

CLUSTAL 2.1 multiple sequence alignment

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Human      -----MVSWGR--FICLVVVTMATLSLARPSFS-LVEDTTLEPEEP 38
Mouse      MGLPSTWRYGRGPGIGTVMVSWGR--FICLVVVTMATLSLARPSFS-LVEDTTLEPEEP 57
Dog        -----MVSWAR--FVCLAAVTMATLSLARPSFN-LVEDTTLEPEE-- 36
Bovine     MGLTSTWRYGRGQIGTVMVSWGR--FLCLVVVTMATLSLARPSFN-LVDDTTVEPEEP 57
Chicken    -----MVSWDSGCLICLVVVTMAGLSLARPSFNLVVEDATLEPEEP 41
Zebrafish  -----MFARGWL-LGALLLMTLATVSVARPSLK-IDLVNTSAPEEP 39
Fly        -----MAAAWSWRASHSTITMTSGSLVVLFLLLLSIWQPAVQVEGRRO 42
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Human      PTKYQISQPEVYVAAPGESLEVRCLLKDAAVISWTKDGVHLGPNNRTVLI GEYLQIKGAT 98
Mouse      PTKYQISQPEAYV VAPGESLELQCM LKDAAVISWTKDGVHLGPNNRTVLI GEYLQIKGAT 117
Dog        -----
Bovine     PTKYQISQPEVYVAAPRESLELRCLLRDAAMISWTKDGVHLGPNNRTVLI GEYLQIKGAT 117
Chicken    PTKYQISQPDVHSALPGEPELELRCLKDAVMISWTKDGVPLGPDNRTV I I GEYLQIKDAS 101
Zebrafish  PTKNQNCVPVLFVSVHPGELLK LKCLPSGADDVVWTKDSSSLRPDNR TLVTRDWLQISDAT 99
Fly        MANSQ-----EMIKDHLGARSQNKTPAITNN----- 68

Human      PRDSGLYACTASRTVDSETWYFMVNVTD AISSGDEDDTDGAEDFVSENSNKRAPYWTN 158
Mouse      PRDSGLYACTAARTVDSETWYFMVNVTD AISSGDEDDTDSS EDVVSENRSNQRAPYWTN 177
Dog        -----GAPYWTN 43
Bovine     PRDSGLYACTAARNVDSETVYFMVNVTD AISSGDEDDADGSEDFVSENSNKRAPYWTN 177
Chicken    PRDSGLYACTAIRTLDSDTLYFIVNVTDALSSGDEDDNDGSEDFVND-SNQMRAPYWTH 160
Zebrafish  PKDSGLYSCSATGSRDCDVFSFIVNVTD AISSGDEDDTERSDDVGAD-GEQMRLPYWTF 158
Fly        -----ANQSSTSSADLDDGAADDDDNKADLPVNVSSKPYWRN 105
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Human      TEKMEKRLHAVPAANTVKFRCPAGGNPMP TMRWLKNGKEFKQEHRIGGYKVRNQHWSLIM 218
Mouse      TEKMEKRLHAVPAANTVKFRCPAGGNPTPTMRWLKNGKEFKQEHRIGGYKVRNQHWSLIM 237
Dog        TEKMEKRLHAVPAANTVKFRCPAGGNPTPTMRWLKNGKEFKQEHRIGGYKVRNQHWSLIM 103
Bovine     TEKMEKRLHAVPAANTVKFRCPAGGNPTPTMRWLKNGKEFKQEHRIGGYKVRNQHWSLIM 237
Chicken    TDKMEKRLHAVPAANTVKFRCPAMGNPTPTMRWLKNGKEFKQEHRIGGYKVRNQHWSLIM 220
Zebrafish  PEKMEKRLHAVPAANTVKFRCAAAGNPKPKMRWLKNAKPF RQEDRMGGYKVR LQHWT LIM 218
Fly        PKKMS-FLQTRPSGSLTLNCHALGNPEPNITWYRNG---TVDWTRGYGSLKRNRTLTM 161
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Human      ESVVP SDKGNYTCVVENEYGSINHTYHLDVVERS PHRPILQAGLPANASTVVG DVEFVC 278
Mouse      ESVVP SDKGNYTCLVENEYGSINHTYHLDVVERS PHRPILQAGLPANASTVVG DVEFVC 297
Dog        ESVVP SDKGNYTCVVENEYGSINHTYHLDVVERS PHRPILQAGLPANRSTVVG DVEFVC 163
Bovine     ESVVP SDKGNYTCVVENDYGSINHTYHLDVVERS PHRPILQAGLPANASTVVG DVEFVC 297
Chicken    ESVVP SDKGNYTCIVENQYGSINHTYHLDVVERS PHRPILQAGLPANASAVVG DVEFVC 280
Zebrafish  ESVVP SDKGNYTCLVENQYGSINHTYTL DVVERS PHRPILQAGLPANVTVQVGD AKFVC 278
Fly        EDLVP GDCGNYTCKVCNSLGCIRHDTQVIVSDRVNHKPI LMTG-PLNLT LVVNSTGSMHC 220
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Human      KVYSDAQPHIQWIKHVEKNGSKY GPDGLPYLKV LKAAGVNTTDKEIEVLYIRNVT FEDAG 338
Mouse      KVYSDAQPHIQWIKHVEKNGSKY GPDGLPYLKV LKAAGVNTTDKEIEVLYIRNVT FEDAG 357
Dog        KVYSDAQPHIQWIKHVEKNGSKY GPDGLPYLKV LKHSGINSSN--AEVLALFNVTEEDAG 221
Bovine     KVYSDAQPHIQWIKHVEKNGSKY GPDGLPYLKV LKHSGINSSN--AEVLALFNVTEADAG 355
Chicken    KVYSDAQPHIQWIKHVERNGSKY GPDGLPYLQV LKAAGVNTTDKEIEVLYIRNVT FEDAG 340
Zebrafish  KVYSDAQPHIQWLQHYTKNGSRY GPDGLPYVRV LKTAGVNTTDKEIEVLYL PNVTFEDAG 338
Fly        KYLSDLT SKKAWIFVPC HGMTNCS-----NNRSIIAEDK--DQLDFVNV RMEQEG 268

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Human   EYTCLAGNSIGISFHSAWLTVLP---APGREKEITASPDYLEIAIYICIGVFLIACMVVTV 395
Mouse   EYTCLAGNSIGISFHSAWLTVLP---APVREKEITASPDYLEIAIYICIGVFLIACMVVTV 414
Dog      EYICKVSNYIGQANQSAWLTVLPKQQAPVREKEITASPDYLEIAIYICIGVFLIACMVVTV 281
Bovine   EYICKVSNYIGQANQSAWLTVLPKQQAPVREKEIPASPDYLEIAIYICIGVFFIACMVVTV 415
Chicken  EYTCLAGNSIGISFHTAWLTVLP--APEKEKEFPTSPDYLEIAIYICIGVFLIACMVLTV 397
Zebrafish EYTCLAGNSIGISYHTAWLTVHP--AETNPIETDYPPDYVEIAIYICIGVFLIACMVVIV 395
Fly      WYTCVESNSLQSNSTAYLRVVRSLHVLEAGVASGSLHSTSFVYIFVFGGLIFIFMTTLF 328
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Human   ILCRMKNTTKKPDFSS-QPAVHKLTKRIPLRRQVTVSAESSSSMNSNTPLVRITT-RLSS 453
Mouse   IFCRMKTTTKKPDFSS-QPAVHKLTKRIPLRRQVTVSAESSSSMNSNTPLVRITT-RLSS 472
Dog      ILCRMKTTTKKPDFSS-QPAVHKLTKRIPLRRQVTVSAESSSSMNSNTPLVRITT-RLSS 339
Bovine   ILCRMRNTTKKPDFSS-QPAVHKLTKRIPLRRQV--SAESSSSMNSNTPLVRITT-RLSS 471
Chicken  ILCRMKNTTKKPDFSS-QPAVHKLTKRIPLRRQVTVSADSSSSMNSNTPLVRITT-RLSS 455
Zebrafish VVCRMRTSAKKPDFSS-QPAVHKLTKQIPLRRQV--SSDSSSSMSSSTPLVRITT-RRSS 451
Fly      VFYAIRKMKHEKVLKQRIETVHQWTKKVIIFKPEGGGDSSGSMDTMIMPVVRIQQRITV 388
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Human   TADTPMLAGVSEYELPEDPKWEFPRDKLTLGKPLGEGCFGQVMAEAVGIDKDKPKEAVT 513
Mouse   TADTPMLAGVSEYELPEDPKWEFPRDKLTLGKPLGEGCFGQVMAEAVGIDKDKPKEAVT 532
Dog      TADTPMLAGVSEYELPEDPKWEFPRDKLTLGKPLGEGCFGQVMAEAVGIDKEKPKEAVT 399
Bovine   TADTPMLAGVSEYELPEDPKWEFPRDKLTLGKPLGEGCFGQVMAEAVGIDKEKPKEAVT 531
Chicken  TADAPMLAGVSEYELPEDPKWEFPRDKLTLGKPLGEGCFGQVMAEAVGIDKDRPKEAVT 515
Zebrafish AHDDP---IPEYDLPEDPRWEFSRDKLTLGKPLGEGCFGQVMAEALGIDKDKPKEAVT 507
Fly      LQNGNEPAPFNEYEFPLDSNWELPRSHLVLGATLGEGAFGRVMAEVN-----NAI 439
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Human   VAVKMLKDDATEKDLSDLVSEMEMMKMIGKHKNINLLGACTQDGPLYVIVEYASKGNLR 573
Mouse   VAVKMLKDDATEKDLSDLVSEMEMMKMIGKHKNINLLGACTQDGPLYVIVEYASKGNLR 592
Dog      VAVKMLKDDATEKDLSDLVSEMEMMKMIGKHKNINLLGACTQDGPLYVIVEYASKGNLR 459
Bovine   VAVKMLKDDATEKDLSDLVSEMEMMKMIGKHKNINLLGACTQDGPLYVIVEYASKGNLR 591
Chicken  VAVKMLKDDATEKDLSDLVSEMEMMKMIGKHKNINLLGACTQDGPLYVIVEYASKGNLR 575
Zebrafish VAVKMLKDDATEKDLSDLVSEMEMMKMIGRHKNINLLGACTQDGPLYVIVEYASKGNLR 567
Fly      VAVKMOVKEGHTDDDIASLVREMEVMKIIGRHININLLGCCSQNGPLYVIVEYAPHGNLK 499
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Human   EYLRARRPPGMEYSYDINRVPEEQ---MTFKDLVSCYQLARGMEYLASQKCIHRDLAA 629
Mouse   EYLRARRPPGMEYSYDINRVPEEQ---MTFKDLVSCYQLARGMEYLASQKCIHRDLAA 648
Dog      EYLRARRPPGMEYSYDINRVPEEQ---MTFKDLVSCYQLARGMEYLASQKCIHRDLAA 515
Bovine   EYLRARRPPGMEYSYDINRVPEEQ---MAFKDLVSCYQLARGMEYLASQKCIHRDLAA 647
Chicken  EYLRARRPPGMEYSFDINRVPEEQ---MTFKDLVSCYQLARGMEYLASQKCIHRDLAA 631
Zebrafish EYLRARRPPGMEYSYDIARVSDEP---LTFKDLVSCYQVARGMEYLASQKCIHRDLAA 623
Fly      DFLYKNRPFGRDQDRDSSQPPSPPAHVITEKDLIKFAHQIARGMDYLASRRCIHRDLAA 559
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Human   RNVLVTENNVMKIADFGLARDINNIDYKKTNGRLPVKWMAPEALFDRVYTHQSDVWSF 689
Mouse   RNVLVTENNVMKIADFGLARDINNIDYKKTNGRLPVKWMAPEALFDRVYTHQSDVWSF 708
Dog      RNVLVTENNVMKIADFGLARDINNIDYKKTNGRLPVKWMAPEALFDRVYTHQSDVWSF 575
Bovine   RNVLVTENNVMKIADFGLARDINNIDYKKTNGRLPVKWMAPEALFDRVYTHQSDVWSF 707
Chicken  RNVLVTENNVMKIADFGLARDINNIDYKKTNGRLPVKWMAPEALFDRVYTHQSDVWSF 691
Zebrafish RNVLVTESNVMKIADFGLARDVHNIDYKKTNGRLPVKWMAPEALFDRVYTHQSDVWSF 683
Fly      RNVLVSDDYVLKIADFGLARDIQSTDYRKNNTNGRLPIKWMAPESLQEKFYDSKSDVWSY 619
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Human	GVLMWEIFTLGGSPYPGIP-VEELFKLLKEGHRMDKPANCTNELYMMMRDCWHAVPSQRP	748
Mouse	GVLMWEIFTLGGSPYPGIP-VEELFKLLKEGHRMDKPNTNCTNELYMMMRDCWHAVPSQRP	767
Dog	GVLMWEIFTLGGSPYPGIP-VEELFKLLKEGHRMDKPANCTNELYMMMRDCWHAVPSQRP	634
Bovine	GVLMWEIFTLGGSPYPGIP-VEELFKLLKEGHRMDKPANCTNELYMMMRDCWHAVPSQRP	766
Chicken	GVLMWEIFTLGGSPYPGIP-VEELFKLLKEGHRMDKPANCTNELYMMMRDCWQAVPSQRP	750
Zebrafish	GVLMWEIFTLGGSPYPGIP-VEELFKLLKEGHRMDKPANCTNELYMMMKDCWHAISSHRP	742
Fly	GILLWEIMTYGQQPYPTIMSAEELYTYLMSGQRMKPAKCSMNIYILMRQCWHFNADDRP	679

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Human	TFKQLVEDLDRILTLTTNEEYLDLSQPLEQYSPSYPDTRSSCSSGDDSVFSPDPMPYEP	808
Mouse	TFKQLVEDLDRILTLTTNEEYLDLTQPLEQYSPSYPDTRSSCSSGDDSVFSPDPMPYEP	827
Dog	TFKQLVEDLDRILTLTTNEEYLDLSQPLEQYSPSYPDTRSSCSSGDDSVFSPDPMPYEP	694
Bovine	TFKQLVEDLDRILTLTTNEEYLDLSQLEQYSPSYPDTRSSCSSGDDSVFSPDPMPYEP	826
Chicken	TFKQLVEDLDRILTLTTNEEYLDLSGPLEQYSPSYPDTRSSCSSGDDSVFSPDPMPYEP	810
Zebrafish	TFKQLVEDLDRILTLATNEEYLDLCAPVEQYSPSFPDTRSSCSSGDDSVFSDPLADEPC	802
Fly	PFTEIVEYMDKLL--QTKEDYLDVDIANLDTPPSTSDEEEDETDN-----	722

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Human	LPQYPHINGSVKT	821
Mouse	LPQYPHINGSVKT	840
Dog	LPQYPHVNGSVKT	707
Bovine	LPQYPHRNGSVKT	839
Chicken	LPKYQHMGNSVKT	823
Zebrafish	LPKYQHINGGIKT	815
Fly	LQKWCNY-----	729

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