OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for MR226516

Rtel1 (NM_001166668) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Rtel1 (NM_001166668) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Rtel1
Synonyms:	AI451565; AW540478; Rtel
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
ORF Nucleotide Sequence:	>MR226516 representing NM_001166668 Red=Cloning site Blue=ORF Green=Tags(s) TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC GCCGCGATCGCC ATGCCCAGGGTAGTCCTGAATGGTGTGACAGTGGATTTTCCTTTCCAGCCCTACCCATGCCAACAGGAAT ATATGACCAAGGTGCTAGAATGTCTCCAGAAGAAAGTGAATGGCATCCTGGAGAGCCCCACAGGCACTGG GAAGACGCTGTGCCTCCTCTGTTCCACCTTGGCCTGGCAACAACATCTCCGAGATGCAGTTTCTTCCCTA AAGATTGCTGAGAGAGTTCAAGGGGAACTCTTTGCCAGTCGGACCTTGTCATCCTGGGGGAGTGCTGCTG CCGCCAGCGGAGACTCAATAGAGTGCTACACAGATATCCCAAAGATCATCTATGCTTCTAGAACGCACTC CCAGCTAACTCAGGTCATCCGTGAGCTTCGGAATACCGCCTACCGGCCCAAGGTATGTGTGCTGGGCTCC CGGGAGCAGCTGTGTATTCATCCTGAAGTGAAGAAGCAGGAGAGTAATCACATGCAGATCAGTTTGTGCC GCAAGAAGGTAGCAAGTCGCTCCTGTCATTTCTACAACAATGTGGAAGCGAAATTCCTGGAGCAAGATTT GGCTACCCCCATCCTGGATATTGAGGACCTTGTCAAGAATGGAAGCAAACAAAAAATGTGCCCATACTAC CTTTCTCGAAACATGAAACAGCAAGCGGACATCATCTTTATGCCATACAATTACCTGTTGGATGCTAAGA GTCGTAAGGCGCACAGCATTGACCTGAAGGGAACAGTTGTGATCTTTGATGAAGCTCACAATGTGGAGAA GATATGTGAGGAGTCAGCCTCCTTTGACTTGACTCCCCGTGATGTGGCTTCAGGACTGGAGATTATCAAC CAGGTTTTGGAGGAACAAGCCCGGGTGACTCAGCAGGGTGAACTCCAACAGGAGTTCATTGTAGACACGT CCAGCTCAGGACTCAACATGGAGCTGGAAGACATCGCAAAGCTAAAGATGATCCTGCTTCGCCTGGAGGA GGCTATTGATGCCGTTCAGCTGCCTGGGGATGACAGAGGCGTCACCAAACCTGGAAGCTATATCTTCGAG CTGTTTGCTGAAGCTCAAATAACATTTCAAACCAAAGGCTGCATTTTGGAATCACTGGACCAGATAATCC AGCACCTGGCAGGCCGTACTGGTGTGTTCACCAACACGGCTGGGTTGCAGAAGCTTATGGACATTATCCA GATTGTGTTCAGCGTGGACCCTCCGGAAGGCAGCCCTGGTTCTCTGGTGGGGCTGGGTATCTCACATTCC TATAAGGTACACATACACCCTGAAACCAGCCACCGGAGAGCAGCTAAGCGGTCAGATGCCTGGAGTACCA CTGCATCCAGGAAACAAGGGAAGGTGCTGAGCTATTGGTGCTTCAGTCCCAGCCAGAGTATGCGGGAACT GGTCTGCCAAGGAGTTCGTACCCTTATCCTCACCAGCGGTACCCTGGCTCCACTGTCTTCCTTTGCTCTG GAGATGCAGATTCCATTCCCAGTCTGTCTGGAGAATCCACACATCATTGACAAGAACCAGCTCTGGGTGG

View online »

GGATTGTCCCCAGAGGCCCTGATGGTGTTCAGCTAAGCTCTGCCTATGACAAAAGGTTTTCTGAAGAGTG
TTTATCTTCCCTGGGGAAGGCTCTGAGCAACATTGCTCGCGTGGTGCCCCATGGGCTTCTGGTCTTCTTC
CCTTCCTACCCTGTCATGGAGAAAAGCCTGGAGTTCTGGCAGGTACAAGGATTGGCCAGGAAGGTAGAGG
CACTAAAGCCTCTGTTCGTGGAACCCAGGAACAAAGGCAGCTTCTCAGAGGTCATTGATGCCTACTACCA
ACAAGTTGCCTCCCCTGCGTCTAATGGGGCCACCTTCTTAGCAGTGTGTCGGGGAAAGGCCAGCGAAGGG
CTGGACTTCTCAGACATGAATGGTCGTGGTGTGATTGTCACGGGCCTCCCATATCCTCCACGCATGGATC
CCCGTGTTGTCCTCAAGATGCAGTTCTTGGATGAGATGAGAGGCCGGAGTGGGGTTGGAGGCCAGTGCCT
CTCTGGGCAGGAATGGTACCAGCAGCAAGCATCCAGGGCTGTGAACCAGGCTATTGGGAGGGTTATTCGA
CACCGCCATGACTATGGGGCCATCTTCCTGTGTGACCACAGGTTCGCCTATGCTGATGCCAGGGCCCAGC
TGCCCTCCTGGGTGCGCCCCTACCTTAAGGTGTATGACAACTTTGGCCATGTCATCCGAGATGTGGCCCA
GTTCTTCCGTGTTGCTCAGAAAACTATGCCTTTGCCAGTTCCTCAGGCTGTGACCTCAAGTGTGAGTGAG
GGAGAAATTGCTCTCAAGGATGCTACATTGTCCAGCTACTCCCTCTCTACCAGGAAAGCCATGAGTTTGG
ATGTGCATGTGCCCAGCCTGAGGCAGAAGCCCATAGGATTACCAGCTGCTGGAGACTCTGAGAGCAGCCT
GTGTGGGGAGTATGAGCAGCAGACATTTTCTGCCCAGCAGAGACCTATGGGACTGCTAGCTGCCTTAGAA
TACAACGAGCAGAAGGCTGGGGCATCTGAGGAGCAGGCACTGGGCTCCTCCACCCCATCTCTCCGGTGCG
AGAAGAGGCTGTCTACTGAGCAAAAAGGAGGAAGGAAGAAAGTCAGGCTGGTCAACCATCCGGAGGAACC
AATGGCTGGCACACAGGCAGGCAGAGCCAAGATGTTCATGGTGGCTGTGAAGCAAGCACTGAGCCAAGCT
AACTTTGACACCTTTACCCAGGCCCTGCAGCACTATAAGAGTTCTGATGACTTTGAAGCCCTAGTGGCCT
CTCTCACCTGTCTCTTTGCTGAAGACCCCAAGAAACACACCCTGCTTAAAGGTTTCTACCAGTTTGTTCG
ACCCCACCACAAGCAGCAGTTTGAGGACATCTGCTTCCAGCTAACAGGCCAACGATGTGGCTACCAGCCA
GGAAAGAGAGAGCTGGAGTCTAAACTGACCTTGTCTGAAGGTGTAGACAGGCAGCTGGATCCTGGACAGC
ACCTGAACCAGGGGCAGCCTCACCTGTCTGCCCATCCAACCTCCAAAGGATTTGGCATGTTTGTGCGTCG
GCATCATAAGCCTCAGTTCCTACAGACCTGTGCAGACCTAATGGGCCTGCCTACCACAGGCAAGGACTTG
GAGCTCGAAGGTCCCAGAGATGAGAGCCCAACTGTGCCTCCTGAGCTTACCCATGAGGACCTGAAACCAG
GGCCCTCGATGTCCAAGAAACCTGAGAAGACCCAGAGTAAGATCTCATCCTTCTTTAGACAGAGGCCAGA
TGAGAGTGTGAGGTCTGATGATACCACCCCAAAGCCCATGCAACTTCCTCCTAGACTACCCCATGAGCTT
ATGAAGCCTCATCGGAGTAAGCAA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

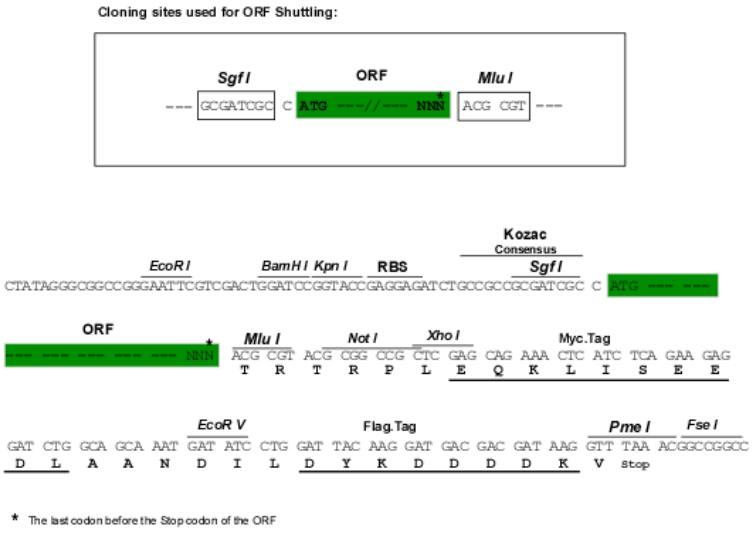
>MR226516 representing NM_001166668
Red=Cloning site Green=Tags(s)

MPRVVLNGVTVDFPFQPYPCQQEYMTKVLECLQKKVNGILESPTGTGKTLCLLCSTLAWQQHLRDAVSSL
KIAERVQGELFASRTLSSWGSAAAASGDSIECYTDIPKIIYASRTHSQLTQVIRELRNTAYRPKVCVLGS
REQLCIHPEVKKQESNHMQISLCRKKVASRSCHFYNNVEAKFLEQDLATPILDIEDLVKNGSKQKMCPYY
LSRNMKQQADIIFMPYNYLLDAKSRKAHSIDLKGTVVIFDEAHNVEKICEESASFDLTPRDVASGLEIIN
QVLEEQARVTQQGELQQEFIVDTSSSGLNMELEDIAKLKMILLRLEEAIDAVQLPGDDRGVTKPGSYIFE
LFAEAQITFQTKGCILESLDQIIQHLAGRTGVFTNTAGLQKLMDIIQIVFSVDPPEGSPGSLVGLGISHS
YKVHIHPETSHRRAAKRSDAWSTTASRKQGKVLSYWCFSPSQSMRELVCQGVRTLILTSGTLAPLSSFAL
EMQIPFPVCLENPHIIDKNQLWVGIVPRGPDGVQLSSAYDKRFSEECLSSLGKALSNIARVVPHGLLVFF
PSYPVMEKSLEFWQVQGLARKVEALKPLFVEPRNKGSFSEVIDAYYQQVASPASNGATFLAVCRGKASEG
LDFSDMNGRGVIVTGLPYPPRMDPRVVLKMQFLDEMRGRSGVGGQCLSGQEWYQQQASRAVNQAIGRVIR
HRHDYGAIFLCDHRFAYADARAQLPSWVRPYLKVYDNFGHVIRDVAQFFRVAQKTMPLPVPQAVTSSVSE
GEIALKDATLSSYSLSTRKAMSLDVHVPSLRQKPIGLPAAGDSESSLCGEYEQQTFSAQQRPMGLLAALE
YNEQKAGASEEQALGSSTPSLRCEKRLSTEQKGGRKKVRLVNHPEEPMAGTQAGRAKMFMVAVKQALSQA
NFDTFTQALQHYKSSDDFEALVASLTCLFAEDPKKHTLLKGFYQFVRPHHKQQFEDICFQLTGQRCGYQP
GKRELESKLTLSEGVDRQLDPGQHLNQGQPHLSAHPTSKGFGMFVRRHHKPQFLQTCADLMGLPTTGKDL
ELEGPRDESPTVPPELTHEDLKPGPSMSKKPEKTQSKISSFFRQRPDESVRSDDTTPKPMQLPPRLPHEL
MKPHRSKQ

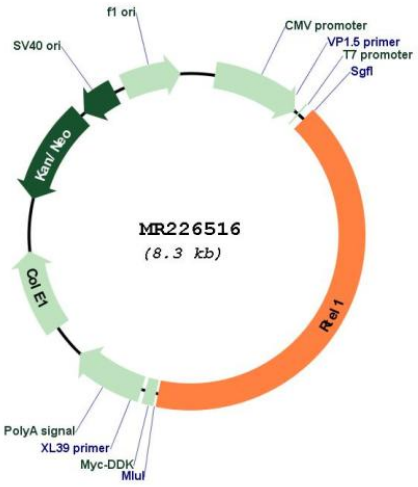
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN:	NM_001166668
ORF Size:	3384 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_001166668.1, NP_001160140.1
RefSeq Size:	4208 bp
RefSeq ORF:	3387 bp
Locus ID:	269400
UniProt ID:	Q0VGM9
Cytogenetics:	2 H4

MW: 126.3 kDa

Gene Summary: ATP-dependent DNA helicase implicated in telomere-length regulation, DNA repair and the maintenance of genomic stability. Acts as an anti-recombinase to counteract toxic recombination and limit crossover during meiosis. Regulates meiotic recombination and crossover homeostasis by physically dissociating strand invasion events and thereby promotes noncrossover repair by meiotic synthesis dependent strand annealing (SDSA) as well as disassembly of D loop recombination intermediates. Also disassembles T loops and prevents telomere fragility by counteracting telomeric G4-DNA structures, which together ensure the dynamics and stability of the telomere.[UniProtKB/Swiss-Prot Function]