

Product datasheet for **RG228473**

Twinkle (TWNK) (NM_001163812) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Tag:	TurboGFP
Symbol:	Twinkle
Synonyms:	ATXN8; C10orf2; IOSCA; MTDPS7; PEO; PEO1; PEOA3; PRLTS5; SANDO; SCA8; TWINL
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



ORF Nucleotide Sequence: >RG228473 representing NM_001163812
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCCGCGATCGCC

ATGTGGGTCTCTCCGAAGTGGGTACCCCTCCGTATCTTGTACCCCTGCGTGGGGAGTGGATGGGTC
 GGAGGGGCTGCCCCGAACTTGGCCCCAGGCCCTCCTCGCAGACGTTACAGGAAGGAGACTCTCCAAGC
 CTTGGATATGCCAGTGTTCGCTGTAAGTGAAGTGAATCCGCCAGTATTTGCGGGGCGATGGGATCCCC
 TTCCAGGATGGTCACAGTTGCCTGCGGGCACTGAGCCCTTTGAGAGTCTTCACAGCTCAAAGGCCAGA
 CTGGTGTACCACCTTCTTCAAGCTTCTTATTGACAAGACCACAGGCCACTTTCTCTGCATGACCAAGCT
 AGCAGAAAGGAGCTGGGAAGACTTCCAGGCCAGCGTGGAGGGCGAGGGGATGGGGCCAGGGAGGGTTT
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 TCTGGGAGCTGCCTGATCAGGAGGAGGTTGAGTGGCTGATACAATGTTTGGCCTTACCAAGGTTACAGA
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 CAAACGATGCTTCTTGGTGCAGCAGGAGACCAACCCCGTCCCTGGAGGCCCTGAACGGAGGCTTC
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 TCATCGACAACCTGCAGTTCATGATGGGTACGAGCAGCTGTCCACAGACAGGATCGCAGCTCAAGACTA
 CATCATCGGGTCTTTCGGAAGTTTGCAACAGACAATAACTGCCATGTGACACTGGTCATTACCCCCGG
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ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

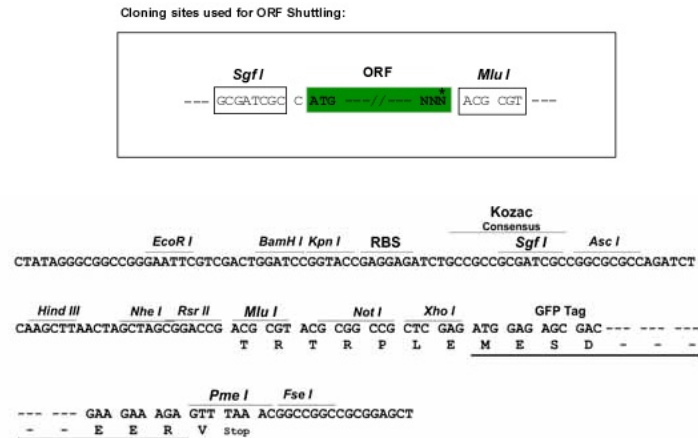
Protein Sequence: >RG228473 representing NM_001163812
 Red=Cloning site Green=Tags(s)

MWLLRSGYPLRILLPLRGEWMGRRGLPRNLAPGPPRRRYRKETLQALDMPVLPVTATEIRQYLRGHGIP
 FQDGHSLRALSPFAESSQLKGQTVTTTSFSLFIDKTTGHFLCMTSLAEGSWEDFQASVEGRGDGAREGF
 LLSKAPEFEDSEEVRIWNRAIPLWELPDQEEVQLADTMFGLTKVTDTLKRFVRYLRPARSLVFPWFS
 PGSGSLRGLKLEAKCQGDGVSYEETIIPRPSAYHNLFGPLISRRDAEVVLTSLREDSALNQSTGLPT
 LTLPRGTTCLPPALLPYLEQFRRIVFWLGDRLSWEAAKLFARKLNPKRCFLVRPGDQPPRPLEALNGGF
 NLSRILRTALPAWHKSIYSFRQLREEVLGELSNVEQAAGLRWSRFPDLNRILKGHRKGELTVFTGPTGSG
 KTTFISEYALDLSQGVNTLWGSFEISNVRLARVMTQFAEGRLEDQLDKYDHWADRFDLPLFYMTFHG
 QQSIRTVIDTMQHAYVYVDICHVIIDNLQFMMGHEQLSTDRIAAQDYIIGVFRKFATDNNCHVTLVIHPR
 KEDDDKELQTASIFGSAKVSGL

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001163812

ORF Size: 1746 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_001163812.2](#)

RefSeq Size: 3684 bp

RefSeq ORF: 1749 bp

Locus ID: 56652

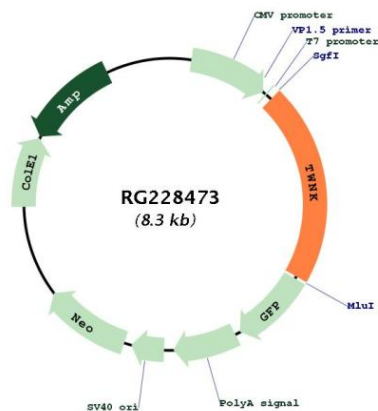
UniProt ID: [Q96RR1](#)

Cytogenetics: 10q24.31

Protein Families: Druggable Genome

Gene Summary: This gene encodes a hexameric DNA helicase which unwinds short stretches of double-stranded DNA in the 5' to 3' direction and, along with mitochondrial single-stranded DNA binding protein and mtDNA polymerase gamma, is thought to play a key role in mtDNA replication. The protein localizes to the mitochondrial matrix and mitochondrial nucleoids. Mutations in this gene cause infantile onset spinocerebellar ataxia (IOSCA) and progressive external ophthalmoplegia (PEO) and are also associated with several mitochondrial depletion syndromes. Alternative splicing results in multiple transcript variants encoding distinct isoforms.[provided by RefSeq, Aug 2009]

Product images:



Circular map for RG228473