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Product datasheet for RC217014

Twinkle (TWNK) (NM_021830) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Twinkle (TWNK) (NM_021830) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Twinkle
Synonyms:	ATXN8; C10orf2; IOSCA; MTDPS7; PEO; PEO1; PEOA3; PRLTS5; SANDO; SCA8; TWINL
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

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ORF Nucleotide Sequence:

>RC217014 representing NM_021830
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGTGGGTCCTCCTCCGAAGTGGGTACCCCCTCCGTATCTTGTTACCCCTGCGTGGGGAGTGGATGGGTC
GGAGGGGCCTGCCCCGAAACTTGGCCCCAGGCCCTCCTCGCAGACGTTACAGGAAGGAGACTCTCCAAGC
CTTGGATATGCCAGTGTTGCCTGTAACTGCAACTGAAATCCGCCAGTATTTGCGGGGGCATGGGATCCCC
TTCCAGGATGGTCACAGTTGCCTGCGGGCACTGAGCCCCTTTGCAGAGTCTTCACAGCTCAAAGGCCAGA
CTGGTGTTACCACTTCCTTCAGCCTCTTCATTGACAAGACCACAGGCCACTTTCTCTGCATGACCAGCCT
AGCAGAAGGGAGCTGGGAAGACTTCCAGGCCAGCGTGGAGGGGCGAGGGGATGGGGCCAGGGAGGGGTTT
CTGCTTAGCAAGGCACCAGAATTTGAGGACAGCGAGGAGGTCCGGAGGATCTGGAACCGAGCAATACCTC
TCTGGGAGCTGCCTGATCAGGAGGAGGTTCAGCTGGCTGATACAATGTTTGGCCTTACCAAGGTTACAGA
TGACACACTCAAGCGTTTCAGTGTGCGATATCTGCGACCTGCTCGCAGTCTTGTCTTCCCTTGGTTCTCC
CCTGGGGGCTCAGGATTACGAGGCCTGAAGCTCCTAGAGGCTAAATGCCAGGGGGATGGAGTGAGCTACG
AGGAAACCACTATTCCCCGACCCAGCGCCTACCACAATCTGTTTGGATTACCACTGATTAGTCGTCGAGA
TGCTGAGGTGGTACTGACGAGTCGTGAGCTTGACAGCCTGGCCTTGAACCAGTCCACGGGGCTGCCTACC
CTTACTCTACCCCGAGGAACGACCTGCTTACCCCCTGCCTTACTCCCTTACCTGGAACAGTTCCGGCGGA
TTGTATTCTGGTTGGGGGATGACCTTCGGTCCTGGGAAGCCGCCAAGTTGTTTGCACGAAAACTGAACCC
CAAACGATGCTTCTTGGTGCGACCAGGAGACCAGCAACCCCGTCCCCTGGAGGCCCTGAACGGAGGCTTC
AATCTTTCTCGTATTCTTCGTACCGCCCTGCCTGCCTGGCACAAGTCCATCGTATCTTTCCGGCAGCTTC
GGGAGGAGGTGCTAGGAGAACTGTCAAATGTGGAGCAAGCAGCTGGCCTCCGCTGGAGCCGCTTTCCAGA
CCTCAATCGTATCTTGAAGGGACATCGAAAGGGCGAGCTGACGGTCTTCACAGGGCCAACAGGCAGTGGA
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CCACCAAAGAACAAGGCCCGGCTCAAGAAGATCAAGGATGACACTGGACCAGTGGCCAAAAAGCCCTCTT
CTGGCAAAAAGGGGGCTACGACACAGAACTCTGAGATTTGCTCAGGCCAGGCCCCCACTCCCGACCAGCC
AGACACCTCCAAGCGTTCAAAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

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Protein Sequence:

>RC217014 representing NM_021830
Red=Cloning site Green=Tags(s)

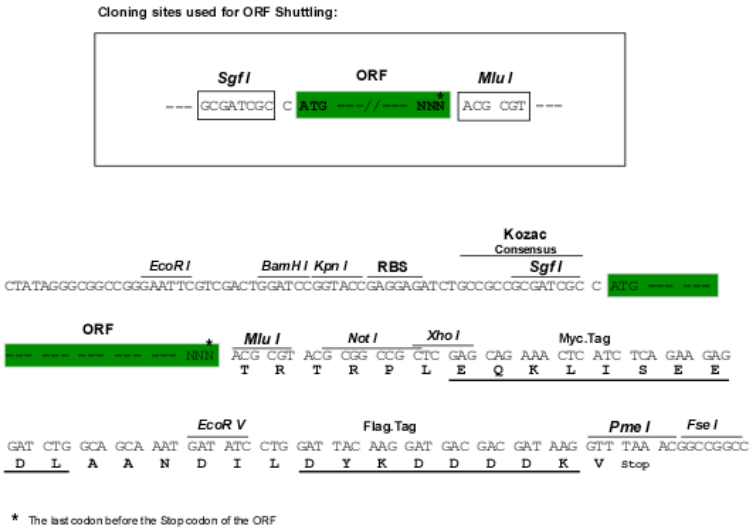
MWVLLRSGYPLRILLPLRGEWMGRRGLPRNLAPGPPRRRYRKETLQALDMPVLPVTATEIRQYLRGHGIP
FQDGHSCLRALSPFAESSQLKGQTGVTTSFSLFIDKTTGHFLCMTSLAEGSWEDFQASVEGRGDGAREGF
LLSKAPEFEDSEEVRRIWNRAIPLWELPDQEEVQLADTMFGLTKVTDDTLKRFSVRYLRPARSLVFPWFS
PGGSGLRGLKLLEAKCQGDGVSYEETTIPRPSAYHNLFGLPLISRRDAEVVLTSRELDSLALNQSTGLPT
LTLPRGTTCLPPALLPYLEQFRRIVFWLGDDLRSWEAAKLFARKLNPKRCFLVRPGDQQPRPLEALNGGF
NLSRILRTALPAWHKSIVSFRQLREEVLGELSNVEQAAGLRWSRFPDLNRILKGHRKGELTVFTGPTGSG
KTTFISEYALDLCSQGVNTLWGSFEISNVRLARVMLTQFAEGRLEDQLDKYDHWADRFEDLPLYFMTFHG
QQSIRTVIDTMQHAVYVYDICHVIIDNLQFMMGHEQLSTDRIAAQDYIIGVFRKFATDNNCHVTLVIHPR
KEDDDKELQTASIFGSAKASQEADNVLILQDRKLVTGPGKRYLQVSKNRFDGDVGVFPLEFNKNSLTFSI
PPKNKARLKKIKDDTGPVAKKPSSGKKGATTQNSEICSGQAPTPDQPDTSKRSK

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6163_f10.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_021830

ORF Size: 2052 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.

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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_021830.5
RefSeq Size:	3630 bp
RefSeq ORF:	2055 bp
Locus ID:	56652
UniProt ID:	Q96RR1
Cytogenetics:	10q24.31
Protein Families:	Druggable Genome
MW:	77 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]

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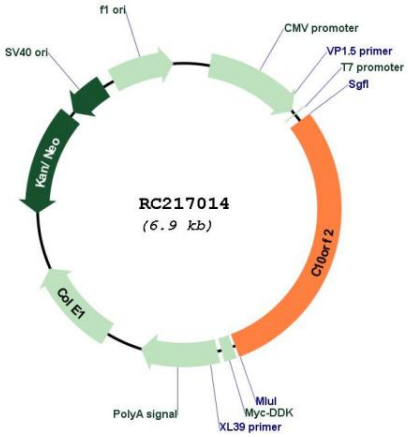
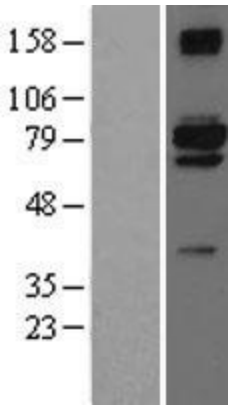
Product images:



Circular map for RC217014



Western blot validation of overexpression lysate (Cat# [LY402882]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC217014 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).

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