

S1 MLSQDGCTSGSGSRLGSGSREGIEDAYKPPALTEELLVIHNRDMEKNMLTKFKEAKRIGETRFRKDGKKFRAAQE  
S2 .....

S1 SGPKHVPRDIIKLKEDKRESGRNRHSSKPEVHLKISVPDENVKKDDQRSLAFNDFHWTSSSGMGTPLDINGISQKA  
S2 .....

S1 DHAGNISFPASHIIQSTLPGGSYQNFQVPAVYVPIPHPGSIPPEMLPNQVPIGLTMDGSSQNLIPVHISDPVAG  
S2 .....

S1 FINPMTKTKVSDSESDSVRETAIHQSKLPDCLAVNSCMELLQHDKLQERDTPSSLIKNRHIRIQSRDGSHTSI  
S2 .....

S1 KGEPGSALESNASAGASIKEQHFTTLALKITDNECSSSQSLYSFVHSSDENNRNDFTAASYSSPNGSPEDSKIIS  
S2 .....

S1 PRLVARPLLSEPFWNENVKLDDHLIYKYQLQQHDIEDVLRKDRAKILKMEVFNLVDEQLMEMLADLDFDYQGIDV  
S2 .....MTNNLIFNYQMETQNLGDVLMKDQEAIKKMQQPEIVEDQLKEIFTELEDGVELEEF

S1 LFDDEK..DSEETTSADESSG.ENDDKSHRVKMSKDKLYMEKLNIFMEENAPFFNSEETNSFNKTTGYFKSDLSN  
S2 LVDFECPTDEDTETSENEQSGIELEEKIFR..NRRKKAHLEKMNIFMEAEPFMPDLSRLT.....

S1 VAYGKTSESSRNLDSEFKTFENSQLSGLSYGNPSSSFKNPESSDTFENSQSCSGVSQNVCTQTIFEKVFENAVEKS  
S2 .....VHKRENSQLYGSPYSES.....TFH...SISG.....

S1 SGRNQHGDNHSFTSNRPQDKRFRYGRNSDSSSAPEPEKNKGEMDQVSTKTKKGKHKSVKTPVEVICSDNTSSDE  
S2 .....

S1 QTMKSNEVTASRSIKVLPCERSPHEDNHKTQQGKRFRYGPQASEEKDVTQKKKEKKKSESLSKAGFSKTRGQDP  
S2 .....

S1 RLKQSTDESESSVEYLITSSSVEAGPSSDDQAEKKSEANPDISDMSISNQSSVKEGSDNQSEHGSDSNILE  
S2 .....





 non-conserved  
 similar  
 ≥ 50% conserved  
 ≥ 70% conserved

Figure 1: Calanus helgolandicus PER

S1 - TRINITY DN15555 c0 g1 i1.p1 ORFtype complete len 818

S2 - TRINITY DN28421 c0 g1 i1.p1 ORFtype 3prime partial len 143