHLRLD
Danio_reri      LTVCIQTPLGMDYKDCLIEKNEK--FSLAGIHNSFINLKQLIDFYQLSTLYVSDIPVTLG
                **.* :.  * *** ***. .    * *.*: . . .*::*:       *  ..  : *

Homo_sapie      SCCIPRPKEKSNLIVVQRGHSPPTSSLVQPQSQYQLSQMTFHKIPADSLEWHENLGHGSF
Pan_troglo      SCCIPRPKEKSNLIVVQRGHSPPTSSLVQPQSQYQLSQMTFHKIPADSLEWHENLGHGSF
Canis_fami      FCCTPRPKEKSNLIVVRRGCNPPTSSPVQPQSQCQLSQMTFHKIPADSLEWHENLGHGSF
Mus_muscul      SCCAPRPKEKSNLIVVRRGCTPAPAPGCSP-SCCALTQLSFHTIPTDSLEWHENLGHGSF
Rattus_nor      SCCVPRPKEKSNLIVVRRGRNPTPAPGHSP-SCCALTKLSFHTIPADSLEWHENLGHGSF
Gallus_gal      TCCPPLPREKSNLLIVRSGCPRPPNSPPAP--RRSPNQMSFHKIDPESLIRGESLGQGSF
Danio_reri      KCCPPRAKELTNMIIIRNS-SMTEIPSSPTLQRHKPSHMQFHMIKHEDLIWSESLGQGSF
                 ** * .:* :*::::: .   .  .   .      .:: ** *  :.*   *.**:***

Homo_sapie      TKIYRGCRHEVVDGEARKTEVLLKVMDAKHKNCMESFLEAASLMSQVSYRHLVLLHGVCM
Pan_troglo      TKIYRGCRHEVVDGEARKTEVLLKVMDAKHKNCMESFLEAASLMSQVSYRHLVLLHGVCM
Canis_fami      TKIYRGCRHEVVDGEARETEVLLKVMDAKHKNCMESFLEAASLMSQVSYQHLVLLHGVCM
Mus_muscul      TKIFRGRRREVVDGETHDSEVLLKVMDSRHRNCMESFLEAASLMSQVSYPHLVLLHGVCM
Rattus_nor      TKIFHGHRREVVDGETHDTEVLLKVMDSRHQNCMESFLEAASLMSQVSYPHLVLLHGVCM
Gallus_gal      THIYKGIKRDQKDDEFYQTPVVLKVMDSSHRNCSESFLEAASIMSQLSHKHLVLLHGVSL
Danio_reri      THIFRGSKIDQRDGGTHSTEVLLKVLDANHKNCWESLFEAASLMSQISHRHLLLVYGISV
                *:*::* : :  *.   .: *:***:*: *:** **::****:***:*: **:*::*:.:

Homo_sapie      AGD-STMVQEFVHLGAIDMYLRK--RGHLVPASWKLQVVKQLAYALNYLEDKGLPHGNVS
Pan_troglo      AGD-STMVQEFVHLGAIDMYLRK--RGHLVPASWKLQVVKQLAYALNYLEDKGLPHGNVS
Canis_fami      AGD-SIMVQEFVHLGALDTYLRK--SGHLVPASWKLQVIKQLAYALNYLEDKGLLHGNVS
Mus_muscul      AGD-SIMVQEFVYLGAIDMYLRK--RGHLVSASWKLQVTKQLAYALNYLEDKGLPHGNVS
Rattus_nor      AGD-SIMVQEFVYLGAIDTYLRK--RGHLVPASWKLQVTKQLAYALNYLEDKGLPHGNVS
Gallus_gal      GKD-SIMVQEYIRHGPLDLYLKKNHSEGKVTTSWKLQVAKQLAYALNYLEDKKITHGNVS
Danio_reri      HKSKNIMVQEFVKHGALDLYLKR---SMCVSVSWKLDVAKQLACALNFLEEKNIAHGNIC
                  . . ****::  *.:* **::      *..****:* **** ***:**:* : ***:.

Homo_sapie      ARKVLLAREG--ADGSPPFIKLSDPGVSPAVLSLEMLTDRIPWVAPECLREAQTLSLEAD
Pan_troglo      ARKVLLAREG--ADGSPPFIKLSDPGVSPAVLSLEMLTDRIPWVAPECLREAQTLSLEAD
Canis_fami      ARKVLLAREG--ADGNLPFIKLSDPGVSPTVLSLEMLTDRIPWVAPECFQEARTLGLEAD
Mus_muscul      ARKVLLAREG--GDGNPPFIKLSDPGVSPTVLSLEMLTDRIPWVAPECLQEAQTLGLEAD
Rattus_nor      ARKVLLAREG--VDGNPPFIKLSDPGVSPTVLSLEMLTDRIPWVAPECLQEAGTLNLEAD
Gallus_gal      AKKVLLTREGDAASSSPPFIKLNDPGVSITVLAKEWLVERIPWVAPECLSDPQSLALPAD
Danio_reri      AKNLLLVREG-----DSPFIKLSDPGVSMSLLGKDVVLDRIPWVAPEVL-DTLEIELECD
                *:::**.***     . *****.***** ::*. : : :******** : :.  : * .*

Homo_sapie      KWGFGATVWEVFSGVTMPISALDPAKKLQFYEDRQQLPAPKWTELALLIQQCMAYEPVQR
Pan_troglo      KWGFGATVWEVFSGVTMPISALDPAKKLQFYEDRQQLPAPKWTELALLIQQCMAYEPVQR
Canis_fami      KWGFGATVWEVFSGIPMPISTLDPAKKLQFYEERQQLPAPKWMELAVLIQQCMAYEPGQR
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Mus_muscul      KWGFGATTWEVFSGGPAHITSLEPAKKLKFYEDQGQLPALKWTELAGLITQCMAYDPGRR
Rattus_nor      KWGFGATTWEVFSGAPMHITSLEPAKKLKFYEDRGQLPALKWTELEGLIAQCMAYDPGRR
Gallus_gal      KWGFGATLWEIFSGGNMPVSLLEPQKKLQFYDSRLQLPAPRWSELAALIAQCI-YAPSRR
Danio_reri      KWSFGTTLWEIFNGGEAPLQGLDLMQKLQFYENFSNLPTLEWTELAELISHCMQYQPELR
                **.**:* **:*.*    :  *:  :**:**:.  :**: .* **  ** :*: * *  *

Homo_sapie      PSFRAVIRDLNSLISSDYELLSDPTPGALAPRDGLWNGAQLYACQDPTIFEERHLKYISQ
Pan_troglo      PSFRAVIRDLNSLISSDYELLSDPTPGALAPRDGLWNGAQLYACQDPTIFEERHLKYISQ
Canis_fami      PSFRAIIRDLNSLITSDYELLSDPTPGALAPRDGLWNGAQLYAYQDPTIFEERHLKYISQ
Mus_muscul      PSFRAILRDLNGLITSDYELLSDPTPGIPSPRDELCGGAQLYACQDPAIFEERHLKYISL
Rattus_nor      PSFRAILRDLNGLITSDYELLSDPTPGIPNPRDELCGGAQLYACQDPAIFEERHLKYISL
Gallus_gal      PCFRAIIRDINSLISSDYELLSELSPGDVTLRESCWGYEHVAAGHGPAQFEERHLKYISL
Danio_reri      PSCRSIIRQLNSLITSDYEILHATDT--LPESNGFWKKLNIFKKQQEDVFEERYLRFISV
                *. *:::*::*.**:****:*    .      :      ::   :    ****:*::**

Homo_sapie      LGKGNFGSVELCRYDPLGDNTGALVAVKQLQHSGPDQQRDFQREIQILKALHSDFIVKYR
Pan_troglo      LGKGNFGSVELCRYDPLGDNTGALVAVKQLQHSGPDQQRDFQREIQILKALHSDFIVKYR
Canis_fami      LGKGNFGSVELCRYDPLGDNTGALVAVKQLQHSGPDQQRDFQREIQILKALHSDFIVKYR
Mus_muscul      LGKGNFGSVELCRYDPLGDNTGPLVAVKQLQHSGPDQQRDFQREIQILKALHSDFIVKYR
Rattus_nor      LGKGNFGSVELCRYDPLGDNTGPLVAVKQLQHSGPEQQRDFQREIQILKALHCDFIVKYR
Gallus_gal      LGKGNFGSVELCRYDPLGDSTGELVAVKKLQQDSAKELQDFEREIQILHSLQHDFIVKYR
Danio_reri      LGKGNFGSVELCRYDPWGDNTGELVAVKELQSNKQATMADFQREIQTISSLHCDYIVKYK
                **************** **.** *****:** .      **:**** : :*: *:****:

Homo_sapie      GVSYGPGRQSLRLVMEYLPSGCLRDFLQRHRARLDASRLLLYSSQICKGMEYLGSRRCVH
Pan_troglo      GVSYGPGRQSLRLVMEYLPSGCLRDFLQRHRARLDASRLLLYSSQICKGMEYLGSRRCVH
Canis_fami      GVSYGPGRQSLRLVMEYLPSGCLRDFLQRHRARLDAGRLLLYASQICKGMEYLGSCRCVH
Mus_muscul      GVSYGPGRQSLRLVMEYLPSGCLRDFLQRHRARLHTDRLLLFAWQICKGMEYLGARRCVH
Rattus_nor      GVSYGPGRQSLRLVMEYLPSGCLRDFLQRHRARLHNDRLLLFAWQICKGMEYLGARRCVH
Gallus_gal      GVCYSRGRRGLRLVMEYLPDGCLRDYLQKNQHRLEHRTLLLYAWQICKGMEYLGAQRCVH
Danio_reri      GICYSTGRLSTKLVMEYLPYGSLIGYMEKHRHNVGNRKLLLFASQICKGMEYLQSMRYVH
                *:.*. ** . :******* *.* .:::::: .:    ***:: ********* : * **

Homo_sapie      RDLAARNILVESEAHVKIADFGLAKLLPLDKDYYVVREPGQSPIFWYAPESLSDNIFSRQ
Pan_troglo      RDLAARNILVESEAHVKIADFGLAKLLPLDKDYYVVREPGQSPIFWYAPESLSDNIFSRQ
Canis_fami      RDLAARNILVESETHVKIADFGLAKLLPLDKDYYVVRGPGQNPIFWYSPESLSDNIFSCQ
Mus_muscul      RDLAARNILVESEAHVKIADFGLAKLLPLGKDYYVVREPGQSPIFWYAPESLSDNIFSRQ
Rattus_nor      RDLAARNILVESEAHVKIADFGLAKLLPLGKDYYVVREPGQSPIFWYAPESLSDNIFSRQ
Gallus_gal      RDLASRNILVESETHVKIGDFGLAKLLPQDKDYYVVQEPGQSPVFWYAPESLADNVFSRA
Danio_reri      RDLAARNILVASDNLVKIADFGLTKIIPVDKEYYRVTQPGESPVFWYAPESISELKFSHK
                ****:***** *:  ***.****:*::* .*:** *  **:.*:***:***:::  **

Homo_sapie      SDVWSFGVVLYELFTYCDKSCSPSAEFLRMMG-CERDVPALCRLLELLEEGQRLPAPPAC
Pan_troglo      SDVWSFGVVLYELFTYCDKSCSPSAEFLRMMG-CERDVPALCRLLELLEEGQRLPAPPAC
Canis_fami      SDVWSFGVVLYELFTYGNKSCSPSAEFLRIMG-CERDVPALCRLVELLAEGQRLPAPPAC
Mus_muscul      SDVWSFGVVLYELFTYCDKSCSPSAEFLSMMG-PEREGPPLCRLLELLAEGRRLPPPPTC
Rattus_nor      SDVWSFGVVLYELFTYSDKSCSPSTEFLRMMG-PEREGSPLCHLLELLAEGRRLPPPSTC
Gallus_gal      SDVWSFGVLLYELFTYSNKSRSPSEEFLHMMG-PEKPAQIICHLLELLKDSRRLPVPPGC
Danio_reri      SDVWSFGIVLHELFSYCDISQNPKKLCIQKIGRYVHSPSMAIHLLTLLKNNWRLPAPAQC
                *******::*:***:* : * .*.   :  :*   :      :*: ** :. *** *. *

Homo_sapie      PAEVHELMKLCWAPSPQDRPSFSALGPQLDMLWSGSRGCETHAFTAHPEGKHHSLSFS
Pan_troglo      PAEV------------------SAAG-----LASVSQSVDWAGVSGKPAGA-------
Canis_fami      PGEVHELMKLCWAPSPKDRPTFSALG--------PQLDALWRGVA-------------
Mus_muscul      PTEVQELMQLCWAPSPHDRPAFGTLS--------PQLDALWRGRPG------------
Rattus_nor      PTEVQELMQLCWSPNPQDRPAFDTLS--------PQLDALWRGSPG------------
Gallus_gal      PMEVYAMMLSCWAFAPSARPTFTELA--------ARVEALRDGRGTAHG---------
Danio_reri      PLKVHSIMMQCWEFNSENRPSFSSLK-------DLIENSLLDEREGCKG---------
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