```
S1    MELMIMSMDHFFAPSIQLGRFVAENKYHISPNYPAKIEEILRRLVQDKARWHFRRALFLNQLISKNLLPTLTSVK
S2    ..........................................................................

S1    EDKQILESTVKLLQELMTPVECLMPVQTMSKNAESYRIVNELDKSISAAKKLFLDGKSTKALVDLMNSLLQDCKG
S2    ..........................................................................

S1    MSEDDCELINQCLLLVRNLLHVSSVPSVLNANITAGTGNSSAASSLNLKREGEDDEDTNNNGVITEDQIMWNLFA
S2    ..........................................................................

S1    QRFDNVIIQLLTCEQQWPTTQNQKPHVWSITMVQLVSLMYREQQQTTIRKLINEWLEVSLAESSEDDENNPMTSS
S2    ..........................................................................

S1    SSDAISTSDPVSDSSERLSPIEMADDNNDHNGMSSMDTIANSRQSKSEKDDSCKDSGFGRSGSNMDSSQDDSVSE
S2    ..........................................................................

S1    GAQKNKDIAKSPRQGNQLHGHTLQTDQFDRDSVDQDMMAYERISKTRGIKRCHEKSEEDPCILGMDYKNIGKCDM
S2    ..........................................................................

S1    EVGKESGSGSEGGSEGSSPIPELVQESPLSSLGNDHVDDHIDFQKDHQQKLVQQSLLDVNKEQMSSVIDDNVDVK
S2    ..........................................................................

S1    PVIKEDVPVLTKRPSQDQMKLPPKQEESGSSGDSSAKPPPQLPKHHKPMTGQKRSRHVMSQKMLSETQENNESSN
S2    ..........................................................................

S1    STGSDCDEGPHAKRPHHQKPHKMLSKPRPAKMLQKALQEKSITRHKLLRRKDSGGIKTKALLHHRPTQEDISNLL
S2    ..........................................................................

S1    KEFTIDFMLNGYSNLVQGLRLHVLLPYQIELDKSHLLWLITYFLRFAVELDLEVAQICPLLSVDVVSYLVYEGIV
S2    ..........................................................................

S1    VQEELESLLNAGQNDTLPQARRLHLVVTALREFFIALDLCLKKEHTLIDVKNILRIKEEIGQLVEVRQLFVFLIR
S2    ..........................................................................

S1    MYRPTVLSLNYLQDLITTNHCFLTTQESTSPLHPSVPSFNIVNHVKQFATMDMMKQYGLLLENFNINDEAVNDCI
S2    ..........................................................................

S1    FTMMHHVAGDLRNINVLLQPSILRTFLRIWQEGFELCVDWADLIEYILRKCTRVRTENPDGKESLTFPKPLSEPI
S2    ..........................................................................

S1    AIKLTDYDLDHLCTLYKTSSSEHDLMDKIRDICCDESIEEPIKKEVIQKLLARGFITSSECAKLCQEIKHTGSVA
S2    ..........................................................................

S1    TKSAKSEGTKSLEIDGMQISSDDSDDSMDGLPTSFKNLERKEKSSFKSTNSDDFKMPPPKPSKHHKNYDFSNQDI
S2    ..........................................................................

S1    EMNSDDVKILPPELAEDTCDDISKHEQEESDDWNDGQSLTLLIDKLKEEGYSTHIQYLQLQLLEACYSKLKIVGP
S2    ....................................MTRLMN.......PHNIYYIE................

S1    DIPKPEPLAFHFSLSNQSIPLIPWTSDQEVVFNNAKFSQLLGTLGFHLPSDTGKAFPRIPNFWCPEALFMVAKRL
S2    .FSRVAAMNLFVAVSNQSIPLIPWTSDQEVVFNNAKFSQLLGTLGFHLPSDTGKAFPRIPNFWCPEALFMVAKRL

S1    GPINSKEMESLKALKKQTTLIATPSRQESVTVPWKTTGQTRHPRCPL
S2    GPINSSDLKVS...VEQMQDMLEEMRDLSLSGSLRTHGNQ.......
```

X	non-conserved
X	similar
X	$\geq 50\%$ conserved
X	$\geq 70\%$ conserved

Figure 1: Crangon crangon TIM

S1 - TRINITY DN7718 c0 g2 i1.p1 ORFtype complete len 1322

S2 - TRINITY DN7718 c0 g1 i1.p1 ORFtype complete len 125