

Alignment of protein sequences from several *T. whipplei* isolates

TWT018: deoD

Twist YVLVIGARTHLYQGHGPEAVVHGIKTAHAAGARVAILTNGAGSTVPDWGPGEVVVIX
Dig7 YVLVIGARAHLYQGHGPEAVVHGIKTAHAAGARVAILTNGAGSTVPENGPGEVVVIX

TWT099: unknown

Twist YITYFIVDKLRRLYLQPNCLFNLFWLPNCLFNLFWLPNLLLWLV
Dig10 LYHLFH*CRA*VIPVTQPFIVVSPVLGGLGN*GELFLLHV
DigNeuro14 YITYFIDAGLGYSYPTIICYG*SCFGLGLGN*GELFL
DigNeuro18 SNRPCIFVPISPISLYHLFH*CRLRLYLQPNHLLWLV

TWT171: unknown

Twist RMHWPVDACWPGIKLFWINWSLLVFSAILLWYAFSACRKYVGRVVAYIGSIGGGALLSLRLLAHPSTPHL
Dig7 RMHWPVDACWPGIKLFWRTNWSLLVFSAILLWYAFSACRKYCHVVAYIGSIGGGALLSLRLLAHPSTPHL
Dig15 RMYGPVDACWPGIKLFWTNWSLLVFSAILLWYAFSACRKYHVVAYIGSIGGGALLSLRLLAHPSTPHL

TWT176: unknown

Twist EVATLFTGAGLGKAAGKAAAKLKFADKAAGKLVKQFLERLHVKAADTAANKVLHFGIDALSLPCKGRKPYII
Dig15 EVATLFTGAGLGKAAGKAAAKLKFADKAAGKLVKQFLERLHVKAADTAANKVLHFGIDALSLPCKGRKPYII

TWT199:ftsE

Twist GITTKLLVQDKEVSVFLSTKEGAAGSSDASSCANNITGTGRCDTGLRDT----HKSDTHNATPRDRALLHDPGLHDTGLQGDVTQGYMT
Dig7 GITTKLLVQDKEVSVFLSTKEGAAGNSDASSCANNITDTGVRDTGVRDT----HKSDTHNATPRDRALLHDPGLHDTGLQGDVTQGYMT
Art1 GITTKLLVQDKEVSVFLSTKEGAAGNSDASSCANNITDTGVRDTGVRDTGVRDTHKSDTHNATPRDRALLHDPGLHDTGLQGDVTQGYMT
DigMusc17 GITTKLLVQDKEVSVFLSTKEGAAGNSDASSCANNITDTGVRDTGVRDT----HKSDTHNATPRDRALLHDPGLHDTGLQGDVTQGYMT
DigNeuro18 GITTKLLVQDKEVSVFLSTKEGAAGNSDASSCANNITDTGVRDTGVRDT----HKSDTHNATPRDRALLHDPGLHDTGLQGDVTQGYMT
DigADP11 GITTKLSGSRRKEVRFCQQKR--AQQVTMQVAAQIT*PIQGVIQGVIPINLIHIMQHPVTAHYYMTLDCMMLDYREM*HKGT*HX

TWT203: ksgA

Twist PTSQLHGLQVTSQSHPTNQGVHDTGLRDTHKSDTHNATPRDRALLHDPGLHDTGLQGDVTQGYMT
Dig15 PTSQLHGL-----QHLTNQGRCDTGLRDTHKSDTHNATPRDRALLHDPGLHDTGLQGDVTQGVRH

TWT232: wisP

Twist AVGVFSNGAGPTTPVVVVHPNNRTTVCLTCICNRAVIRLRPKCIGEPVKHILSSX
Dig9 AVGVFSNGADSTTPVVVVPPNNRTICLTCICNRTVIRLRPKCIGEPVKHILSSX
Art1 AVGVFSNGADSTTPVVVVPPNNRTICLTCICNRTVIRLRPKCIGEPVKHILSSX
DigMusc17 AVGVFSNGADSTTPVVVVPPNNRTICLTCICNRTVIRLRPKCIGEPVKHILSSX

TWT277: unknown

Twist IDTNINPYKRRQAPTQHRQAYARAKLTGRRRATNPARTSQSDRAKLCY
Dig15 IDTN*PA*EATN-PT*HRQAYARAKLTGRYKPHSSNQPVRSGKTMLS

TWT311: unknown

Twist LFFVVSFGTHLQNLGVKETFQNKGTGLHKFVMLFKQRLWLVGAVLLAIASILQVLSLVFAPLVVVQPLX
Dig15 LFFVVSFGTHLQNLGVKETFQNKGTGLHKFVMLFKQRLWLVGAVPPAIASILQVLSLVFAPLVVVQPLX

TWT386: trpE

Twist FSKLLDCDPQPWPLGFGVWIDYEVGACLLGVNYPTQQDAPATGQTNLSSWICCNRAICIDYRMGLLKIISFSKNTVDAKEWVX
Dig15 FSKLLDGDPQPWPLGFGVWVDYEVGACLLGVNYPTQQDAPATGQTNLSSWICCNRAICIDYRMGLLKIISFSKNTVDAKEWVX

TWT388: unknown

Twist STMQGLSEALRVPDKVTDTRLFNRNIELMKHGIQSADQAVEKAKESMLLNHKAKKMRKAFDDDLVLFRLER IAGH
Neuro2 STMQGLSEALRVPDKVADTRLFNRNIELMKHGIQSADQAVEKAKESMLLNHKAKKMRKAFDDDLVLFRLER IAGH
DigNeuro18 STMQGLSEALRVPDKVADTRLFNRNIELMKHGIQSADQAVEKAKESMLLNHKAKKMRKAFDDDLVLFRLER IAGH

TWT594: WiSP

Twist VPYL----AVRIVYSVSH^TIYSYANPSLKARVLLY^TQSQSNVSI^TPILYGSFSI^STYVLVDTT^TGATSGSTGLPKGLSF-TSGTITGSIDIRX
Slow2 VPYL----AVRIVYSVSH^TIYSYANPSLKARVLLY^TQSQSNVSI^TPILYGSFSI^STYVLVDTT^TGATSG^XTGLPKGL^TLDSSGTITGSIDIRX
Endo5 VRTLLSVLYTQPCYIISRIIYSYANPSLKARVLLY^TQSQSNVSI^TPILYGSFSI^STYVLVDTT^TGATSGSTGLPKGL^TLDSSGTITGSIDIRX
Endo7 FRTLLSVLYTQPCYIFSRI IYSYANPSLKARVLLY^TQSQSNVSI^TPILYGSFSI^STYVLVDTT^TGATSGSTGLPKGL^SFDSSGTI^KGSIDIRX
Dig9 FRTLLSVLYTQPCYIFSRI IYSYANPSLKARVLLY^TQSQSNVSI^TPILYGSFSI^STYVLVDTT^TGATSGSTGLPKGL^TLDSSGTITGSIDIRX
Dig10 VPYL----AVRIVYSVSH^TIYSYANPSLKARVLLY^TQSQSNVSI^TPILYGSFSI^STYVLVDTT^TGATSGSTGLPKGL^TLDSSGTITGSIDIRX
DigADP11 VPYL----AVRIVYSVSH^TIYSYANPSLKARVLLY^TQSQSNVSI^TPILYGSFSI^STYVLVDTT^TGATSGSTGLPKGL^TLDSSGTITGSIDIRX
Art1 VPYLLLSVLYTQPCYIFSRI IYSYANPSLKARVLLY^TQSQSNVSI^TPILYGSFSI^STYVLVDTT^TGATSGSTGLPKGL^SFDSSGTI^KGSIDIRX
DigNeuro18 FRTLLSVLYTQPCYIFSRI IYSYANPSLKARVLLY^TQSQSNVSI^TPILYGSFSI^STYVLVDTT^TGATSGSTGLPKGLSF-TSGTITGSIDIRX
Dig7 SVPCYPCYILSHAIYSYAVSYHTHLIQA*KHVVYCTHRVRVM*VLHLYSTEAFLYPHMY**IQQVLHGSTGLPKGLSFDSSGTI^KGSIDIRX

TWT596: WiSP

Twist ANGSDTFLYPTDQLTEGGEGYTPIPVSTQSLSNFTIDTVSNTWTYTGSGKTNQTQGTVTLIIITAYKNSTSSSTQQTW
Dig7 QMAKRHTYTPQIN*PRVEKSYTPITVSTQSLH-FTIDLTSNTWTYTGSGNTNQTQGTVTLITITAYKNSS^TSTQR^{TW}

TWT604: unknown

Twist LLLRNLRYRLGHRLCHLVGRPRCLWVIVGGSLFLLIVFSKIRRENIQQNKIX
Dig10 LLLRNLRYRLGHRLGHRVGRPRCLWVIVGGSLFLLIVFSKIRRENIQQNKIX

TWT653: membrane protein

Twist TVTLTHVTQQTRNSTDRWVIGVTDLYYGTDAWGFYKAGWSLQAAALVAVTSVVPSPVPLKAALRVILPALLKGAVKFAGS
Neuro2 L*PLHMQRNRHRQDFPGVMTHGVST*NWNGMNKLLPQLALPLVAVPAWPLRPL*K*P*RQAPRFLAWRVVDKLSDIIGA

TWT673: unknown

Twist RPAAVSVAGGLTGFVGGAVSGCVLGGRLVDDL^VNGFNAGFNAV^GDFV^GGKLF^G
Dig9 RPAAVSVAGGLTGFVGGTVSGCVLGGS**SCQWV*CWI*RRW*LCKRAIRI

TWT679: unknown

Twist KPLSRGIKIGASVVALCVSVLLIAIFSLMTRPIGNDYHTTSFKVKSNEVIVEFSFTGHIPTVCAVRVLGRDMSTVGWKVVPVLSPHMEVGLRTTKVAX
Dig7 KPLSRGIKIGASVVAICVSVLLIGIFSLMTRPIGNDYHTTSFKVKSNEVIVGFSFTGHIPTVCAVRVLGHDMSTVGWKVVPVLSPHMEVGLRTTKVAX
Art1 KPLSRGIKIGASVVAICVSVLLIGIFSLMTRPIGNDYHTTSFKVKSNEVIVGFSFTGHIPTVCAVRVLGHDMSTVGWKVVPVLSPHMEVGLRTTKVAX
DigMuscl7 KPLSRGIKIGASVVAICVSVLLIGIFSLMTRPIGNDYHTTSFKVKSNEVIVGFSFTGHIPTVCAVRVLGHDMSTVGWKVVPVLSPHMEVGLRTTKVAX

TWT704: unknown

Twist YKTYFSRTRWERELSEAVCFNGKQLNSAIHYGIYRTGVIDPVWTA^FIFK^WVYA^FR
Art1 YKTYFSRTRWERELSEAVCFGGKQLNSAINYGVYRTGVIDPVWTV^FIFK^WVYA^FR
DigMuscl7 YKTYFSRTRWERELSEAVCFGGKQLNSAINYGVYRTGVIDPVWTV^FIFK^WVYA^FR

TWT751: unknown

Twist IRKASQMLKDWRLSGLTLFVTMEPCTMCAGAIVTSRISR^VVFGAFNNKTGSVGSRIDILR
Art1 IRKASQMLKDWRLSGLTLFVTMEPCTMCAGAIVTSRISR^VVFGVFNNKTGSVGSRIDILR

TWT762: unknown

Twist LRGWSGSGDFGVSRLTRVLPVLVLPVALVVEEGASERLPNNFLNGHVMPCHIH^LNGAAIPLPTFDQNPPLLSVGVERHLSNIDCX
DigMuscl7 LRGCSGSCDFCAPRLRFLPLVLPVALVVEEGASERLPNNFLNGHVMPCHIH^LNGAAIPLPTFDQNPPLLSVGVERHLSNIDCX

TWT773: unknown

Twist IAHLTLLTATLLTATLSALGIEKQHGLSLERASTWRSALRNLGIKQQINMGFVPGHMLWHAGHLV
DigNeuro18 IAHLTLLSAN-----LSALGIEKRHGLSLERASTWRSALRNLGIKHTNKHGVRARSHAMACWASGL