

S1 MNNSKDFFRNDEKENAKKSNNYSFLKLLNIPAAPSNYRILPNMNKESCSSASQSNLQLEPSSASLIPQLWNPQNM  
 S2 .....

S1 VGYKQFQAHMVQNMDEQIEPQVHTSNMDTDEL DQLLDEFEDVFKTGEDSNRLNIESMMDKMAN DGS DKEK....  
 S2 .....MDTDEL NKLLDEFQDVFAQA GEEVNPLN....MDKMSNGSR DKE SGEDM

S1 EELFTKKTENGSPRQFSAEELAPQIMIRKAKKQFVPD NAKDSKYWTRRVKNNAARRSREARHKKENQIRVRAAW  
 S2 DDMPHKKLDNGPPRQFSAEELAPQIMIRKAKKQFVPEHAKDSKYWTRRVKNNAARRSREGPGLKNVQMLVNEA.

S1 LEKENIRLRVELLDARQQIV.....D L NRE RPSNN.....  
 S2 .....IESLLSLVSA S QEGEPDSRARS LAREGKSSSPSRIA

[X] non-conserved  
 [X] similar  
 [X] ≥ 50% conserved  
 [X] ≥ 70% conserved

Figure 1: *Oikopleura dioica* PDP1e  
 S1 - TRINITY DN6971 c0 g1 i5.p1 ORFtype complete len 251  
 S2 - TRINITY DN9084 c0 g1 i3.p1 ORFtype complete len 155