

Product datasheet for SC309730

RTEL1 (NM_032957) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	RTEL1 (NM_032957) Human Untagged Clone
Tag:	Tag Free
Symbol:	RTEL1
Synonyms:	C20orf41; DKCA4; DKCB5; NHL; PFBMFT3; RTEL
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>NCBI ORF sequence for NM_032957, the custom clone sequence may differ by one or more nucleotides

```

ATGCCCAAGATAGTCCTGAATGGTGTGACCGTAGACTTCCCTTTCCAGCCCTACAATGC
CAACAGGAGTACATGACCAAGGTCTGGAATGTCTGCAGCAGAAGGTGAATGGCATCCTG
GAGAGCCCTACGGGTACAGGGAAGACGCTGTGCCTGCTGTGCACACGCTGGCCTGGCGA
GAACACCTCCGAGACGGCATCTCTGCCCGCAAGATTGCCGAGAGGGCGCAAGGAGAGCTT
TTCCCGGATCGGGCCTTGTATCCTGGGGCAACGCTGCTGCTGCTGGAGACCCATA
GCTTGCTACACGGACATCCCAAAGATTATTTACGCCTCCAGGACCCACTCGCAACTACA
CAGGTCATCAACGAGCTTCGGAACCTCCTACCGGCCTAAGGTGTGTGCTGGGCTCC
CGGAGCAGCTGTGCATCCTCCTGAGGTGAAGAAACAAGAGAGTAACCATCTACAGATC
CACTTGTGCCGTAAGAAGGTGGCAAGTCGCTCCTGTCATTTCTACAACAACGTAGAAGAA
AAAAGCCTGGAGCAGGAGCTGGCCAGCCCATCCTGGACATTGAGGACTTGGTCAAGAGC
GGAAGCAAGCACAGGGTGTGCCCTTACTACCTGTCCCAGAACCTGAAGCAGCAAGCCGAC
ATCATATTTCATGCCGTACAATTACTTGTGGATGCCAAGAGCCGAGAGCACACAACATT
GACCTGAAGGGGACAGTCGTGATCTTTGACGAAGCTCACAACTGGGAGAAAGATGTGTGAA
GAATCGGCATCCTTTGACCTGACTCCCCATGACCTGGCTTCAGGACTGGACGTCATAGAC
CAGGTGCTGGAGGAGCAGACCAAGGCAGCGCAGCAGGGTGAGCCCCACCCGGAGTTCAGC
GCGGACTCCCCAGCCCAGGGCTGAACATGGAGCTGGAAGACATTGCAAAGCTGAAGATG
ATCCTGCTGCGCCTGGAGGGGGCCATCGATGCTGTTGAGCTGCCTGGAGACGACAGCGGT
GTCACCAAGCCAGGGAGCTACATCTTTGAGCTGTTTGTGTAAGCCAGATCACGTTTCAG
ACCAAGGGCTGCATCCTGGACTCGCTGGACCAGATCATCCAGCACCTGGCAGGACGTGCT
GGAGTGTTCACCAACACGGCCGGACTGCAGAAGCTGGCGGACATTATCCAGATTGTGTTT
AGTGTGGACCCCTCCGAGGGCAGCCCTGGTTCCCCAGCAGGGCTGGGGCCTTACAGTCC
TATAAGGTGCACATCCATCCTGATGCTGGTCACCGGAGGACGGCTCAGCGGTCTGATGCC
TGGAGCACCCTGCAGCCAGAAAGCGAGGGAAGGTGCTGAGCTACTGGTGCTTACGTCCTC
GGCCACAGCATGCAGAGCTGGTCCGCCAGGGCGTCCGCTCCCTCATCCTTACCAGCGGC
ACGCTGGCCCCGTGTCCTCCTTTGCTCTGGAGATGCAGATCCCTTTCCAGTCTGCCTG

```



[View online >](#)

GAGAACCACACATCATCGACAAGCACCAGATCTGGGTGGGGTCTGCCAGAGGCCCC
 GATGGAGCCCAGTTGAGCTCCGCGTTTACAGACGGTTTTCCGAGGAGTGCTTATCCTCC
 CTGGGGAAGGCTCTGGGCAACATCGCCCGGTGGTGCCTATGGGCTCCTGATCTTCTC
 CCTTCTATCCTGTATGGAGAAGACCTGGAGTTCTGGCGGGCCCGGACTTGGCCAGG
 AAGATGGAGGCGCTGAAGCCGCTGTTTGTGGAGCCAGGAGCAAAGGCAGCTTCTCCGAG
 ACCATCAGTGCTTACTATGCAAGGGTTGCCGCCCTGGGTCCACCGGCCACCTTCTG
 GCGTCTGCCGGGCAAGGCCAGCGAGGGGCTGGACTTCTCAGACACGAATGGCCGTGGT
 GTGATTGTCACGGGCCTCCCGTACCCCCACGCATGGACCCCGGTTGTCTCAAGATG
 CAGTTCCTGGATGAGATGAAGGGCCAGGGTGGGGCTGGGGCCAGTTCCTCTCTGGGCG
 GAGTGGTACCGGCAGCAGGCGTCCAGGGCTGTGAACCAGGCCATCGGGGAGTGATCCGG
 CACCGCCAGGACTACGGAGCTGTCTTCTCTGTGACCACAGGTTCCGCTTTGCCGACGA
 AGAGCCCAACTGCCCTCCTGGGTGCGTCCCCACGTGAGGGTGTATGACAACCTTTGGCCAT
 GTCATCCGAGACGTGGCCAGTTCTTCCGTGTTGCCGAGCGAACTATGCCAGCGCCGGCC
 CCCCAGGCTACAGCACCCAGTGTGCGTGGAGAAGATGCTGTCAGCGAGGCCAAGTCGCT
 GGCCCTTCTTCCACCAGGAAAGCTAAGAGTCTGGACCTGCATGTCCCAGCCTGAAG
 CAGAGGTCTCAGGGTACCAGCTGCCGGGACCCCGAGAGTAGCCTGTGTGGAGTAT
 GAGCAGGAGCCAGTTCCTGCCCGCAGAGGCCAGGGGGTCTGGCCCGCCTGGAGCAC
 AGCGAACAGCGGGCGGGGAGCCCTGGCGAGGAGCAGGCCACAGCTGCTCCACCTGTCC
 CTCCTGTCTGAGAAGAGGCGCGCAGAAGAACCAGGAGGAGGAGGAAGAAGATCCGGCTG
 GTCAGCCACCCGAGGAGCCCGTGGTGGTGCACAGACGGACAGGGCCAAAGCTTTCATG
 GTGGCCGTGAAGCAGGAGTTGAGCCAAGCCAACCTTCCACCTTACCCAGGCCCTGCAG
 GACTACAAGGGTCCGATGACTTCGCCGCCCTGGCCGCTGTCTGGCCCCCTCTTTGCT
 GAGGACCCCAAGAAGCACAACTGCTCCAAGGCTTCTACCAGTTTGTGGGCCCCACCAT
 AAGCAGCAGTTTTGAGGAGTCTGTATCCAGCTGACAGGACGAGGCTGTGGCTATCGGCCT
 GAGCACAGCATTCCCGAAGGCAGCGGGCACAGCCGGTCTGGACCCACTGGAAGAAGC
 GCGCCGGATCCCAAGCTGACCGTGTCCACGGTGCAGCCAGCAGCTGGACCCCAAGAG
 CACCTGAACCAGGGCAGGCCACCTGTGCGCCAGGCCACCCCAACAGGAGACCCTGGC
 AGCCAACCACAGTGGGGTCTGGAGTGCCAGAGCAGGGAAGCAGGGCCAGCACGCCGTG
 AGCGCCTACCTGGCTGATGCCCCAGGGCCCTGGGGTCCGCGGGCTGTAGCCAACCTTG
 GCAGCGTGACAGCCTATAAGCAAGACGACGACCTCGACAAGGTGCTGGCTGTGTTGGCC
 GCCCTGACCAGTCAAAGCCAGAGGACTTCCCCCTGCTGCACAGGTTAGCATGTTTGTG
 CGTCCACACCACAAGCAGCGCTTCTCACAGACGTGCACAGACCTGACCGCCCGGCCCTAC
 CCGGGCATGGAGCCACCGGGACCCAGGAGGAGAGGCTTGCCGTGCCTCCTGTGCTTACC
 CACAGGGTCCCCAACAGGCCCTCACGGTCCGAGAAGACCGGGAAGACCCAGAGCAAG
 ATCTCGTCTTCTTAGACAGAGGCCAGCAGGGACTGTGGGGCGGGCGGTGAGGATGCA
 GGTCCCAGCCAGTCTCAGGACCTCCCCACGGGCTGCAGCATCTGAGTGGGGTGTGAGCT
 CATGGGAGAGACATCGCTGGGCAGCAGGCCACGGGAGCTCCGGGCGGGCCCTCTCAGCA
 GGCTGTGTGTCCAGGGCTGTGGGCAGAGGACGTGGTGCCTTCCAGTGCCTGCCTGT
 GACTTCCAGCGCTGCCAAGCCTGCTGGCAACGGCACCTTCCAGCCTCTAGGATGTGCCA
 GCCTGCCACACCGCCTCCAGGAAGCAGAGCGTCATGCAGGCTTCTTGCCAGAGCCCCAG
 TGA

Restriction Sites:

Please inquire

ACCN:

NM_032957

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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 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_032957.2](#), [NP_116575.1](#)

RefSeq Size: 5288 bp

RefSeq ORF: 4203 bp

Locus ID: 51750

UniProt ID: [Q9NZ71](#)

Cytogenetics: 20q13.33

Protein Families: Druggable Genome

Gene Summary:

This gene encodes a DNA helicase which functions in the stability, protection and elongation of telomeres and interacts with proteins in the shelterin complex known to protect telomeres during DNA replication. Mutations in this gene have been associated with dyskeratosis congenita and Hoyerall-Hreidarsson syndrome. Read-through transcription of this gene into the neighboring downstream gene, which encodes tumor necrosis factor receptor superfamily, member 6b, generates a non-coding transcript. Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Sep 2013]

Transcript Variant: This variant (2) has multiple differences in the coding region, compared to variant 3, one of which results in a translational frameshift. The encoded protein (isoform 2) has a distinct C-terminus and is shorter than isoform 3.