

Product datasheet for **SC327108**

Twinkle (TWNK) (NM_001163812) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Twinkle (TWNK) (NM_001163812) Human Untagged Clone
Tag:	Tag Free
Symbol:	Twinkle
Synonyms:	ATXN8; C10orf2; IOSCA; MTDPS7; PEO; PEO1; PEOA3; PRLT55; SANDO; SCA8; TWINL
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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Fully Sequenced ORF: >SC327108 representing NM_001163812.
 Blue=Insert sequence Red=Cloning site Green=Tag(s)

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GCTCGTTTAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGGCCGGGAATTCGTGACTG
GATCCGGTACCGAGGAGATCTGCCGCCCGCATCGCC
ATGTGGTCTCCTCCGAAGTGGTACCCCTCCGTATCTTGTACCCTGCGTGGGGAGTGGATGGGT
CGGAGGGCCTGCCCGAAACTTGGCCCCAGGCCCTCCTCGCAGACGTTACAGGAAGGAGACTCTCAA
GCCTTGATATGCCAGTGTTCCTGTAACCTGCAACTGAAATCCGCCAGTATTGCGGGGGCATGGGATC
CCCTCCAGGATGGTCACAGTTGCCTGCGGGCACTGAGCCCTTTGCAGAGTCTTACAGCTCAAAGGC
CAGACTGGTGTACCCTTCTTCAGCCTCTTATTGACAAGACCACAGGCCACTTTCTCTGCATGACC
AGCCTAGCAGAAGGGAGCTGGGAAGACTTCCAGGCCAGCGTGGAGGGGCGAGGGGATGGGGCCAGGGAG
GGGTTTCTGCTTAGCAAGGCACCAGAATTTGAGGACAGCGAGGAGGTCCGGAGGATCTGGAACCGAGCA
ATACCTCTCTGGGAGCTGCCTGATCAGGAGGAGTTTCACTGGCTGATACAATGTTTGGCCTTACCAAG
GTTACAGATGACACACTCAAGCGTTTTCAGTGTGCGATATCTGCGACCTGCTCGCAGTCTTGTCTTCCCT
TGTTTCTCCCCTGGGGGCTCAGGATTACGAGGCCCTGAAGCTCCTAGAGGCTAAATGCCAGGGGGATGGA
GTGAGCTACGAGGAAACCACTATTCCCCGACCCAGCGCCTACCACAATCTGTTTGGATTACCACTGATT
AGTCGTCGAGATGCTGAGGTGGTACTGACGAGTCGTGAGCTTGACAGCCTGGCCTTGAACCAAGTCCACG
GGGCTGCCTACCTTACTCTACCCCGAGGAACGACCTGCTTACCCCTGCCTTACTCCCTTACCTGGAA
CAGTTCGGCGGATTGTATTCTGGTTGGGGGATGACCTTCGGTCTGGGAAGCCGCCAAGTTGTTTGCA
CGAAAACCTGAACCCCAAACGATGCTTCTTGGTGCAGCAGGAGACCAGCAACCCCGTCCCCTGGAGGCC
CTGAACGGAGGCTTCAATCTTCTCGTATTCTTTCGTACCGCCCTGCCTGCCTGGCACAAGTCCATCGTA
TCTTTCGGCAGCTTCGGGAGGAGGTGCTAGGAGAAGTGTCAAATGTGGAGCAAGCAGCTGGCCTCCGC
TGGAGCCGCTTTCAGACCTCAATCGTATCTTGAAGGGACATCGAAAGGGCGAGCTGACGTTCTTACA
GGGCCAACAGGCAGTGGAAAGACGACATTCATCAGTGAGTATGCCCTGGATTTGTGTTCCAGGGGGTG
AACACACTGTGGGTAGCTTCGAGATCAGCAATGTGAGACTAGCCCGGTCATGCTGACACAGTTTGCC
GAGGGGCGGCTGGAAGATCAACTGGACAAATATGATCACTGGGCTGACCGCTTTGAGGACCTGCCCTC
TATTTTCATGACTTTCATGGACAGCAAAGCATCAGGACTGTAATAGATACAATGCAACATGCAGTCTAC
GTCTATGACATTTGTATGTGATCATCGACAACCTGCAGTTTTCATGATGGGTCACGAGCAGCTGTCCACA
GACAGGATCGCAGCTCAAGACTACATCATCGGGTCTTTCGGAAGTTTGAACAGACAATAACTGCCAT
GTGACACTGGTCATTACCCCGGAAAGAGGATGATGACAAGGAAGTGCAGACAGCGTCCATTTTGGC
TCAGCCAAAGTGAGTGGCCTTAG
ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGAT
TACAAGGATGACGACGATAAGGTTTAAACGGCCGGC
  
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- Restriction Sites:** SgfI-MluI
- ACCN:** NM_001163812
- Insert Size:** 1749 bp
- OTI Disclaimer:** Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
- OTI Annotation:** This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.
- 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.

RefSeq: [NM_001163812.1](#)

RefSeq Size: 3684 bp

RefSeq ORF: 1749 bp

Locus ID: 56652

UniProt ID: [Q96RR1](#)

Cytogenetics: 10q24.31

Protein Families: Druggable Genome

MW: 66 kDa

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]

Transcript Variant: This variant (2) uses an alternate splice site in the 3' coding region which introduces a novel stop codon, compared to variant 1. The encoded protein (isoform B; also known as Twinky) has a shorter and distinct C-terminus, which lacks a C-terminal domain required for hexamer formation, compared to isoform A.