

10 20 30 40 50 60 70 80 90 100 110  
CA1 [H. sapiens] -----MASPDWGYDDK--NGPEQWSKLYP---IANGNNQSPVDIKTSETKHDTSLKPI SVS-YNPATAKEIINV 63  
F1 [C. gigas] --MAQCLSSVLLLWISLGTVLGAGFLGVRPQSNNGDCRYDDINKAHFSYDQNHCEGPMKWCNVHQCWSTCGSDIROSPINIQTAETIREG-FGNLQFRNLHLRVPANISNN 107  
F2 [C. gigas] MKMAALYWLVLVFLGSLCIGTVESAGYLYRMPHHGDVICYEDLKNAHF SYDEENCRRPQWVYCYLHKCWTT CGSTRROSPINLDTSEARRT--KASFOLYNKDKRVPFTYNN 108  
F3 [C. gigas] -----MPHHGGSCYIEDIKNAHF SYDEETCRRPDKWCCLHKCWATCGSTRROSPINLDTSEARRT--NANIKLYNIDKRVPATTHNS 80  
pm [P. maxima] -----ASMFKHDHYMDNGVRYPNGDGICEQLNETKCDAGFSYDRSICEGPHYWHTISKWFIACGIGQROSPINIVSYDAKFRQLPKIKFKPHMEKLTKEVTNH 99  
P1 [M. yessoensis] -----QSPINIVSYDAKFRQLPKIKFKPHMEKLTKEVTNH 36  
nacrein [P. fucata] ALCVVVPLCYGASMFKHDHYMDNGVRYPNGDGICKQLNETKCDAGFSYDRSICEGPHYWHTISKCFIACGIGQROSPINIVSYDAKFRQLPKIKFKPHMEKLTKEVTNH 110  
C5 [P. margaritifera] SLLVLIPLCHCASHRHDHYMDMDQTYPNQWGYCDPPKNSSCKAGFSYORDICOGPYWHTISSCFKACASKRQSPINIVSHRAVFPDLPRPKFKPHMKSLDTEVSNH 110  
mc [M. californianus] -----RCEKNWCKVHPCWTT CGSQMROSPININTNQTIYKR-YPRKRVENVHKRVIATIRNN 56  
nacrein [T. marmoratus] -----MAAVALCLLLGISLTSATYERARVPVGPREFCSNDGQLCFSYDRSSPIGPPSWFNVCQTR-KCFFGKNQSPHINLNFVYVG--CGPRIGYRGNPAVKGDVMNE 100

120 130 140 150 160 170 180 190 200 210 220  
CA1 [H. sapiens] GHSHFVNFEEDNDNRS-----VLKGGPFSDSVRLFOFHFHWG---STNEHGSEHTVDCGVKYSAEHLVAHWNSAKYSSSLAEAAASKADGLAVIGVLMKVG----- 152  
F1 [C. gigas] GHSPDIEDCKVETDEALKENIILTNTVPMR-GDKQYIFLAQLHIBIGNETNNDDEGSEHSIDGOEYFMEAHLVFYDSFDNIGVAKPVK-DSLVLVGVMIKVRDDNEEENE 215  
F2 [C. gigas] GHAPHEFSVKLNETK-RNITLKLKSVSGRNPNEEYILADLHIBLGE---KEKDVGSEHSIDGTFYFMEAHMVYFNSKYGDISOAKPKD-DGLVVIQVMIAKAKDDDDDDND 212  
F3 [C. gigas] GHAPHEFDVAEDNKD-ITLKLKNIINKRWSKDTMIFHDHIBLGE---KKENKGSEHSIDGKTFYFMEAHMVYFNSKYEDISEAKSKD-DGLAVIQVMIOVNGDDNDEDD 184  
pm [P. maxima] QRAPEPEPEDGENLY-----VKLNNLVDGHYKFEHNLHVBNG---RTRRKGSEHSVNGRFTPMEAHLVFHDDQTHFEPTRTKLHNDFFVVGVFLEVGFGEFDPDEE 197  
P1 [M. yessoensis] QRAPEPEPEDGENLY-----VKLNNLVDGHYKFEHNLHVBNG---RTRRKGSEHSVNGRFTPMEAHLVFHDDQTHFEPTRTKLHNDFFVVGVFLEVGFGEFDPDEE 134  
nacrein [P. fucata] QRAPEPEPEDGENLY-----VKLNNLVDGHYKFEHNLHVBNG---RTRRKGSEHSVNGRFTPMEAHLVFHDDQTHFEPTRTKLHNDFFVVGVFLEVGFGEFDPDEE 208  
C5 [P. margaritifera] QHAPEDSED-EKPR-----VKLKNLVDGHYKFEHNLHVBIG---KSRKKGSEHSVDNRHFTPMEAHLVFHDKEKIEPPRIWLSNEFVVGVFLEVGFGEFDPDEE 207  
mc [M. californianus] GHAPHEFVHEKFDDEIVLNRNVPERRRKEYNFAQLHVBQLG---RDEKGESEHSIDNKFKPMEAOVMVFYDKDYEDVLEAKSKK-NGLVVIVMIEVYGRSKEHDD- 156  
nacrein [T. marmoratus] GIYPAPERPDENPLLS-----GVPGYEHETFQAGMHVBFHFR---GFNSEGQEHKIGNADYDAEMHLVFFSTKYGKRSSVDVFRFRRRIYSADYFKKYDNGNGNGNG 197

230 240 250 260 270 280 290 300 310 320 330  
CA1 [H. sapiens] -----EAN 155  
F1 [C. gigas] EEEDKRENEEEEEEDQEEPDQDDK-----DLC SLEEGKMNEKFYRKH CYRKRITCKGRFAKRLSDNMEHYFEE IRNHD PVKPDLEKSSDDDIRQCGDHPDL 310  
F2 [C. gigas] NDDEEEDDG-----YEKGGDKERSEWAAWGHK YTRNYGDYKHNGDGEDYFSSKCYKGNRCKVRFARTLSHIMEKYDDKIKEYHHNEEPEIKDPEDLQCGEKPSD 315  
F3 [C. gigas] DDDDDDDAKKGNENEYDDEDEKEHDEYEGGEDNERSSNYWNYEYREHDEESFKKCYEGRGKCKVRFAKTLSCLMKEYEYKIKEYHEQDNTTNGNHGPRCEYCGKKPSD 294  
pm [P. maxima] CKRILKGHP--DNN-ENGNGDNGYNGDNGNNGDNGYNGDNGNNGDNGNNGYNGDNGNNGDNGNN-----GENGNGENGNNGNGN--NGENGHKHGAKHL SRIL 293  
P1 [M. yessoensis] CKRILKGHP--DNN-ENGNGDNGYNGDNGNNGDNGYNGDNGNNGDNGNNGYNGDNGNNGDNGNN-----GENGNGENGNNGNGN--NGENGHKHGAKHLSTIL 230  
nacrein [P. fucata] CKHILKGHP--DNN-ENGNGDNGYNGDNGNNGDNGYNGDNGNNGVNGNNGYNGDNGNNGDNGNNGENGNNGNGN--NGENGHKHGAKHL SRIL 313  
C5 [P. margaritifera] CKRILKGHYDYCDNNGDNGNNGNNGNNGGNGNG--NGSNG-NGDHGSNGNNGGNGNNGNNGDNGNG-----DNGYNGDNGNSDNVRRIHTEHYHFSGARRLSRIL 305  
mc [M. californianus] -----CADGNETVRYVRKLSKLMKEYEYKVRRYPLVSNPHFLTFIKLPCGRTSP 210  
nacrein [T. marmoratus] NGNGNGKDNNGNGNDNGYNGNNGNGNNGSNGSDEED 307

340 350 360 370 380 390 400 410 420 430  
CA1 [H. sapiens] PKLQKVLDAQAIKTKGRAPFTNFDPSTLLP-SSLDFWYTPGSLTHPPLYESVWIIICKESISVSSEQLAQFRSLLSNVEGDNAVPMQHNNRPTQPLKGRTRVRSF- 261  
F1 [C. gigas] DTIYNMCMKRSTYESRNYREVE SGISPLDVLPCDQS-FYTYAGSLTTPPCYETVQWVIFKCPITVSKKAYRNLQVDSNE-DELKLLGVKRRHMTNTGIOVYRNHE 416  
F2 [C. gigas] KFIQSECTRGGG-HPEETDIHCGISPVDVLPDQR-FYTYPGSLTTPPCYESVQWVYKCPKIVSRKAFKALQVYDAEK-KPLNHHGVKRPKINEF-FVSKNE- 418  
F3 [C. gigas] YFIKEVCQKAG-NHSNT-VIECGITPADVLPYDQR-FYTYPGSLTTPPCYESVQWVYKCPKIVSRKAFKALQVYEDTEN-NPLKEHGVRRPQFNRYKVS SKNE- 397  
pm [P. maxima] ECAYRNDKVVREFKKVGEEGGLDVHLTPEMALPLKYRHYTYEGSLTTPPCYESVWVQKCHVOVSRRVLHALLRNVEGYKDGTTTRKYGTRRPTQK--NKVTYKSEK 399  
P1 [M. yessoensis] ECAYRNDKVVREFKKVGEEGGLDVHLTPEMALPLKYRHYTYEGSLTTPPCYESVWVQKCHVOVSRRVLHALLRNVEGY----- 309  
nacrein [P. fucata] ECAYRNDKVVREFKKVGEEGGLDVHLTPEMALPLKYRHYTYEGSLTTPPCYESVWVQKCHVOVSRRVLHALLRNVEGYKDGTTTRKYGTRRPTQK--NKVTYKSEK 419  
C5 [P. margaritifera] ECAYRHKKVREFKRNGEHS LDVEITPEMVLPTKYRQYTYEGSLTTPPCYETVQWVYKCPKIVSKAFRMLQVDSHL-DPLEKLGVRRLQTNKN-VIYRNHL 413  
mc [M. californianus] DFIEKKCEKEEP-ETRPFVFEF-I TPLDVIPIYDTRNEYTYAGSLTTPPCYETVQWVYKCPKIVSKAFRMLQVDSHL-DPLEKLGVRRLQTNKN-VIYRNHL 314  
nacrein [T. marmoratus] DDIYGFCDAEPECLDGDCEVEITLNPDGLLP-ERDFYYYYSGLTSPPVSEVVAWVWVQPIKIKTFQLFLMQLESRERGVKIAVNCVRRPQS-LNGRTVYGNFC 413