

S1
 S2
 S3 MNQTMGRYYENQNDKHVVHWFVKGLRLHDNPSLR^EGLKHSATFRCIFILDPWFAGSSN^VDINKWRFLLESLEDLD
 S4MSRFDGNQLDKHVHWFVKGLRLHDNPSLR^DGLKHSATFRCIFILDPWFAGSSN^DDINKWRFLLESLEDLD

S1
 S2TCLTFEEDPEHFGV^RRDQY^IRTMCKEMGIEVISRSSH^ALYHP^KTI
 S3 QSLRKLNSRLFV^IRGQPAGVLPRLFKEW^STTCLTFEEDPEPFGRVRDQNI^MTMCKEMGI^QVI^ARA^SHTLYHPQTI
 S4 QSLRKLNSRLFV^VRGQPAGVLPRLFKEW^GTTCLTFEEDPEPFGRVRDQNI^MTMCKEMGIEVISRSSHTLYHPQTI

S1
 S2 IQKNKGRVPLTYRQFNIIATVDPPPPPER^DIS^FQFIG^PSYTPMNEADER^RY^NL^PNLEELGFDTDGLMPAVWKGG
 S3 IAKNKGRKAPLTYRQFNIIATVDPPPPPEA^DIT^FEFIGRSYTPM^DNEADEKY^SVPTLEELGFDTDGLMPAVWKGG
 S4 IQKNRGRAPLTYRQFNIIATVDPPPPPEP^DIT^FQFI^ARSYTPMND^DADEKYNVPTLEELGFDTDGLMPAVWKGG

S1 .TEAMTRLQRHLEH^RTWVA^CCDQ^PKMTPQSLLASQTGLSPY^FRFGCLSVRLFHQQLTSLYKKIKKA^DPPLSL^YGQ
 S2 ET.....
 S3 ETEGL^TRLRHLERKAWVASFGRPKMTPQSLLASQTGLSPYLRFGCLSVRLFHQQLT^NLYKKIKKAHPPLSLHGQ
 S4 ETEAMTRLRHLERKAWVASFGRPKMTPQSLLASQTGLSPYLRFGCLSVRLFHQQLTSLYKKIKKAHPPLSLHGQ

S1 VLMREFF^FCAATNNRNFDRMSGNPIC^IQIPWD^NNAV^ALAKWANG^KTGFP^FIDAIMTQLREEGWIH.....
 S2
 S3 VLWREFFYCAATNNPNFDRMVGNPICVQIPWD^SNAEALAKWANGQTGFPWIDAIMTQLREEGWIHHLARHAVACF
 S4 VLWREFFYCAATNNPNFDRMA^GNPICVQIPWD^TNAEALAKWANGQTGFPWIDAIMTQLREEGWIHHLARHAVACF

S1
 S2
 S3 LTRGDLWISWEEGMKVFEELLLDADWSVNAGTWMWLS^CSSFFHQFFHCYCPVKFGRKVDPNGDFIKKYQPV^LKNF
 S4 LTRGDLWISGKRE.....

S1
 S2
 S3 PLQYIHEPWNAPEEAQRAAKCIVGRDYPLPMVN^HMGASLINIERMKQVYQRLTQYRGSGLMIASNSSSQTPMKET
 S4

S1
 S2
 S3 KNHFIAG
 S4

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

Figure 1: Podon leuckartii CRY2

S1 - TRINITY DN12060 c0 g1 i1.p1 ORFtype internal len 139

S2 - TRINITY DN16487 c0 g1 i1.p1 ORFtype internal len 122

S3 - TRINITY DN5851 c1 g1 i3.p1 ORFtype complete len 532

S4 - TRINITY DN5851 c0 g2 i1.p1 ORFtype complete len 384