

Product datasheet for **SC124839**

Twinkle (TWNK) (NM_021830) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Tag:	Tag Free
Symbol:	Twinkle
Synonyms:	ATXN8; C10orf2; IOSCA; MTDPS7; PEO; PEO1; PEOA3; PRLTS5; SANDO; SCA8; TWINL
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)



Fully Sequenced ORF:

>OriGene ORF within SC124839 sequence for NM_021830 edited (data generated by NextGen Sequencing)

```

ATGTGGGTCTCTCCGAAGTGGGTACCCCTCCGTATCTTGTTACCCCTGCGTGGGAG
TGGATGGGTCGGAGGGGCTGCCCCGAACTTGGCCCCAGGCCCTCTCGCAGACGTTAC
AGGAAGGAGACTCTCCAAGCCTTGATATGCCAGTGTTGCCTGTAAGTCAACTGAAATC
CGCCAGTATTTGCGGGGCGATGGGATCCCCTTCCAGGATGGTCACAGTTGCCTGCGGGCA
CTGAGCCCCCTTGCAGAGTCTTACAGCTCAAAGGCCAGACTGGTGTACCACTTCCTTC
AGCCTCTTATTGACAAGACCACAGGCCACTTTCTCTGCATGACCAGCCTAGCAGAAGGG
AGCTGGGAAGACTTCCAGGCCAGCGTGGAGGGGCGAGGGGATGGGGCCAGGGAGGGGTTT
CTGCTTAGCAAGGCACCAAGATTTGAGGACAGCGAGGAGTCCGGAGGATCTGGAACCGA
GCAATACCTCTCTGGGAGCTGCCTGATCAGGAGGAGGTTGAGCTGGCTGATACAATGTTT
GGCCTTACCAAGGTTACAGATGACACACTCAAGCGTTTCAGTGTGCGATATCTGCGACCT
GCTCGCAGTCTTGCTTCCCTTGTTCTCCCCTGGGGCTCAGGATTACGAGGCCTGAAG
CTCCTAGAGGCTAAATGCCAGGGGGATGGAGTGAGCTACGAGGAAACCACTATCCCCGA
CCCAGCGCCTACCACAATCTGTTTGGATTACCACTGATTAGTCGTCGAGATGCTGAGGTG
GTACTGACGAGTCGTGAGCTTGACAGCCTGGCCTTGAACCAGTCCACGGGGCTGCCTACC
CTTACTCTACCCCGAGGAACGACCTGCTTACCCCTGCCTTACTCCCTTACCTGGAACAG
TTCCGGCGGATTGTATTCTGTTGGGGGATGACCTTCGGTCTGGGAAGCCGCCAAGTTG
TTTGCACGAAAACCTGAACCCAAACGATGCTTCTTGGTGCGACAGGAGACCAGCAACCC
CGTCCCCTGGAGGCCCTGAACGGAGGCTTCAATCTTCTCGTATTCTTCGTACCGCCCTG
CCTGCCTGGCACAAGTCCATCGTATCTTCCGGCAGCTTCGGGAGGAGGTGCTAGGAGAA
CTGTCAAATGTGGAGCAAGCAGCTGGCCTCCGCTGGAGCCGCTTCCAGACCTCAATCGT
ATCTTGAAAGGACATCGAAAGGGCGAGCTGACGGTCTTACAGGGCCAACAGGCAGTGGA
AAGACGACATTCATCAGTGAGTATGCCCTGGATTGTGTTCCAGGGGGTGAACACACTG
TGGGGTAGCTTCGAGATCAGCAATGTGAGACTAGCCCGGTCATGCTGACACAGTTTGCC
GAGGGGCGGCTGGAAGATCAACTGGACAAATATGATCACTGGGCTGACCGCTTTGAGGAC
CTGCCCCTCTATTTGATGACTTTCCATGGACAGCAAAGCATCAGGACTGTAATAGATACA
ATGCAACATGCAGTCTACGTCTATGACATTTGTATGTGATCATCGACAACCTGCAGTTC
ATGATGGGTACAGAGCAGCTGTCCACAGACAGGATCGCAGCTCAAGACTACATCATCGGG
GTCTTTCGGAAGTTTGCAACAGACAATAACTGCCATGTGACACTGGTCATTACCCCCGG
AAAGAGGATGATGACAAGGAAGTGCAGACAGCGTCCATTTTGGCTCAGCCAAAGCAAGC
CAGGAAGCAGACAATGTTCTGATCCTGCAGGACAGGAAGCTGGTAACCGGGCCAGGGAAA
CGGTATCTGCAGGTGTCCAAGAACCGCTTTGATGGAGATGTAGGTGTCTTCCCGCTTGAG
TTCAACAAGAACTCCCTCACCTTCTCCATTCCACCAAGAACAAGGCCCGGCTCAAGAAG
ATCAAGGATGACACTGGACAGTGGCCAAAAGCCCTCTTCTGGCAAAAAGGGGGCTACG
ACACAGAACTCTGAGATTGTCTCAGGCCAGGCCCCCTCCCGACCAGCCAGACACCTCC
AAGCGTTCAAAGTGA

```

Clone variation with respect to NM_021830.4

5' Read Nucleotide

Sequence:

>OriGene 5' read for NM_021830 unedited
 TTTTGTATACGACTCACTATAGGGCGGCCGCAATTCGCACGAGGGTCATAGAGGTGAGG
 TGGCGNGANAGAACTAACTAACGGACCATAGAGGTGGGGGAGCCATTGTAGAAGGACGT
 GGACGCGAAAGGGTCGTGTAGATGGGCATATGTGTGAAGCAGCAACGTAAGGGGCTGAA
 GAGGAGAAATTCATGGAGAGAAAGATGCACCTAGAGTGAGCTCTGCAGAGTGTGCGTG
 GGATATCCCTAGAGTTTGGTCTAGTGAAGGCACGCTAACCAGGCACCTAAGGCATTTCAA
 GTAGTGACTTCCACATTTGGCTAGGAATGGTGGGCTCTCCCGAAGTGGGTACCCCT
 CCGTATCTTGTACCCCTGGGGGATGGATGGGNNNNNNNNAANNNNNNNNNNNNNNN
 NANNNNNGNNNNNGNNNTNTNNAANNTANAGGAAGGAGANTNTNNAAGNNTTGA
 TATGNNAGTGTGGNTGTAATTGGAANTGAAATNNGNAGTATTTGGGGGGGGATGGGATN
 NNNTTNNAGGATGGTNAAGTTGGNTGGGGGATTGGGNNNTTTGGAGAGTTTTTAAGN
 TTAAGGGGAAAAATGGGGTANAATTTNTTTTANNTTTTATTGGAAGAAAAAGGGGNA
 TTTTTTGGTTGAANAGNTTANAAAAAGGGAGNTGGGAAGAATTTNAGGNAANNTTGAAG
 GGGAAGGGGATGGGGNAGGGAAGGGGTTTTTGTNTNAGGGANAAAAATTTAGGAAAN
 NAAGGAGGTNGGGAGATTTTGAANAANAATATTTTTTGAANTGNTTGAAGGAGGAG
 GGNNANNNGGTGTATAATGGTTGGNTTTTNAAGTTTNAATGAAATTTAANTTTTAGGG
 GGGATATTTTGAATGGTTAAAAATTTA

3' Read Nucleotide

Sequence:

>OriGene 3' read for NM_021830 unedited
 NGGGTATTGCNGAATTTTTTAGCAAAACGGNAAAAGCTCTATAAAAGTCCTGACTCCAGC
 AGTCTTGAGGCAGCACACAATGGCATCAGTGTCTAGGTGGCAGGCACTCCGGGCTGACAG
 CTTCTTTCTATGGCTCTATGACCAAGCAACCCAGCCGAGGCAGCTCCACCACTGAGGC
 CCTGATATTGCAGGGCTAAGCACCTAGGATCCAATTCTAGTACATGCCACCTCATGCTAG
 GCTCTACAAAGTGGGGAGCAGAGGAGCTTGGTACCCACTGTATCACCCCTTGACTTTGAA
 AGCCTAGGCTGGAGTTTCGCATGAAGTCCCGATTCCCTCCAGGTTTCATGCGGCTGAC
 CTCCTGCCTTGAATCTGACCTGCTCATTCTACCTCAGGGCTTGATTTCCTTTTCTCT
 CTGCTGGGTCCTTCGCCGATGTTACGTGGCTCTCTCCTTCTAGTTGTTTAGGCCC
 CAGCTCACATGCCCTCGGCTCAGAGACACCTTTTCAGACCCTTATCTACACTAGCCTGC
 CAGCACTCTATCGCATTTCTATTTTCTTACAGCATTTTCACTAAAACTAGGTTTTCTG
 CTAATTTGTTCAATTGCTTGCTGTCTCTCCGCCAGAATGCATGCAGGCAGGGACTTTAT
 CTCTCTTTTCAGTGCTGTATATACAGGACCTCAAACAAAGCCTGAGCAACACAGTAGTTT
 CTCAGTAGTCTGCTACATTGAATTTTCTCACTATGGAACCTGCTCTAGGTTAGGCCCT
 CAGACTGAGAAGGGCACACAGCTCNAGACCACAGGATAGAGGAGCCCTTGACAGTTTGA
 TGCTCCAGCCTATCCTATCAGGCTCATTTCACTGACCAGCTCTGCA

Restriction Sites:

NotI-NotI

ACCN:

NM_021830

Insert Size:

3600 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).

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:	<u>NM_021830.3, NP_068602.2</u>
RefSeq Size:	3630 bp
RefSeq ORF:	2055 bp
Locus ID:	56652
UniProt ID:	<u>Q96RR1</u>
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] Transcript Variant: This variant (1) encodes the longest isoform (A; also known as Twinkle).