```
S1    ....MNVVWFRRGLRFHDNPSLLSAIKDAENLVAIYIFDTKFE.DVPRSFHSSGFLLECLADLDNTLRKMGSRLH
S2    ....MNVLWFRRGLRFHDNPSLLSAIKDADKFMAIYIFDTTFEADFHKSYHRIDFLLECLADLNKTLTEAGGKLH
S3    MSPGLNILWFRRNLRLHDNPSLHSAIEHPQNVFPIYIFDTRFNNQAKGSYHQNAFLLECLEDLKKRLISVGGHLH
S4    ......................................................................


S1    VFRGCPLAVFRYLHSGSGLKKVCFEQDCEPIWHFRDDSVKSLLGALGVECSEHISHTLWDPMNIIVANGGTPPLT
S2    IFKGCPLKIFDYIHSLCKIKKVCFEEDCEPIWHPRDNAVKKLLSSLEVDFEELVSHTLWDPMKIIDANGGTPPLT
S3    IFKGCPILIFQYLHSEYGISSLSVEQDCEPIWHLRNSEIRSLSKELRFEYEEHVSHTLWDPFLIISANGGTVPLT
S4    ......................................................................


S1    YDMFVHVAMSLGDPPKPVEDPDWTGVNFSNITAM....ESA...EFVLFEGMPSLSEIGVADIPLAQRKRRIIGG
S2    YDMFVHVAMSLGDPPKPVEDADLSKVNFLDFDPAELKNECD...DFVLFEKMPTLSELDIPDIPVSLQKRRIIGG
S3    FSAFIQAITLIPEPPYPVSNVNWKEVHFCPL.PLKFPSDSEKYTAITFYTEVPSLLELEIVSIPENSTKHIMPGG
S4    .............................................MFYEDIPSLSDLGVEPIPEISQKRIIKGG


S1    EVTALKTLETRLRAEKSAFLAGFYQPNQARPDLLGPPLSISSAISMGAISVRFFYHKVHDLFDEINRGQPPARLH
S2    ETTALKHLEDRLKAEKSAFLAGFYQPNQARPNLLGPPLSISSALAMGVISVRHFYHRVHELFDEINQGKPPAWIH
S3    ETNALDQLDVRLKVEKSAFTARLFQPNQARPNLLDQPMSLSPAINFGTLSVRHFYWKIHDLYEKVNRGVSHQSME
S4    ETVALKMLALRLEVEKAAFRAGLFQPNQARPNLLGPLMSMSCAINVGALSIRYFYWKIRHLYDETIQGIRPPLIE


S1    ITGQLIWREYFYTMSRLNSKYDKMKGNPICLQIPWKEDEEQFQKWVNGMTGYPFIDAGLRQLIQEGWMHHSVRNA
S2    ITGQLIWREYFYTMSRLNSNYDQMENNPICLQIPWNDDDKLFEKWTQGVTGFPFIDAGLRQLIKEGWMHHSVRNA
S3    ITGQLIWREFFYTLSHLNPYFDKIKCNPVCLPVPWSQDETPLKHWKAGNTGYPFIDAGLRQLIQEGWTHHLVRNA
S4    ITGQMMWREYFYTQSRLNLHFNQIKNNPVCLNIPWSKDESFLQDWKDGKTGYPFIDAGMRQIVQEGWTHHLIRNA


S1    VAMFLTRGDLWLHWEKGADHLMNHLVDCDWSVNSGNWMWVSSSAFERLLDCSVCINSVSYGKRLEPSGNFIRRFV
S2    VAMFLTRGDLWITWTKGADHLMKYLIDCDWSINSGNWMWVSSSAFERLLDCSICIDSVSYGKRLEPSGDFIRRYV
S3    IAMFLTIGDLWISWERGAEHFTKYQIDFDWCVNAGNWMWVSSSAFGRIMDDSQSIDPVLFGKRLESSGEYIRKYV
S4    VAMFLTRGDLWISWERGCEHLMEHLIDSDWSINAGNWMWISSSAFDRVLDSTQSIDPVLFGKRLEPSGEYIRKYI


S1    PELANFPFEYIHEPWKAPIEAQQAANCLIGKDYPARMVIHEEVSRRNREHMVAIREKIVAKCQGSAPPHCKPSSE
S2    PELANFPFQYIHEPWKAPIEAQIEANCILGKDYPHRIVNHAEVSRRNREKMVTIRDQIIAKSEGSTPPHCKPSSE
S3    PELANFSFEYIHEPWKAPIEVQKAANCILGVNYPERIVQHNEVWPKNKERMTIFKAELLK....KGVPMSFVMVQ
S4    PELANFSFQYIHEPWKAPVEVQKAANCIIGIDYPEPIVNHTEQSLRNKERMTKFKEELAG....NIPP.YFH..S


S1    NEVYQFFCIAE..NCLHV..............
S2    NEIYQFFCITD..KTLQID.............
S3    DELTPDYQLSYLYNCKEI..VS..........
S4    SALTSFYQIPN..QCLPIEVESSDIETKDMLP
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X	non-conserved
X	similar
X	≥ 50% conserved
X	≥ 70% conserved

Figure 1: Podon leuckartii CRY1
S1 - TRINITY DN4974 c0 g1 i1.p1 ORFtype complete len 529
S2 - TRINITY DN4974 c0 g2 i2.p1 ORFtype complete len 535
S3 - TRINITY DN11012 c0 g1 i3.p1 ORFtype complete len 540
S4 - TRINITY DN11012 c0 g3 i2.p1 ORFtype complete len 352