

## Product datasheet for RC214507

### RTEL1 (NM\_016434) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	RTEL1 (NM_016434) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	RTEL1
Synonyms:	C20orf41; DKCA4; DKCB5; NHL; PFBMFT3; RTEL
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
ORF Nucleotide Sequence:	>RC214507 representing NM_016434 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGCCAAGATAGTCCTGAATGGTGTGACCGTAGACTTCCCTTCCAGCCCTACAAATGCCAACAGGAGT  
ACATGACCAAGGTCTGGAATGTCTGCAGCAGAAGGTGAATGGCATCCTGGAGAGCCCTACGGGTACAGG  
GAAGACGCTGTGCCTGCTGTGCACCACGCTGGCCTGGCGAGAACACCTCCGAGACGGCATCTCTGCCCGC  
AAGATTGCCGAGAGGGCGCAAGGAGAGCTTTCCCGGATCGGGCCTTGTCATCCTGGGGCAACGCTGCTG  
CTGCTGTGGAGACCCATAGCTTGCTACACGGACATCCCAAAGATTATTTACGCCTCCAGGACCCACTC  
GCAACTCACACAGGTCATCAACGAGCTTCGGAACACCTCCTACCGGCCTAAGGTGTGTGTCTGGCTCC  
CGGGAGCAGCTGTGCATCCATCCTGAGGTGAAGAAACAAGAGAGTAACCATCTACAGATCCACTTGTGCC  
GTAAGAAGGTGGCAAGTCGCTCCTGTCAATTTCTACAACAACGTAGAAGAAAAAGCCTGGAGCAGGAGCT  
GGCCAGCCCCATCCTGGACATTGAGGACTTGGTCAAGAGCGGAAGCAAGCACAGGGTGTGCCCTTACTAC  
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GCCGCAGAGCACACAACATTGACCTGAAGGGGACAGTCGTGATCTTTGACGAAGCTCACAACTGGAGAA  
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GGTCCGCCAGGGCGTCCGCTCCCTCATCCTTACCAGCGGCACGCTGGCCCCGGTGTCTCTTTGCTCTG  
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GGGTCGTCCCCAGAGGCCCGATGGAGCCAGTTGAGCTCCGCGTTTGACAGACGGTTTTCCGAGGAGTG  
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ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC214507 representing NM\_016434  
 Red=Cloning site Green=Tags(s)

MPKIVLNGVTVDFFPQPYKQQEYMTKVLECLQKQVNGILESPGTGKTLCLLCTTLAWREHLRDGISAR  
 KIAERAQGELFPDRALSSWGNAAGDPIACYTDIPKIIYASRTHSQLTQVINELRNTSYRPKVCVLGS  
 REQLCIHPEVKKQESNHLQIHLCRKKVASRSCHFYNVVEEKSLEQELASPILDIEDLVKSGSKHRVCPYY  
 LSRNLKQQADIIIFMPYNYLLDAKSRRAHNIDLKGTVVIFDEAHNVEKMCEESASFDLTPHDLASGLDVID  
 QVLEEQTAAQQGEPHPEFSADSPSPGLNMELEDIAKLKMILLRLEGIDAVELPGDSDSGVTKPGSYIFE  
 LFAEAQITFQTKGCILDSLQI IQHLAGRAGVFTNTAGLQKLADI IQIVFSVDPSEGPSGSPAGLALQS  
 YKVVIHPDAGHRRTAQRSDAWSTTAARKRGKVL SYWCFSPGHSMHELVRQGVRSIL TSGTLAPVSSFAL  
 EMQIPFPVCLENPHIIDKHQI WVGVVPRGPDGAQLSSAFDRRFSEECLSSLGKALGNIARVVPYGLLIFF  
 PSYPVMEKSLEFWRARDLARKMEALKPLFVEPRSKGSFSETISAYYARVAAPGSTGATFLAVCRGKASEG  
 LDFSDTNGRGI V TGLPYPPRMDPRVVLKMQLDEMKGQGGAGGQFLSGQEWYRQQASRAVNAIGRVIR  
 HRQDYGAVFLCDHRFAFADARAQLPSWVRPHVRVYDNFGHVIRDVAQFFRVAERTMPAPAPRATAPSVRG  
 EDVASEAKSPGPFSTRKAKSLDLHVP SLKQRSSGSPAAGDPESL CVEYEQEPV PARQRPRGLLAAL EH  
 SEQRAGSPGEEQAHSCTLSLLSEKRAEPRGGRKKIRLVSHPEEPVAGAQTDRAKLFMVAVKQELSQA  
 NFATFTQALQDYKGSDDFAALACLGPLFAEDPKKHNLQGFYQFVRPHHKQQFEFVCIQLTGRGCGYRP  
 EHSIPRRQRAQVLDPTGRTAPDPKLTVSTAAQQLDPQEHLNQRPHLSRPPPTGDPGSQPQWGSVP  
 RAGKQGQHAVSAYLADARRALGSAGCSQLLAAL TAYKQDDDLKVLAVLAALTTAKPEDFPLLHRFSMFV  
 RPHHKQRF SQTCTDL TGRPYPGMEPPGPQEERLAVPPVL THRAPQPGPSRSEKTGKTQSKISSFLRQRP  
 GTV GAGGEDAGPSQSSGPPHGAASEWGL

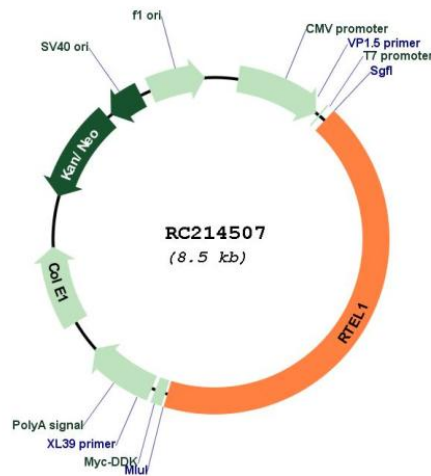
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**



**Plasmid Map:**


**ACCN:** NM\_016434

**ORF Size:** 3657 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.

**RefSeq:** [NM\\_016434.4](#)

**RefSeq Size:** 4970 bp

**RefSeq ORF:** 3660 bp

**Locus ID:** 51750

**UniProt ID:** [Q9NZ71](#)

**Cytogenetics:** 20q13.33

**Protein Families:** Druggable Genome

**MW:** 133.7 kDa

**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]