CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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| | *** :***.**:** *.*:** .:**:::**::* : . * :* :::* | |
|--------------------------------------|--|------------|
| Mus_musculus | MGLRIHFVVDPHGWCCMGLIVFVWLYNIVIIPKIVLFPHYEEGHIPGILIIIFYGISIFC | 60 |
| Rattus_norvegicus | MGLRIHFVVDPHGWCCMGLIVFVWLYNIVIIPKIVLFPHYEEGHIPGILIIIFYGISIFC | 60 60 |
| Bos_taurus Equus_caballus | MGLRIHFVVDPHGWCCMGLIVFVWLYNFFLIPKIVLFPHYEEGHIPGILIIIFYGIAMFC MGLRIHFVVDPHGWCCMGLIVFVWLYNFFLIPKIVLFPHYEEGHIPGILIIIFYGIAIFC | 60 60 |
| Macaca mulatta | MGLRIHFVVDPHGWCCMGLIVFVWLYNFVLIPKIVLFPHYEEGHIPGILIIIFIGIAIFC | 60 |
| Callithrix jacchus | MGLRIHFVVDPHGWCCMGLIVFVWLYNIVIIPKIVLFPHYEEGHIPGVLIIIFYGIAIFC | 60 |
| Homo sapiens | MGLRIHFVVDPHGWCCMGLIVFVWLYNIVLIPKIVLFPHYEEGHIPGILIIIFYGISIFC | 60 |
| Pan_troglodytes | MGLRIHFVVDPHGWCCMGLIVFVWLYNIVLIPKIVLFPHYEEGHIPGILIIIFYGISIFC | 60 |
| Canis_lupus_familiaris | MGLRIHFVVDPHGWCCMGLIVFVWLYNIVLIPKIVLFPHYEEGHIPGILIIIFYGIAIFC | 60 |
| Heterocephalus_glaber | MGLRIHFVVDPHGWCCMGLIVFVWLYNIILIPKIVLFPHYEEGHIPGILIIIFYSIAIFC | 60 |
| Pavo muticus | MGLRIHFVVDPQGWCCMGLIIFVWLYNTIFIPKVILFPHYEEGHISAVAILCYYLCSLFC | 60 |
| Pavo_cristatus | MGLRIHFVVDPOGWCCMGLIIFVWLYNTIFIPKVILFPHYEEGHISALAILCYYLCSLFC | 60 |
| Gallus_gallus | MGLRIHFVVDPQGWCCMGLIIFVWLYNTIFIPKVILFPHYEEGHISAVAILCYYLCSLFC | 60 |
| Anas_platyrhynchos | MGLRIHFVVDPQGWCCMGLIIFVWLYNTIFIPKVILFPRYEEGHISAVAILCYYLCSLFC | 60 |
| Chelonia_mydas | MGLQIHFVVDPQGWCCMGMIIFVWLYNTLFIPQIILFPHYEEGHTSTAAILCYYLVSLFC | 60 |
| Xenopus_tropicalis | MGLSIHFVVDPQGWCCVGAIFFIWFYNTLFIPKLILFPRFDEGQISVAAIWAYYLTSIFC | 60 |
| Latimeria_chalumnae | MGLRVHFVADPQGWCCMGIIVFIWFYNTLLIPKLILFPHYEERHISAVVIATYYLTSLLC | 60 |
| | 1102030405060 | |
| | | |
| | | |
| Mar | : : : : * : * : * : * : : : : : : : : : | 100 |
| Mus_musculus Rattus_norvegicus | LVALVRASLTDPGRLPENPKIPHAERELWELCNKCNLMRPKRSHHCSRCGHCVRRMDHHC LVALVRASLTDPGRLPENPKIPHAERELWELCNKCNLMRPKRSHHCSRCGHCVRRMDHHC | 120 120 |
| Bos_taurus | LVALVRASITDPGRLPENPKIPHAERELWELCNKCNLMRPKRSHHCSRCGHCVRRMDHHC LVALVRASITDPGRLPENPKIPHGEREFWELCNKCNLMRPKRSHHCSRCGHCVRRMDHHC | 120 |
| Equus_caballus | LVALVRASIADPGRLPENPKIPHGEREFWELCNKCNLMRPKRSHHCSRCGHCVRRMDHHC | 120 |
| Macaca mulatta | LVALVRASITDPGRLPENPKIPHGEREFWELCNKCNLMRPKRSHHCSRCGHCVRRMDHHC | 120 |
| Callithrix jacchus | LVALVRASITDPGRLPENPKIPHGEREFWELCNKCNLMRPKRSHHCSRCGHCVRRMDHHC | 120 |
| Homo_sapiens | LVALVRASITDPGRLPENPKIPHGEREFWELCNKCNLMRPKRSHHCSRCGHCVRRMDHHC | 120 |
| Pan_troglodytes | LVALVRASITDPGRLPENPKIPHGEREFWELCNKCNLMRPKRSHHCSRCGHCVRRMDHHC | 120 |
| Canis lupus familiaris | LVALVRASFTDPGRLPENPKIPHGEREFWELCNKCNLMRPKRSHHCSRCGHCVRRMDHHC | 120 |
| Heterocephalus_glaber | LVALVRASITDPGRLPENPKIPHGEREFWELCNKCNLMRPKRSHHCSRCGHCVRRMDHHC | 120 |
| Pavo_muticus | IASLVRASVADPGRLPENPKIPITEREFWELCNKCNMMRPKRSHHCSRCGHCVRRMDHHC | 120 |
| Pavo_cristatus | IASLVRASVADPGRLPENPKIPITEREFWELCNKCNMMRPKRSHHCSRCGHCVRRMDHHC | 120 |
| Gallus_gallus | IASLVRASVADPGRLPENPKIPITEREFWELCNKCNMMRPKRSHHCSRCGHCVRRMDHHC | 120 |
| Anas_platyrhynchos | IASLVRASVADPGKLPENPKIPITEREFWELCNKCNMMRPKRSHHCSRCGHCVRRMDHHC | 120 |
| Chelonia_mydas | IVSLLRASIADPGKLPETPKIPLTEREFWELCNKCNMMRPKRSHHCSRCGHCVRRMDHHC | 120 |
| Xenopus_tropicalis | IISLLRASTADPGKLQDSPKIPLTEKELWELCNKCNMMRPKRSHHCSRCGHCVRRMDHHC | 120 |
| Latimeria_chalumnae | ITALIRASIADPGKLPQNPEISHTERDYWELCNKCNMMRPKRSHHCSRCGHCVRRMDHHC | 120 |
| | 708090100110120 | |
| | | |
| | ******* * * * * * * * * * * * * * * * * | |
| Mus musculus | PWINNCVGEDNHWLFLQLCFYTELLTCYALMFSFCHYYYFLPLK-KRNLDLFVVRHELAI | 179 |
| Rattus norvegicus | PWINNCVGEDNHWLFLQLCFYTELLTCYALMFSFCHYYYFLPLK-TRNLDLFVVRHELAI | 179 |
| Bos_taurus | PWINNCVGEDNHWLFLQLCFYTELLTCYALMFSFCHYYYFLPLK-KRNLDLFVVRHELAI | 179 |
| Equus_caballus | PWINNCVGEDNHWLFLQLCFYTELLTCYALMFSFCHYYYFLPLK-KRNLDLFVVRHELAI | 179 |
| Macaca_mulatta | PWINNCVGEDNHWLFLQLCFYTELLTCYALMFSFCHYYYFLPLK-KRNLDLFVVRHELAI | 179 |
| Callithrix_jacchus | PWINNCVGEDNHWLFLQLCFYTELLTCYALMFSFCHYYYFLPLK-KRNLDLFVVRHELAI | 179 |
| Homo_sapiens | PWINNCVGEDNHWLFLQLCFYTELLTCYALMFSFCHYYYFLPLK-KRNLDLFVFRHELAI | 179 |
| Pan_troglodytes | PWINNCVGEDNHWLFLQLCFYTELLTCYALMFSFCHYYYFLPLK-KRNLDLFVFRHELAI | 179 |
| Canis_lupus_familiaris | PWINNCVGEDNHWLFLQLCFYTELLTSYALMFSFCHYYYFLPVK-KRNLDLFVVRHELAI | 179 |
| Heterocephalus_glaber | PWINNCVGEDNHWLFLQLCFYTELLTCYALMFSFCHYYYFLPLK-KHNLDLFVFRHELAI | 179 |
| Pavo_muticus | PWINNCVGEDNHWLFLQLCFYTQILSSYTLLLDFCHYYYFLPLK-KDNWDVFVFRHELAL | 179 |
| Pavo_cristatus | PWINNCVGEDNHWLFLQLCFYTQILSSYTLLLDFCHYYYFLPLK-KDNWDVFVFRHELAL | 179 |
| Gallus_gallus | PWINNCVGEDNHWLFLQLCFYTQILSSYTLLLDFCHYYYFLPLK-KDNWDVFVFRHELAL PWINNCVGEDNHWLFLQLCFYTQILSSYTLILDFCHYYYFLPLK-KDYGDVFVFRHELAL | 179 |
| Anas_platyrhynchos | PWINNCVGEDNHWLFLQLCFYTQLLSSYTLILDFCHYYYFLPLK-KDYGDVFVFRHELAL PWINNCVGEDNHWLFLQLCFYTQLLSSYTLILDFCHYYYFLPLK-KVNWDLFVFRHELAL | 179 179 |
| Chelonia_mydas Xenopus tropicalis | PWINNCVGEDNHWLFLQLCFYTQLLSSYTLYLDFCHYYYFLPLAINWDIFIFRHELAL PWINNCVGEDNHWLFLQLCFYTQLLSGYTLVLDFCHYYYFLPLAINWDIFIFRHELAL | 179 178 |
| Latimeria chalumnae | PWINNCVGEDNHWLFLQLCFYTQLLSGITLVLNFCQYYCFQPLTWTNDGESFVFGHELAL | 180 |
| nacimer ia chaimhae | 130140150160170180 | 100 |
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| Mus musculus | | | ***:*: ** | | * ** | | | 216 |
|---|--|---------------------------------------|---|--|-------------------------------------|------------------|--|-----------------------------|
| Rattus_norvegicus | MRLAAFMG: | TMLVGITG | LF <mark>YTO</mark> LI <mark>G</mark> I | IT <mark>D</mark> TTSI | KMS | | | 216 |
| Bos_taurus | MRLAAFMG | TMLVGITG | LF <mark>YTQ</mark> LI <mark>G</mark> I | ITDTTSIE | EKMS | | | 216 |
| Equus_caballus Macaca_mulatta | MRLAAFMG | TLLVGITG | LFYTQLIGI. | ITDTTSIE | CKMS | | | 216 216 |
| Callithrix_jacchus | MRLAAFMG | TMLVGITG | LFYTOLIGI | ITDTTSIE | KMS | | | 216 216 |
| Homo_sapiens | MRLAAFMG: | [<mark>TMLVGITG</mark>] | LF <mark>YTQ</mark> LI <mark>G</mark> I | IT <mark>D</mark> TTSI | KM <mark>S</mark> | | | 216 |
| Pan_troglodytes | | | | | | | <mark>SQ</mark> KI <mark>GH</mark> LCC <mark>GE</mark> | |
| Canis_lupus_familiaris | MRLAAFMG | TMLVGITG | LFYTQLIGI | ITFI | LMMN | <mark>G</mark> W | KW <mark>TFGMLLL</mark> -R | V <mark>Q</mark> 226 216 |
| Heterocephalus_glaber Pavo muticus | I.RISAFMG | TTT.GGTSG | LEVTOLIGI | TTDTTSTE | KMS | | | 216 216 |
| Pavo_cristatus | LRISAFMG | /IILGGISG | LFYTOLIGI: | FTDTTSIE | KMS | | | 216 |
| Gallus_gallus | LRISAFMG | IIL <mark>GGISG</mark> I | LF <mark>YTO</mark> LIGI | FT <mark>D</mark> TTSI | KMS | | | 216 |
| Anas_platyrhynchos | LRISAFMGI | IMLGGISG | LF <mark>YTQ</mark> LM <mark>G</mark> I | FTDTTSIE | KMS | | | 216 |
| Chelonia_mydas Xenopus_tropicalis | LRISTFMG | IMLGGISG | LFYTQLVGI. | TDTTSIE | CKMS | | | 216 215 |
| Latimeria_chalumnae | VRISTFMG: | LMFGGMNG | LFYAOL <mark>TG</mark> I | TDTTTI | CKMS | | | 213 217 |
| | | | | | | | 2302 | |
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| | | | | | | | | |
| Mus musculus | | · · · · · · · · · · · · · · · · · · · | | | · : PSEVECT | TRWKTT.WF | .* I <mark>PFRQRQP</mark> LRV | PY 259 |
| Rattus_norvegicus | | -NCCEEISRI | <mark>P</mark> | RKPWQQTE | SEVFG1 | RWKILWF | I <mark>PFRQRQPLR</mark> V | PY 259 |
| Bos_taurus | | | | | | | I <mark>PFRRRQP</mark> LRV | |
| Equus_caballus | | | | | | | I <mark>P</mark> FR <mark>Q</mark> RQPLRV | |
| Macaca_mulatta Callithrix jacchus | | | | | | | I <mark>PFRQRQP</mark> LRV IPFRQRQPLRV | |
| Homo_sapiens | | | | | | | I <mark>P</mark> FRQRQPLRV | |
| Pan_troglodytes | VQVVRH RAV | TEQ <mark>EQT</mark> AC | Y-VY <mark>TT</mark> AL <mark>E</mark> | I <mark>KLC</mark> CS <mark>T</mark> A | (R <mark>D</mark> SL <mark>P</mark> | SSWKTLV | H <mark>PFGQ</mark> FS <mark>YH</mark> FL | E <mark>G</mark> 298 |
| Canis_lupus_familiaris | | | | | | | FTFELAIKLFF | |
| Heterocephalus_glaber | | | | | | | I <mark>PFRQRQP</mark> LRV | |
| Pavo_muticus Pavo_cristatus | | | | | | | I <mark>PFRQRQP</mark> LRV IPFRQRQPLRV | |
| Gallus gallus | | | | | | | IPFRQRQPLRA | |
| Anas_platyrhynchos | | | | | | | I <mark>P</mark> FRQRQPLRV | |
| Chelonia_mydas | | | | | | | I <mark>PFRQRQP</mark> LRI | |
| Xenopus_tropicalis Latimeria_chalumnae | | | | | | | I <mark>P</mark> FRRRQ <mark>P</mark> LRV IPFRQRQPLQV | |
| nacimeria_charumiae | | | | | | | 2903 | |
| | | | | | | | | |
| | | | | | | | | |
| Mus musculus | HFA <mark>N</mark> HV | 265 | | | | | | |
| Rattus norvegicus | HFA <mark>N</mark> HV | 265 | | | | | | |
| Bos_taurus | HFA <mark>N</mark> HV | 265 | | | | | | |
| Equus_caballus | HFA <mark>N</mark> HV | 265 | | | | | | |
| Macaca_mulatta Callithrix jacchus | HFA <mark>N</mark> HV HFANHV | 265 265 | | | | | | |
| Homo sapiens | HFANHV | 265 | | | | | | |
| Pan_troglodytes | HF <mark>P</mark> | 301 | | | | | | |
| Canis_lupus_familiaris | VAF | 289 | | | | | | |
| Heterocephalus_glaber | HFA <mark>N</mark> HV | 265 | | | | | | |
| Pavo_muticus Pavo_cristatus | HFA <mark>N</mark> HV HFA <mark>N</mark> HV | 265 265 | | | | | | |
| Gallus_gallus | HFANHV HFA <mark>N</mark> HV | 265 | | | | | | |
| Anas_platyrhynchos | HFA <mark>N</mark> HV | 265 | | | | | | |
| Chelonia_mydas | HFA <mark>N</mark> HV | 265 | | | | | | |
| Xenopus_tropicalis | YFA <mark>N</mark> HV | 264 | | | | | | |
| Latimeria_chalumnae | HF <mark>TN</mark> HV | 266 | | | | | | |