```
T-COFFEE, Version_6.85Tue Sep 9 14:03:25 WEST 2008
  Cedric Notredame
  CPU TIME:18 sec.
  SCORE=86
  *
   BAD  AVG  GOOD
  *
  Human          :   87
  Chimpanzee     :   87
  Dog            :   87
  Mouse          :   87
  Rat            :   87
  Chicken        :   83
  Zebrafish      :   81
  cons           :   86

  Human            1 MAPPSEETPLI-PQRSCSLLSTEAGALHVLLPARGPGP-P---QRLSF   43
  Chimpanzee       1 MAPPSEETPLI-PQRSCSLLSTEAGALHVLLPARGPGP-P---QRLSF   43
  Dog              1 MAPPSEETPLI-PQRSCSLSSSEAGALHVLLPPRGPGP-P---QRLSF   43
  Mouse            1 MAPPSEETPLI-PQRSCSLSSSEAGALHVLLPPRGPGP-P---QRLSF   43
  Rat              1 MAPPSEETPLI-SQRSCSLSSSEAGALHVLLPPRGPGP-P---QRLSF   43
  Chicken          1 MAPLGEETPLI-GERSCSLSSSEPGTLQVYLYHRGPHAPPDSAATLTF   47
  Zebrafish        1 -MSEEEEVPLMKSERAGSQRSSCDSALQVHL-YYSPSLN----SETTF   42

  cons             1   .   **.**:  :*: *   *:   .:*:* *   .*   :    :*   48


  Human           44 SF--GDHLAEDLCVQAAKASGILPVYHSLFALATEDLSCWFPPSHIFS   89
  Chimpanzee      44 SF--GDHLAEDLCVQAAKASGILPVYHSLFALATEDLSCWFPPSHIFS   89
  Dog             44 SF--GDHSAEELCVWAAKASGILPVYHSLFALATEDLSCWFPPSHIFS   89
  Mouse           44 SF--GDYLAEDLCVRAAKACGILPVYHSLFALATEDFSCWFPPSHIFC   89
  Rat             44 SF--GDYLAEDLCVRAAKACGILPVYHSLFALATEDLSCWFPPSHIFS   89
  Chicken         48 TF--GEYTAEELCVHAAKACGVLPICHPLFALATEDLSCWYPPNHLFT   93
  Zebrafish       43 SIPTGHVTAESVCVLAAKASGILPVYHNLFALASEDLSYWYPPNHLFK   90

  cons            49 ::  *.   **.:** ****.*:**: *  *****:**:* *:**.*:*   96


  Human           90 VEDASTQVLLYRIRFYFPNWFGLEK--CHRFGLRKDLASAILDLPVLE  135
  Chimpanzee      90 VEDASTQVLLYRIRFYFPNWFGLEK--CHRFGLRKDLASAILDLPVLE  135
  Dog             90 MEDSGTQVLVYRLRFYFPNWFGLEK--CHRFGLRKDLASAILDLPVLE  135
  Mouse           90 IEDVDTQVLVYRLRFYFPDWFGLET--CHRFGLRKDLTSAILDLHVLE  135
  Rat             90 IEDVDTQVLVYRLRFYFPGWFGLET--CHRFGLHKDLTSAILDVHVLE  135
  Chicken         94 VEDARSQVVVYRIRFFFPNWCGQGQ--VHRFQLPSDRPSPVLDYPVID  139
  Zebrafish       91 SEEPVK--VYYRVRFFFSSWFGQESRASYRFSLSKGRIFAVLDYAVID  136

  cons            97  *:  .  :  **:**:*..* *     :** * ..    .:**  *::  144


  Human          136 HLFAQHRSDLVSGRLPVGLSLKEQGECLSLAVLDLARMAREQAQRPGE  183
  Chimpanzee     136 HLFAQHRSDLVSGRLPMGLSLKEQGECLSLAVLDLARMAREQAQRPGE  183
  Dog            136 HLFAQHRNDLVSGRFSVGLSLKEQDEYLSLAVLDLARMAREQAQQPEE  183
  Mouse          136 HLFAQHRSDLVSGRLPVGLSMKEQGEFLSLAVLDLAQMAREQAQRPGE  183
  Rat            136 HLFAQHRSDLVSGRLPVGLSLKDQGEFLSLAVLDLAQMARKQAQRPGE  183
  Chicken        140 YLFAQSRSDFIAGRMELALSLAGQEECLSLAVLDMLRIAKEKWQSPKE  187
  Zebrafish      137 YVFAQSRSDFVTGCGGISPALSLQQECLGLAVLDLWRLAKERNQSLAE  184

  cons           145 ::*** *.*:::*   :. ::  * * *.*****: ::*::: *   *  192
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Human          184 LLKTVSYKACLPPSLRDLIQGLSFVTRRRIRRTVRRALRRVAACQADR 231
Chimpanzee     184 LLKTVSYKACLPPSLRDLIQGLSFVTRRRIRRTVRRALRRVAACQADR 231
Dog            184 LLKTVSYKVCLPPDLRDLIQGLSFVTRKRIRRMVRRALRRVTACQADR 231
Mouse          184 LLKTVSYKACLPPSLRDVIQGQNFVTRRRIRRTVVLALRRVVACQADR 231
Rat            184 LLKSVSYKACLPPSLRDLIQGQSFVTRRRIRRTVVQALRRVVACQADR 231
Chicken        188 VFSCVSYKTCIPEQLRCQIQQHSFLTRKRIRRRVAQSLRRMGGCRVDG 235
Zebrafish      185 ICNTTSYKSCLPETHRQDIQRMNRLARYQIRKTLKRFLKKLGKCSAGE 232

cons           193 : . .*** *:*   *  **  . ::* :**: :   *:::  * .. 240


Human          232 HSLMAKYIMDLERLDPAGAAETFHVGLPGALGGHDGLG--LLRVAGDG 277
Chimpanzee     232 HSLMAKYIMDLERLDPAGAAETFHVGLPGALGGHDGLG--LLRVAGDG 277
Dog            232 HSLMAKYIMDLERLDPARAVETFLVSFPGAAGGQDAQG--LLRVAGDR 277
Mouse          232 YALMAKYILDLERLHPAATTETFRVGLPGA---QEEPG--LLRVAGDN 274
Rat            232 YALMAKYILDLERLHPAATTESFLVGLPGA---QEEPG--CLRVTGDN 274
Chicken        236 CCLKLKYLLDLERLRCCWAEESFHAHGP------DADI--AIHVSTDS 275
Zebrafish      233 RSLKLKYLMKLSELEPDYGSESFPLHHSGWLEQSEQQRVLAVKVSGEG 280

cons           241  .*  **::.*..*       *:*  .  :   :::*: : 288


Human          278 GIAWTQGEQEVLQPFCDFPEIVDISIKQAPRVGPAGEHRLVTVTRTDN 325
Chimpanzee     278 GIAWTQGEQEVLQPFCDFPEIVDISIKQAPRVGPAGEHRLVTVTRTDN 325
Dog            278 GIAWSPGGQEALQPFCDFPEIVDISIKQAPRAGPAGEHRLVTVTKTDK 325
Mouse          275 GISWSSGDQELFQTFCDFPEIVDVSIKQAPRVGPAGEHRLVTVTRMDG 322
Rat            275 GIAWSSKDQELFQTFCDFPEIVDVSIKQAPRVGPAGEHRLVTITRMDG 322
Chicken        276 GVSWSCVGSESRQHFCDFPDIADVSIKQASRDGGPVENRIVTLTKTDN 323
Zebrafish      281 GIQIQKTDRQEWQTFCDFPQIIDISIKRLCQEQMPLEGRVVTLTRQDD 328

cons           289 *:        :  * *****:* *:***:  :   . * *:**:*: * 336


Human          326 QILEAEFPGLPEALSFVALVDGYFRLTTDSQHFFCKEVAPPRLLEEVA 373
Chimpanzee     326 QILEAEFPGLPEALSFVALVDGYFRLTTDSQHFFCKEVAPPRLLEEVA 373
Dog            326 QILEAEFPGLPAALSFVALVDGYFRLTSDSRHFFCKEVAPPRLLEEVA 373
Mouse          323 HILEAEFPGLPEALSFVALVDGYFRLICDSRHYFCKEVAPPRLLEEEA 370
Rat            323 HILEAEFPGLPEALSFVALVDGYFRLICDSRHFFCKEVAPPRLLEEEA 370
Chicken        324 RVLEVEFPTLREALSFMALVDGYYRLTADAHHYFCKEVAPPRLLEDME 371
Zebrafish      329 QCMEAEFQTLTDALSFVSLVDGYFRLTTDSTHYFCAEVAPPSLLEDIQ 376

cons           337 : :*.**  *  ****::*****:**  *: *:** ***** ***:  384


Human          374 EQCHGPITLDFAINKLKTGGSRPGSYVLRRSPQDFDSFLLTVCVQNPL 421
Chimpanzee     374 EQCHGPITLDFAINKLKTGGSHPGSYVLRRSPQDFDSFLLTVCVQTPL 421
Dog            374 EQCHGPITLDFAINKLKTGGSLPGSYVLRRSPQDFDSFLLTVCVQTPL 421
Mouse          371 ELCHGPITLDFAIHKLKAAGSLPGTYILRRSPQDYDSFLLTACVQTPL 418
Rat            371 ELCHGPITLDFAIHKLKAAGSLPGSYILRRSPQDYDSFLLTACVQTPL 418
Chicken        372 NQCHGPISSEFAVRKLKAAGSHPGLYVLRRSPQDFDSYLLTVCAETRS 419
Zebrafish      377 NYCHGPITSEFAVHKLKKAGGKNGMFLLRHSPKEFDKYFLTVCIQTPL 424

cons           385 : *****: :**:.*** .*.  * ::**:**:::*.::**.* :.  432
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Human          422 GPDYKGCLIRRSPTGTFLLVGLSRPHSSLRELLATCWDGGLHVDGVAV 469
Chimpanzee     422 GPDYKGCLIRRSPTGTFLLVGLSRPHSSLRELLATCWDGGLHVDGVAV 469
Dog            422 GPDYKGCLIRCDPTGTFSLAGLGRPHSSLRELLTACWDGGLHMDGAAL 469
Mouse          419 GPDYKGCLIRQDPSGAFSLVGLSQPHRSLRELLAACWNSGLRVDGAAL 466
Rat            419 GPDYKGCLIRQDPSGAFSLVGLSQLHRSLQELLTACWHSGLQVDGTAL 466
Chicken        420 GQDYKRCLIRRDEDGSFWLAGLARRFCSLQELLGTYGCCGLQAEGAHL 467
Zebrafish      425 GMDYKDCLIEKNE--KFSLAGIHNSFINLKQLIDFYQLSTLYVSDIPV 470

cons           433 * *** ***. .    * *.*: . . .*::*:       *  .. : 480


Human          470 TLTSCCIPRPKEKSNLIVVQRGHSPPTSSLVQPQSQYQLSQMTFHKIP 517
Chimpanzee     470 TLTSCCIPRPKEKSNLIVVQRGHSPPTSSLVQPQSQYQLSQMTFHKIP 517
Dog            470 NLTFCCTPRPKEKSNLIVVRRGCNPPTSSPVQPQSQCQLSQMTFHKIP 517
Mouse          467 NLTSCCAPRPKEKSNLIVVRRGCTPAPAPGCSP-SCCALTQLSFHTIP 513
Rat            467 NLTSCCVPRPKEKSNLIVVRRGRNPTPAPGHSP-SCCALTKLSFHTIP 513
Chicken        468 RLDTCCPPLPREKSNLLIVRSGCPRPPNS--PPAPRRSPNQMSFHKID 513
Zebrafish      471 TLGKCCPPRAKELTNMIIIRNSSMTEIPSSPTL-QRHKPSHMQFHMIK 517

cons           481  *  ** * .:* :*:::::. .     .   .  .::  ** *  528


Human          518 ADSLEWHENLGHGSFTKIYRGCRHEVVDGEARKTEVLLKVMDAKHKNC 565
Chimpanzee     518 ADSLEWHENLGHGSFTKIYRGCRHEVVDGEARKTEVLLKVMDAKHKNC 565
Dog            518 ADSLEWHENLGHGSFTKIYRGCRHEVVDGEARETEVLLKVMDAKHKNC 565
Mouse          514 TDSLEWHENLGHGSFTKIFRGRRREVVDGETHDSEVLLKVMDSRHRNC 561
Rat            514 ADSLEWHENLGHGSFTKIFHGHRREVVDGETHDTEVLLKVMDSRHQNC 561
Chicken        514 PESLIRGESLGQGSFTHIYKGIKRDQKDDEFYQTPVVLKVMDSSHRNC 561
Zebrafish      518 HEDLIWSESLGQGSFTHIFRGSKIDQRDGGTHSTEVLLKVLDANHKNC 565

cons           529 :.*   *.**:****:*:*:* : :  *.   .: *:***:*: *:** 576


Human          566 MESFLEAASLMSQVSYRHLVLLHGVCM-AGDSTMVQEFVHLGAIDMYL 612
Chimpanzee     566 MESFLEAASLMSQVSYRHLVLLHGVCM-AGDSTMVQEFVHLGAIDMYL 612
Dog            566 MESFLEAASLMSQVSYQHLVLLHGVCM-AGDSIMVQEFVHLGALDTYL 612
Mouse          562 MESFLEAASLMSQVSYPHLVLLHGVCM-AGDSIMVQEFVYLGAIDMYL 608
Rat            562 MESFLEAASLMSQVSYPHLVLLHGVCM-AGDSIMVQEFVYLGAIDTYL 608
Chicken        562 SESFLEAASIMSQLSHKHLVLLHGVSL-GKDSIMVQEYIRHGPLDLYL 608
Zebrafish      566 WESLFEAASLMSQISHRHLLLVYGISVHKSKNIMVQEFVKHGALDLYL 613

cons           577 **::****:***:*: **:*::*:.:  .. ****::  *.:* ** 624


Human          613 RKRGH--LVPASWKLQVVKQLAYALNYLEDKGLPHGNVSARKVLLARE 658
Chimpanzee     613 RKRGH--LVPASWKLQVVKQLAYALNYLEDKGLPHGNVSARKVLLARE 658
Dog            613 RKSGH--LVPASWKLQVIKQLAYALNYLEDKGLLHGNVSARKVLLARE 658
Mouse          609 RKRGH--LVSASWKLQVTKQLAYALNYLEDKGLPHGNVSARKVLLARE 654
Rat            609 RKRGH--LVPASWKLQVTKQLAYALNYLEDKGLPHGNVSARKVLLARE 654
Chicken        609 KKNHSEGKVTTSWKLQVAKQLAYALNYLEDKKITHGNVSAKKVLLTRE 656
Zebrafish      614 KRS-M--CVSVSWKLDVAKQLACALNFLEEKNIAHGNICAKNLLLVRE 658

cons           625 ::   *..****:* **** ***:**:* : ***:.*:::**.** 672
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Human          659 G--ADGSPPFIKLSDPGVSPAVLSLEMLTDRIPWVAPECLREAQTLSL 704
Chimpanzee     659 G--ADGSPPFIKLSDPGVSPAVLSLEMLTDRIPWVAPECLREAQTLSL 704
Dog            659 G--ADGNLPFIKLSDPGVSPTVLSLEMLTDRIPWVAPECFQEARTLGL 704
Mouse          655 G--GDGNPPFIKLSDPGVSPTVLSLEMLTDRIPWVAPECLQEAQTLGL 700
Rat            655 G--VDGNPPFIKLSDPGVSPTVLSLEMLTDRIPWVAPECLQEAGTLNL 700
Chicken        657 GDAASSSPPFIKLNDPGVSITVLAKEWLVERIPWVAPECLSDPQSLAL 704
Zebrafish      659 G-----DSPFIKLSDPGVSMSLLGKDVVLDRIPWVAPEVL-DTLEIEL 700

cons           673 *   .  *****.***** ::*. : : :********* : :.  : * 720


Human          705 EADKWGFGATVWEVFSGVTMPISALDPAKKLQFYEDRQQLPAPKWTEL 752
Chimpanzee     705 EADKWGFGATVWEVFSGVTMPISALDPAKKLQFYEDRQQLPAPKWTEL 752
Dog            705 EADKWGFGATVWEVFSGIPMPISTLDPAKKLQFYEERQQLPAPKWMEL 752
Mouse          701 EADKWGFGATTWEVFSGGPAHITSLEPAKKLKFYEDQGQLPALKWTEL 748
Rat            701 EADKWGFGATTWEVFSGAPMHITSLEPAKKLKFYEDRGQLPALKWTEL 748
Chicken        705 PADKWGFGATLWEIFSGGNMPVSLLEPQKKLQFYDSRLQLPAPRWSEL 752
Zebrafish      701 ECDKWSFGTTLWEIFNGGEAPLQGLDLMQKLQFYENFSNLPTLEWTEL 748

cons           721 .***.**:* **:*.*    :  *:  :**:**:.  :**: .* ** 768


Human          753 ALLIQQCMAYEPVQRPSFRAVIRDLNSLISSDYELLSDPTPGALAPRD 800
Chimpanzee     753 ALLIQQCMAYEPVQRPSFRAVIRDLNSLISSDYELLSDPTPGALAPRD 800
Dog            753 AVLIQQCMAYEPGQRPSFRAIIRDLNSLITSDYELLSDPTPGALAPRD 800
Mouse          749 AGLITQCMAYDPGRRPSFRAILRDLNGLITSDYELLSDPTPGIPSPRD 796
Rat            749 EGLIAQCMAYDPGRRPSFRAILRDLNGLITSDYELLSDPTPGIPNPRD 796
Chicken        753 AALIAQCI-YAPSRRPCFRAIIRDINSLISSDYELLSELSPGDVTLRE 799
Zebrafish      749 AELISHCMQYQPELRPSCRSIIRQLNSLITSDYEILH--ATDTLPESN 794

cons           769   ** :*: * *  **. *:::*::*.**:****:*   :..     : 816


Human          801 GLWNGAQLYACQDPTIFEERHLKYISQLGKGNFGSVELCRYDPLGDNT 848
Chimpanzee     801 GLWNGAQLYACQDPTIFEERHLKYISQLGKGNFGSVELCRYDPLGDNT 848
Dog            801 GLWNGAQLYAYQDPTIFEERHLKYISQLGKGNFGSVELCRYDPLGDNT 848
Mouse          797 ELCGGAQLYACQDPAIFEERHLKYISLLGKGNFGSVELCRYDPLGDNT 844
Rat            797 ELCGGAQLYACQDPAIFEERHLKYISLLGKGNFGSVELCRYDPLGDNT 844
Chicken        800 SCWGYEHVAAGHGPAQFEERHLKYISLLGKGNFGSVELCRYDPLGDST 847
Zebrafish      795 GFWKKLNIFKKQQEDVFEERYLRFISVLGKGNFGSVELCRYDPWGDNT 842

cons           817       ::   :    ****:*::** ***************** **.* 864


Human          849 GALVAVKQLQHSGPDQQRDFQREIQILKALHSDFIVKYRGVSYGPGRQ 896
Chimpanzee     849 GALVAVKQLQHSGPDQQRDFQREIQILKALHSDFIVKYRGVSYGPGRQ 896
Dog            849 GALVAVKQLQHSGPDQQRDFQREIQILKALHSDFIVKYRGVSYGPGRQ 896
Mouse          845 GPLVAVKQLQHSGPDQQRDFQREIQILKALHSDFIVKYRGVSYGPGRQ 892
Rat            845 GPLVAVKQLQHSGPEQQRDFQREIQILKALHCDFIVKYRGVSYGPGRQ 892
Chicken        848 GELVAVKKLQQDSAKELQDFEREIQILHSLQHDFIVKYRGVCYSRGRR 895
Zebrafish      843 GELVAVKELQSNKQATMADFQREIQTISSLHCDYIVKYKGICYSTGRL 890

cons           865 * *****:** .       **:**** : :*: *:****:*:.*. ** 912
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```
Human          897  SLRLVMEYLPSGCLRDFLQRHRARLDASRLLLYSSQICKGMEYLGSRR  944
Chimpanzee     897  SLRLVMEYLPSGCLRDFLQRHRARLDASRLLLYSSQICKGMEYLGSRR  944
Dog            897  SLRLVMEYLPSGCLRDFLQRHRARLDAGRLLLYASQICKGMEYLGSCR  944
Mouse          893  SLRLVMEYLPSGCLRDFLQRHRARLHTDRLLLFAWQICKGMEYLGARR  940
Rat            893  SLRLVMEYLPSGCLRDFLQRHRARLHNDRLLLFAWQICKGMEYLGARR  940
Chicken        896  GLRLVMEYLPDGCLRDYLQKNQHRLEHRTLLLYAWQICKGMEYLGAQR  943
Zebrafish      891  STKLVMEYLPYGSLIGYMEKHRHNVGNRKLLLFASQICKGMEYLQSMR  938

cons           913  . :******* *.* .:::::: .:     ***:: ********* : *  960


Human          945  CVHRDLAARNILVESEAHVKIADFGLAKLLPLDKDYYVVREPGQSPIF  992
Chimpanzee     945  CVHRDLAARNILVESEAHVKIADFGLAKLLPLDKDYYVVREPGQSPIF  992
Dog            945  CVHRDLAARNILVESETHVKIADFGLAKLLPLDKDYYVVRGPGQNPIF  992
Mouse          941  CVHRDLAARNILVESEAHVKIADFGLAKLLPLGKDYYVVREPGQSPIF  988
Rat            941  CVHRDLAARNILVESEAHVKIADFGLAKLLPLGKDYYVVREPGQSPIF  988
Chicken        944  CVHRDLASRNILVESETHVKIGDFGLAKLLPQDKDYYVVQEPGQSPVF  991
Zebrafish      939  YVHRDLAARNILVASDNLVKIADFGLTKIIPVDKEYYRVTQPGESPVF  986

cons           961   ******:***** *:   ***.****:*::* .*:** *   **:.*:* 1008


Human          993  WYAPESLSDNIFSRQSDVWSFGVVLYELFTYCDKSCSPSAEFLRMMGC 1040
Chimpanzee     993  WYAPESLSDNIFSRQSDVWSFGVVLYELFTYCDKSCSPSAEFLRMMGC 1040
Dog            993  WYSPESLSDNIFSCQSDVWSFGVVLYELFTYGNKSCSPSAEFLRIMGC 1040
Mouse          989  WYAPESLSDNIFSRQSDVWSFGVVLYELFTYCDKSCSPSAEFLSMMGP 1036
Rat            989  WYAPESLSDNIFSRQSDVWSFGVVLYELFTYSDKSCSPSTEFLRMMGP 1036
Chicken        992  WYAPESLADNVFSRASDVWSFGVLLYELFTYSNKSRSPSEEFLHMMGP 1039
Zebrafish      987  WYAPESISELKFSHKSDVWSFGIVLHELFSYCDISQNPKKLCIQKIGR 1034

cons          1009  **:***:::   **   *******::*:***:* : * .*.   :   :* 1056


Human         1041  ERDVPALC-RLLELLEEGQRLPAPPACPAEVHELMKLCWAPSPQDRPS 1087
Chimpanzee    1041  ERDVPALC-RLLELLEEGQRLPAPPACPAEVS-------------AAG 1074
Dog           1041  ERDVPALC-RLVELLAEGQRLPAPPACPGEVHELMKLCWAPSPKDRPT 1087
Mouse         1037  EREGPPLC-RLLELLAEGRRLPPPPTCPTEVQELMQLCWAPSPHDRPA 1083
Rat           1037  EREGSPLC-HLLELLAEGRRLPPPSTCPTEVQELMQLCWSPNPQDRPA 1083
Chicken       1040  EKPAQIIC-HLLELLKDSRRLPVPPGCPMEVYAMMLSCWAFAPSARPT 1086
Zebrafish     1035  YVHSPSMAIHLLTLLKNNWRLPAPAQCPLKVHSIMMQCWEFNSENRPS 1082

cons          1057      :.  :*:  **  :.  ***  *.  **  :*                .  1104


Human         1088  FSALGPQLD-MLW---SGSRGCETHAFTAHPEGKHHSLSFS 1124
Chimpanzee    1075  LASVSQSVD---W---AGVSG--------KPAGA------- 1094
Dog           1088  FSALGPQLD-ALW---RGVA--------------------- 1103
Mouse         1084  FGTLSPQLD-ALW---RGRPG-------------------- 1100
Rat           1084  FDTLSPQLD-ALW---RGSPG-------------------- 1100
Chicken       1087  FTELAARVE-ALR---DGR-G------TAHG---------- 1106
Zebrafish     1083  FSSLKDLIENSLLDEREGCKG-------------------- 1103

cons          1105  :   :    ::     *                        1145
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