

S1 P P P P P P T R P C L N T I Q A Q G F G L C S S L G D I M A I N V D N A E R A Q M H W N W A . H V F Q A Q L N V A P R G P . . . . . A . . . . .  
 S2 . . . . . M S V N A E G L E G K T V A W N W A T H M F Q A Q L N S A P H F Q T N R G A P A G S H I N A G

S1 . T G P T G P P A P V V G P G V A L A Q Q W N A W A H Q Q V Q H Q Q Q Q H Q Q Q Q Q Q P P V A Q S L L K H R L N G N A A G A K Q E N G E K K E E T D E  
 S2 S M A P I A S T A P N T V T G N I W A H Q W N A W A Q H Q A Q . . . . . Q Q H S A A P S Q F K H R L N G N S P G A K Q D . . . E K E E T D D

S1 V W S Y L E A Q A A F L G P S L W D N G D L K M E Y M D L D E F L S E N G I P V K D N A A R G R S P P Q Q G P S I Q S T N S S G G D S A A P A Q A S  
 S2 M W N Y F E A Q A A F L G P S L W D N G D L K M E Y M D L D E F L S E N G I P V G E N N . K D R A A Q K Q S P S N N D N S N . . . . . D S T P D Q A S

S1 S S S G S S G S S G S S G S V C S N . A T P T R S A P S P A M T L V N E D D D N S V S E C S S S S V L D A I S P A A T C T S F S R T P A K R K R T A  
 S2 S S S S A D H . . . . . R D C I T P P D R L K D I M S P E G S V V T E . D D G S V S G C S T A Q . . D D N T P E . K C M P . V R S V A A K R K R T A

S1 V S I A S S F N D N S S D D G S Y V P G H D F D P K S R P F S Q E E L R P Q P M S K K S K K Q Y V P D D L K D D K Y W A R R R K N M A A K R S R D A  
 S2 V S I A S S T N G N T S D D G S Y V P G H D F D P K S R P F S Q E E L R P Q P M S K K S K K Q Y V P D D L K D D K Y W A R R R K N M A A K R S R D A

S1 R R V K E N Q I A M R A A F L E K E V N A V L K A E L D K V T K L Y A S A L K R L E Q Y E K P I K K Y  
 S2 R R V K E N Q I A M R A A F L E K E V N A V L R A E L D K V S K L Y A S A L K R L E K Y E N P T K K Y

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

Figure 1: Podon leuckartii PDP1e  
 S1 - TRINITY DN410 c0 g2 i2.p1 ORFtype 5prime partial len 410  
 S2 - TRINITY DN410 c0 g1 i25.p1 ORFtype complete len 368