**T-COFFEE, Version\_9.01 (2011-10-13 19:18:48 - Revision 1115 - Build 7)**  
**Cedric Notredame**  
**CPU TIME:5 sec.**  
**SCORE=93**  
**\***  
**BAD AVG GOOD**  
**\***  
**Human        :  94**  
**Dog          :  93**  
**Cattle       :  93**  
**Brown\_Rat    :  94**  
**Chicken      :  94**  
**C.\_elegans   :  86**  
**Drosophila   :  95**  
**cons         :  93**  
  
**Human            1 ML-------------------------------------    2**  
**Dog              1 MKACTLRQ----NQDLTYYATRSTSLANFKVHYGGLKGN   35**  
**Cattle           1 ML-------------------------------------    2**  
**Brown\_Rat        1 MQ-------------------------------------    2**  
**Chicken          1 ML-------------------------------------    2**  
**C.\_elegans       1 MSNIPRG--------------------------------    7**  
**Drosophila       1 MSLADMGTASRSA---GGEGGR---------HYD-----   22**  
  
**cons             1 \*                                         39**  
  
  
**Human            3 ---------------------------------------    2**  
**Dog             36 TSPQMGVESPSHP-GLNFPITVLPATATLGFSHG-GGCR   72**  
**Cattle           3 ---------------------------------------    2**  
**Brown\_Rat        3 ---------------------------------------    2**  
**Chicken          3 ---------------------------------------    2**  
**C.\_elegans       8 ------VGAPPPP-GMN----------------------   17**  
**Drosophila      23 -LATGGAGSGGHPVGGGLP--GGRMTHSLSTPSGVDGTP   58**  
  
**cons            40                                           78**  
  
  
**Human            3 -----------HLKVQFLDDSQKI--FVVDQKSSGKALF   28**  
**Dog             73 SAP------AARLKEMFLKDLQSSSSPTSLQKSSGKALF  105**  
**Cattle           3 -----------HLKVQFLDDSQKI--FVVDQKSSGKALF   28**  
**Brown\_Rat        3 ------------LE---------R--QAGRQKSSGKALF   18**  
**Chicken          3 -----------HLKVQFLDDSQKI--FVVDQKSCGKGLF   28**  
**C.\_elegans      18 SSK---RGRLVCIKVRMLDDTVAV--FHLGHKAIGQTLL   51**  
**Drosophila      59 STPRHRGGKKLTVRIQMLDDSITM--FQVQAKALGRVLF   95**  
  
**cons            79             :.                 \*: \*: \*:  117**  
  
  
**Human           29 NLSCSHLNLAEKEYFGLEFCSHSGN-NVWLELLKPITKQ   66**  
**Dog            106 NLSCGHLNLAEKEYFGLEFCSHSGN-NVWLELLKPITKQ  143**  
**Cattle          29 NLSCSHLNLAEKEYFGLEFCSHSGN-NVWLELLKPITKQ   66**  
**Brown\_Rat       19 NLSCSHLNLAEKEYFGLEFCSHSGH-NVWLELLKPITKQ   56**  
**Chicken         29 NLTCSHLNLAEKEYFGLEFCSQAGN-HVWLEPLKPITKQ   66**  
**C.\_elegans      52 DEVCRHLNLLECDYFGLSFIDINGN-HCWLDREKTILRQ   89**  
**Drosophila      96 EQVCRQLNLLEADYFGLEYQEVSTHTKYWLDLEKPMNRQ  134**  
  
**cons           118 :  \* :\*\*\* \* :\*\*\*\*.: .   : : \*\*:  \*.: :\*  156**  
  
  
**Human           67 VKN-PKEIVFKFMVKFFPVDPGHLREELTRYLFTLQIKK  104**  
**Dog            144 VKN-PKDVVFEFMVKFFPVDPGHLREELTRYLFTLQIKK  181**  
**Cattle          67 VK----------------MDPGHLREELTRYLFTLQIKK   89**  
**Brown\_Rat       57 VKN-PKEVVFKFIVKFFPVDPGHLREELTRYLFTLQIKK   94**  
**Chicken         67 IKN-PKEVLFKFMVKFFPVDPGHLREELTRYLFTLQIKK  104**  
**C.\_elegans      90 ITNGSTDAKFYFVVKFYTPNPIDLEEEYTRYLFTMQIKR  128**  
**Drosophila     135 VGLSLIDPVLRFCIKFYTPDPAQLEEEYTRYLFCLQIKR  173**  
  
**cons           157 :                  :\* .\*.\*\* \*\*\*\*\* :\*\*\*:  195**  
  
  
**Human          105 DLALGRLPCSDNCTALMVSHILQSELGDFHEET--DRKH  141**  
**Dog            182 DLALGRLPCSENCTALMVSHILQSELGDFHEET--AKKH  218**  
**Cattle          90 DLALGRLPCSDNCTALMVSHILQSELGDFHEET--DRKH  126**  
**Brown\_Rat       95 DLALGRLPCSDNCTALMVSHILQSELGDFHEEM--VRKH  131**  
**Chicken        105 DLALARLPCSDKSAALLVSHLLQSELGDFHEET--DQQH  141**  
**C.\_elegans     129 DLALGELHCSDNTASLLSAYLVQSECGDFSSEDYPDATY  167**  
**Drosophila     174 DLATGSLQCNDNTAALMASYIVQASCGDFVPEDYPDHTY  212**  
  
**cons           196 \*\*\* . \* \*.:: ::\*: ::::\*:. \*\*\*  \*      :  234**  
  
  
**Human          142 LAQTRYLPNQDC-LEGKIMHFHQKHIGRSPAESDILLLD  179**  
**Dog            219 LAQTRYLPNQDC-LESKIMQFHQKHTGRSPAESDILLLD  256**  
**Cattle         127 LAQTRYLPNQDD-LESKIVHFHQKHIGRSPAESDILLLD  164**  
**Brown\_Rat      132 LVQTQYLPSQAC-LESKIMQFHQQHIGRSPAESDILLLD  169**  
**Chicken        142 LATHRYLPNQEY-LDNKIMHYHRRHRGKTPAESDAQLLD  179**  
**C.\_elegans     168 LSHTRFVPNQTLEFQKKVMDNHRNFIGMTPGESDLAMLE  206**  
**Drosophila     213 LSSYRFVPNQDATMQRKIMENHKKHVGQSPAEADLNLLE  251**  
  
**cons           235 \*   :::\*.\*   :: \*::. \*:.. \* :\*.\*:\*  :\*:  273**  
  
  
**Human          180 IARKLDMYGIRPHPASDGEGMQIHLAVAHMGVLVLRGNT  218**  
**Dog            257 IARKLDMYGIRPHPASDGEGMQIHLAVAHMGVLVLRGNT  295**  
**Cattle         165 IARKLDMYGIRPHPASDGEGMQIHLAVAHMGVLVLRGNT  203**  
**Brown\_Rat      170 IARKLDMYGIRPQPASDGEGMQIHLAVAHMGVLVLRGNT  208**  
**Chicken        180 VARKLEMYGIRPHPASDGEGTQINLAVTHMGVLVLRGNT  218**  
**C.\_elegans     207 VARRCDFYGVKLHAAKDIDGNDAALSVMHLGIKVFRQLQ  245**  
**Drosophila     252 TARRCELYGMKMHPAKDVEGVPLNLAVAHMGITVFQNIT  290**  
  
**cons           274  \*\*: ::\*\*:: :.\*.\* :\*    \*:\* \*:\*: \*::     312**  
  
  
**Human          219 KINTFNWAKIRKLSFKRKHFLIKLHANILVLCKDTLEFT  257**  
**Dog            296 KINTFNWAKIRKLSFKRKHFLIKLHANILVLCKDTLEFT  334**  
**Cattle         204 KINTFNWAKIRKLSFKRKHFLIKLHANILVLCKDTLEFT  242**  
**Brown\_Rat      209 KINTFNWAKIRKLSFKRKHFLIKLHANILVLCKDTLEFT  247**  
**Chicken        219 KINTFNWSKIRKLSFKRKHFLIKLHANVAALCKDTLEFT  257**  
**C.\_elegans     246 LDTTFSWARIRKLSFKRKKLLVKLHPDSYQYLKETVEFS  284**  
**Drosophila     291 RINTFSWAKIRKISFKRKRFLVKLHPEGYGYYKDTVEFF  329**  
  
**cons           313   .\*\*.\*::\*\*\*:\*\*\*\*\*::\*:\*\*\*.:     \*:\*:\*\*   351**  
  
  
**Human          258 MASRDACKAFWKTCVEYHAFFRLSE--EPKSKPKTLLCS  294**  
**Dog            335 MASRDACKAFWKTCVEYHAFFRLSE--EPKSKPKTLLCS  371**  
**Cattle         243 MASRDACKAFWKTCVEYHAFFRLSE--EPKSKPKTLLCS  279**  
**Brown\_Rat      248 MASRDACKAFWKTCVEYHAFFRLSE--EPKSKPKTLLCS  284**  
**Chicken        258 MASRDACKAFWKTCVEYHAFFRLSE--EPKSKPKALLCS  294**  
**C.\_elegans     285 FETRDECKNFWKKCVEHHAFFRCVQAEEPKKET-RFFIS  322**  
**Drosophila     330 FEGRNECKNFWKKCVENHGFFRCTA-VQNTPRRKTRVLS  367**  
  
**cons           352 :  \*: \*\* \*\*\*.\*\*\* \*.\*\*\*     : . .    . \*  390**  
  
  
**Human          295 KGSSFRYSGRTQRQLLEYGRKGRLKSLPFERKHYPSQYH  333**  
**Dog            372 KGSSFRYSGRTQRQLLEYGKKGRLRSLPFERKHYPSQYH  410**  
**Cattle         280 KGSSFRYSGRTQRQLLEYGKKGRLKSLPFERKHYPSQYH  318**  
**Brown\_Rat      285 KGSSFRYSGRTQRQLLEYGKKGRLKSLPFERKQYPSQYH  323**  
**Chicken        295 KGSSFRYSGRTQRQLLEHGRKAKMKSLPFERKHYASHYD  333**  
**C.\_elegans     323 KGSSFRYHGRTQKQLIDYVREHHKRREPFTRPLRSAAST  361**  
**Drosophila     368 RGSSFRYSGKTQKQIIEFVRENYVKRQNFQRYKTN----  402**  
  
**cons           391 :\*\*\*\*\*\* \*:\*\*:\*:::. ::   :   \* \*          429**  
  
  
**Human          334 ERQCR-SSPDLLSD-------------------------  346**  
**Dog            411 ERQCR-SSPDLLSD-------------------------  423**  
**Cattle         319 ERQCR-SSPDLLSD-------------------------  331**  
**Brown\_Rat      324 ERQCR-SSPDILSD-------------------------  336**  
**Chicken        334 ERQCR-SSPDLLTD-------------------------  346**  
**C.\_elegans     362 RKGTYSSTYGLVTDRPTKHRNGSVYEPNQTDPYNKHQNT  400**  
**Drosophila     403 ---------------------------------------  402**  
  
**cons           430                                          468**  
  
  
**Human          347 ---------VSKQVED-----------------------  353**  
**Dog            424 ---------VSKQVED-----------------------  430**  
**Cattle         332 ---------VSKQVED-----------------------  338**  
**Brown\_Rat      337 ---------VSKQVED-----------------------  343**  
**Chicken        347 ---------VSKQVEE-----------------------  353**  
**C.\_elegans     401 HSSMPHIAHISSQPADHSFSGTLDARVGKSVTRDPSTSV  439**  
**Drosophila     403 ---------------------------------------  402**  
  
**cons           469                                          507**  
  
  
**Human          354 --LRLAYGG-GYYQNVNGVHASEPVLESRRRNSALEVTF  389**  
**Dog            431 --LRLAYGG-GYYRNVNGVHASEPVLDSRRRNSAVEVTF  466**  
**Cattle         339 --LRLGYGS-GYYRTVNGVHASEPVLDGRRRNSAVEVTF  374**  
**Brown\_Rat      344 --LRLTYGS-SYYRNVNGVHASEPMLDGRRRNSAVEVTF  379**  
**Chicken        354 --LRLAYGSCGSFRTASGVHTSEPTLDSRHSGSATAMMF  390**  
**C.\_elegans     440 TQHRLRQLK-RSERCISDVDTVE----RPQRSSCRPVSH  473**  
**Drosophila     403 ---------------------------------------  402**  
  
**cons           508                                          546**  
  
  
**Human          390 ATELEHSKPEADP--------------------------  402**  
**Dog            467 AAELECSKPEVDP--------------------------  479**  
**Cattle         375 AAELEHSKPEADP--------------------------  387**  
**Brown\_Rat      380 AAELEHSKPEAEA--------------------------  392**  
**Chicken        391 AAELERFKPEVAP--------------------------  403**  
**C.\_elegans     474 AINISSTSSKEQPDLSVSLPNVLSDDLQMVCKEIEIEQN  512**  
**Drosophila     403 ---------------------------------------  402**  
  
**cons           547                                          585**  
  
  
**Human          403 ---------------------------------------  402**  
**Dog            480 ---------------------------------------  479**  
**Cattle         388 ---------------------------------------  387**  
**Brown\_Rat      393 ---------------------------------------  392**  
**Chicken        404 ---------------------------------------  403**  
**C.\_elegans     513 DPPKSVSGDNFQQRRSSRDYDNVSEDSYRLSDHERSTRS  551**  
**Drosophila     403 ---------------------------------------  402**  
  
**cons           586                                          624**  
  
  
**Human          403 ---------------------------------------  402**  
**Dog            480 ---------------------------------------  479**  
**Cattle         388 ---------------------------------------  387**  
**Brown\_Rat      393 ---------------------------------------  392**  
**Chicken        404 ---------------------------------------  403**  
**C.\_elegans     552 EVGVGSKFAAATIFNSTFVARKPGSNVVKRVVAHTKSTP  590**  
**Drosophila     403 ---------------------------------------  402**  
  
**cons           625                                          663**  
  
  
**Human          403 -------TLLHQSQSSSSFP------FIYMDPVFN--TE  426**  
**Dog            480 -------TLLHQSQSSSSFP------FIYTDPVFS--TD  503**  
**Cattle         388 -------TSLHQSQSSSSFP------FIYTDPVFI--TD  411**  
**Brown\_Rat      393 -------ASLHPSQSSSSFT------FIYADPVFN--TD  416**  
**Chicken        404 -------TFLPHSKSSSAFP------LLYAQLELE--RA  427**  
**C.\_elegans     591 NSTDDEEGALKSASEYQTFRHIKEYPFARNANIVPIEID  629**  
**Drosophila     403 ---------------------------------------  402**  
  
**cons           664                                          702**  
  
  
**Human          427 PNPNPDPRDIFSERSSLSSFQTSCKFSGNHMSI------  459**  
**Dog            504 P----DPRDYFGERSPLSSFQPSSKFADNLMST------  532**  
**Cattle         412 PDPDTDPRDYFEERGPLSSFQTSSKFADNPMST------  444**  
**Brown\_Rat      417 P----EPIDFFEERSPLSSFQTNSKFVD-----------  440**  
**Chicken        428 W----EPTDSFSSRNPLTSFRPHHKFTGSSRSP------  456**  
**C.\_elegans     630 G----PNVDLSARRSPAATTTTTRTYANTTTTVTTTSKV  664**  
**Drosophila     403 ---------------------------------------  402**  
  
**cons           703                                          741**  
  
  
**Human          460 --------------------YSG-LTSKVRPAKQLTYTD  477**  
**Dog            533 --------------------SSG-LASKVSPARQLTYTD  550**  
**Cattle         445 --------------------SSG-LTSKVSPARQLTYTD  462**  
**Brown\_Rat      441 ----------------------G-HTSKVSPARQLTYTD  456**  
**Chicken        457 --------------------SVG-NMREVS-ARPLVYMD  473**  
**C.\_elegans     665 LTSSGAVLMKPKVISNDHEPSSGTHSSRVSPES-GTYGA  702**  
**Drosophila     403 ---------------------------------------  402**  
  
**cons           742                                          780**  
  
  
**Human          478 VPYIP---CTGQQVGIMPPQVFFYVDKPPQV---P----  506**  
**Dog            551 VPYIP---CTGQQVDIMPPQVFFYVDRPPQV---P----  579**  
**Cattle         463 VPYIP---CTGQQVDIMPPQVFFYVDRPPQV---P----  491**  
**Brown\_Rat      457 VPYIP---CTSQKVDIMPPQVFFYVDKPPQV---P----  485**  
**Chicken        474 VPLPP---TP-------APQVFFYVDRPPPP---P----  495**  
**C.\_elegans     703 LGPLPGRVITKENMMI-TPEGFKEKKAKPNPPPKPSFPV  740**  
**Drosophila     403 ---------------------------------------  402**  
  
**cons           781                                          819**  
  
  
**Human          507 --------------------------------RWSPIRA  513**  
**Dog            580 --------------------------------RRSPIMA  586**  
**Cattle         492 --------------------------------RRSPIMA  498**  
**Brown\_Rat      486 --------------------------------RRSLMMA  492**  
**Chicken        496 --------------------------------CHVPS-E  501**  
**C.\_elegans     741 QAVHSETEVVREIKTERASSHPLVHMQEEIPFSRAPLKF  779**  
**Drosophila     403 ---------------------------------------  402**  
  
**cons           820                                          858**  
  
  
**Human          514 EERT------------------SPH--------------  520**  
**Dog            587 EEND------------------RPD--------------  593**  
**Cattle         499 EERE------------------RPD--------------  505**  
**Brown\_Rat      493 EESM------------------RPD--------------  499**  
**Chicken        502 EEGG------------------AAG--------------  508**  
**C.\_elegans     780 EDKKERKSSLSRPALISVQSEDNPDVQKCHLFNSDIPYT  818**  
**Drosophila     403 ---------------------------------------  402**  
  
**cons           859                                          897**  
  
  
**Human          521 -------------------------SYVEPTAMKPAERS  534**  
**Dog            594 -------------------------SCLESTIMKPAKRS  607**  
**Cattle         506 -------------------------SCLQSTAVKSAKRS  519**  
**Brown\_Rat      500 -------------------------SYVDPSAIKPAKRS  513**  
**Chicken        509 -------------------------G-CIPTATKTAMWG  521**  
**C.\_elegans     819 LTMRNVENTQSLPYSSFKDVSTAKKQGYESNSLKRVSKS  857**  
**Drosophila     403 ---------------------------------------  402**  
  
**cons           898                                          936**  
  
  
**Human          535 PRNIRMKSFQQD----------LQVLQEAIARTSGRSNI  563**  
**Dog            608 PRNVRMKSFQQD----------FQELQEAMARTTGRSNI  636**  
**Cattle         520 PRNIRMKSFQQD----------FQELQEAMARTTGRSNV  548**  
**Brown\_Rat      514 PRNMRIKSLQQD----------LQELQEAMARTSGRSNI  542**  
**Chicken        522 PSSTWMGELQH----------------EASHRAAGT---  541**  
**C.\_elegans     858 PEFKRRKSLDLVPRKRLPSPGNFSAQDHTISPTTPDSDV  896**  
**Drosophila     403 ---------------------------------------  402**  
  
**cons           937                                          975**  
  
  
**Human          564 NVGLEEEDPNLEDAFVCNIQEQTPKRSQSQSDMKTIRFP  602**  
**Dog            637 NVDLEVEEPNSEGAFAYSIQEQTPKRSQSQSDMKTIRFP  675**  
**Cattle         549 NVDLEEQDPTIEDTFAYNIQEPTPKRSQSQSDMKTIRFP  587**  
**Brown\_Rat      543 NVEPEEEDPHLDDAFAYNLQEQTPKRSQSQSDMKTIRFP  581**  
**Chicken        542 SVGPEGERRQGARSFDYGLQEQPPKRSWSQSDMKAIRFP  580**  
**C.\_elegans     897 LEYLLRRRSLLGD---KSVIKTKSKRTDPRRQTQPVRFD  932**  
**Drosophila     403 ---------------------------------------  402**  
  
**cons           976                                         1014**  
  
  
**Human          603 FGSEFRPLGPCPALS-HKADLFTDMFAEQELPAVLM---  637**  
**Dog            676 FGSEYRPLGPCPTLS-RKADLFTYMFAEQGFPTVLT---  710**  
**Cattle         588 FGSEFRPLGPCPALS-RKADLLTYMFAEQEFPTVLM---  622**  
**Brown\_Rat      582 FGSEFRPLGPCPALT-RKTDLFTCTFAEQEFPTVLM---  616**  
**Chicken        581 YSSEFRPLGPCPALSSRKAGMLQHVLAQQGAAPGL----  615**  
**C.\_elegans     933 L-----PPSPCSPTA-GGSTPFISILNDDLFDECVSESR  965**  
**Drosophila     403 ---------------------------------------  402**  
  
**cons          1015                                         1053**  
  
  
**Human          638 ---------------DQSTAERYVAS--ESSDS-ESEIL  658**  
**Dog            711 ---------------DQGAAERYIGS--ESSDS-ESEIL  731**  
**Cattle         623 ---------------DQGATERYVPS--ESSDS-ESEIL  643**  
**Brown\_Rat      617 ---------------DQSSAERYVAS--ESSDS-ESEIL  637**  
**Chicken        616 ----------------RRAAERYVGSSTESSDS-DSDLL  637**  
**C.\_elegans     966 SLHEDMDRLDKTTPHNQSIS-SFMSQK-SRRDSEDSDVM 1002**  
**Drosophila     403 ---------------------------------------  402**  
  
**cons          1054                                         1092**  
  
  
**Human          659 KPDYYALYGKEIRS-------------------------  672**  
**Dog            732 KPDYYSLYGKGTRS-------------------------  745**  
**Cattle         644 KPDYYSLYDKGIRS-------------------------  657**  
**Brown\_Rat      638 KTDYYSLYGKGTKS-------------------------  651**  
**Chicken        638 AADYCSLYGRVLRA-------------------------  651**  
**C.\_elegans    1003 PPPPEEILNKAMISSSRPAPPPPPPKSLAAAVKVAEMKA 1041**  
**Drosophila     403 ---------------------------------------  402**  
  
**cons          1093                                         1131**  
  
  
**Human          673 PMA-RIRLSSGSLQLDE-EDEDAYF------NTPTAED-  702**  
**Dog            746 PMA-RIRLSSGSLQLDE-EDEGVSF------NTPTAED-  775**  
**Cattle         658 PMA-RIRLSSGSLQLDE-EDEDVSF------NTSTAED-  687**  
**Brown\_Rat      652 PRA-RIRLSSGSLQLEE-EDEAISF------GTPGAED-  681**  
**Chicken        652 PRA-RVRLSSGSLQLEEEEDEEVSS------AALVAEE-  682**  
**C.\_elegans    1042 AAAGKIY-YSGSSRTGK-ITDSPPFIDDSPKNSSASDAP 1078**  
**Drosophila     403 ---------------------------------------  402**  
  
**cons          1132                                         1170**  
  
  
**Human          703 --RTSLKPCNYFLA  714**  
**Dog            776 --RTLLKPCNYFVA  787**  
**Cattle         688 --RTLQKPCNYFLA  699**  
**Brown\_Rat      682 --RTLLKPCNYFLA  693**  
**Chicken        683 --RTSRGPSRYF-T  693**  
**C.\_elegans    1079 SVPSPQKNC-FSDF 1091**  
**Drosophila     403 ------------SS  404**  
  
**cons          1171                1184**