

## Product datasheet for MC223956

### Rtel1 (NM\_001001882) Mouse Untagged Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Rtel1 (NM\_001001882) Mouse Untagged Clone  
**Tag:** Tag Free  
**Symbol:** Rtel1  
**Synonyms:** AI451565; AW540478; Rtel  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**Cell Selection:** Neomycin  
**Fully Sequenced ORF:** >MC223956 representing NM\_001001882  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGCCAGGGTAGTCCTGAATGGTGTGACAGTGGATTTCTTTCCAGCCCTACCCATGCCAACAGGAAT  
 ATATGACCAAGGTGCTAGAATGTCTCCAGAAGAAAGTGAATGGCATCCTGGAGAGCCCCACAGGCACTGG  
 GAAGACGCTGTGCCTCCTCTGTTCCACCTTGGCCTGGCAACAACATCTCCGAGATGCAGTTTCTTCCCTA  
 AAGATTGCTGAGAGAGTTCAAGGGAACTTTGCCAGTCGGACCTTGTCATCCTGGGGGAGTGTGCTG  
 CCGCCAGCGGAGACTCAATAGAGTGTACACAGATATCCCAAAGATCATCTATGTTCTAGAACGCACTC  
 CCAGCTAACTCAGGTCATCCGTGAGCTTCGGAATACCGCCTACCGGCCAAAGGTATGTGTGCTGGCTCC  
 CGGGAGCAGCTGTGATTATCCTGAAGTGAAGAAGCAGGAGAGTAATCATATGCAGATCAGTTTGTGCC  
 GCAAGAAGGTAGCAAGTCGCTCCTGTCAATTTCTACAACAATGTGGAAGCGAAATTCCTGGAGCAAGATT  
 GGCTACCCCATCCTGGATATTGAGGACCTTGCAAGAATGGAAGCAAACAAAAATGTGCCATACTAC  
 CTTTCTCGAAACATGAAACAGCAAGCGGACATCATCTTTATGCCATACAATTACCTGTTGGATGCTAAGA  
 GTCGTAAGGCGCACAGCATTGACCTGAAGGGAACAGTTGTGATCTTTGATGAAGCTCACAAATGTGGAGAA  
 GATATGTGAGGAGTCAGCCTCCTTTGACTTGACTCCCCGTGATGTGGCTTCAGGACTGGAGATTATCAAC  
 CAGGTTTTGGAGGAACAAGCCGGGTGACTCAGCAGGGTGAACCTCAACAGGAGTTCATTGTAGACACGT  
 CCAGCTCAGGACTCAACATGGAGCTGGAAGACATCGAAAGCTAAAGATGATCCTGCTTCGCTGGAGGA  
 GGCTATTGATGCCGTTACAGTGCCTGGGGATGACAGAGGCGTCACCAAACCTGGAAGCTATATCTTCGAG  
 CTGTTTGTGAAGCTCAAATAACATTTCAAACAAAGGCTGCATTTTGAATCACTGGACCAGATAATCC  
 AGCACCTGGCAGGCCGACTGGTGTGTTACCAACACGGCTGGGTTGCAGAAGCTTATGGACATTATCCA  
 GATTGTGTTACAGCTGGACCCTCCGAAGGCAGCCCTGGTCTCTGGTGGGGCTGGGTATCTCACATTCC  
 TATAAGGTACACATACACCTGAAACCAGCCACCGGAGAGCAGCTAAGCGGTGATGCCTGGAGTACCA  
 CTGCATCCAGGAAACAAGGGAAGGTGCTGAGCTATTGGTCTTCACTCCAGCCAGAGTATGCGGGAAC  
 GGTCTGCCAAGGAGTTCGTACCCTTATCCTCACCAGCGGTACCCTGGCTCCACTGTCTTCTTTGCTCTG  
 GAGATGCAGATCCATCCAGTCTGTCTGGAGAATCCACACATCATTGACAAGAACCAGCTCTGGGTGG



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GGATTGTCCCCAGAGGCCCTGATGGTGTTCAGCTAAGCTCTGCCTATGACAAAAGGTTTTCTGAAGAGTG
TTTATCTTCCCTGGGGAAGGCTCTGAGCAACATTGCTCGCGTGGTGCCCATGGGCTTCTGGTCTTCTTC
CCTTCTACCTGTCTATGGAGAAAAGCCTGGAGTTCTGGCAGGTACAAGGATTGGCCAGGAAGGTAGAGG
CACTAAAGCCTCTGTTCTGTGAACCCAGGAACAAAGGCAGCTTCTCAGAGGTCATTGATGCCTACTACCA
ACAAGTTGCCCTCCCCTGCGTCTAATGGGGCCACCTTCTTAGCAGTGTGTGGGGAAAGGCCAGCGAAGGG
CTGGACTTCTCAGACATGAATGGTGTGGTGTGATTGTACAGGGCCTCCCATATCCTCCACGCATGGATC
CCCGTGTGTCTCAAGATGCAGTTCTTGATGAGATGAGAGGCCGGAGTGGGGTTGGAGGCCAGTGCCT
CTCTGGGCAGGAATGGTACCAGCAGCAAGCATCCAGGGCTGTGAACCAGGCTATTGGGAGGGTTATTGCA
CACCGCCATGACTATGGGGCCATCTTCTGTGTGACCACAGGTTGCGCTATGCTGATGCCAGGGCCAGC
TGCCCTCTGGGTGCGCCCTACCTTAAGGTGTATGACAACTTTGGCCATGTCATCCGAGATGTGGCCCA
GTTCTTCCGTGTGCTCAGAAAATGATGCTTTGCCAGTTCCTCAGGCTGTGACCTCAAGTGTGAGTGAG
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ATGTGCATGTGCCAGCCTGAGGCAGAAGCCATAGGATTACCAGCTGCTGGAGACTCTGAGAGCAGCCT
GTGTGGGAGTATGAGCAGCAGACATTTCTGCCAGCAGAGACCTATGGGACTGCTAGTGCCTTAGAA
TACAACGAGCAGAAGGCTGGGGCATCTGAGGAGCAGGCACTGGGCTCCTCCACCCATCTCTCCGGTGGC
AGAAGAGGCTGTCTACTGAGCAAAAAGGAGGAAGGAAAGTCAAGGCTGGTCAACCATCCGGAGGAACC
AATGGCTGGCACACAGGCAGGCAGAGCCAAAGATGTTTCATGGTGGCTGTGAAGCAAGCACTGAGCCAGCT
AACTTTGACACCTTTACCCAGGCCCTGCAGCACTATAAGATTCTGATGACTTTGAAGCCCTAGTGGCCT
CTCTCACCTGTCTTTGCTGAAGACCCCAAGAAACACACCCTGCTTAAAGGTTTCTACCAGTTTGTTCG
ACCCACCACAAGCAGCAGTTTGGAGACATCTGCTTCCAGCTAACAGGCCAACGATGTGGTACCAGCCA
GGAAAGAGAGAGCTGGAGTCTAACTGACCTTGTCTGAAGGTGTAGACAGGCAGCTGGATCCTGGACAGC
ACCTGAACCAGGGCAGCCTCACCTGTCTGCCATCCAACCTCCAAGCTCATTTTTCCAACCAGGACA
CACCAGCCATTGTACAAAAGTGGGATGTGCAGTAGAAAAACCTGGCCAGCCTGCTGTGAGTGACTACATA
TCTGATGTCCACAAGGCTCTGGGATCTGCAAGCTGCAACCAGCTTACGGCAGCTCTGAGGGCATAACAAAC
AGGATGATGACCTGGACAAGGTGGTGGTGTGGTGGCAGCACTGACCCTGCAAAAACCTGAACACTTACC
CTTGCTACAGAGATTTGGCATGTTTGTGCGTCGGCATCATAAGCCTCAGTTCTACAGACCTGTGCAGAC
CTAATGGGCTGCCTACCACAGGCAAGGACTTGGAGCTCGAAGGTCCCAGAGATGAGAGCCCAACTGTGC
CTCCTGAGCTTACCCATGAGGACCTGAAACCAGGGCCCTCGATGTCCAAGAACTGAGAAGACCCAGAG
TAAGATCTCATCTTCTTAGACAGAGGCCAGATGAGAGTGTGAGGTCTGATGATACCACCCCAAAGGCC
ATGCAACTTCTCTAGACTACCCCATGAGCTTATGAAGCCTCATCGGAGTAAGCAATAG

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ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

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**Restriction Sites:**

Sgfl-Mlul

**ACCN:**

NM\_001001882

**Insert Size:**

3630 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.

**RefSeq:** [NM\\_001001882.3](#), [NP\\_001001882.3](#)

**RefSeq Size:** 4451 bp

**RefSeq ORF:** 3630 bp

**Locus ID:** 269400

**UniProt ID:** [Q0VGM9](#)

**Cytogenetics:** 2 H4

**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]  
Transcript Variant: This variant (1) encodes the longest isoform (1).