

## Product datasheet for MC223841

### Rtel1 (NM\_001166666) Mouse Untagged Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Rtel1 (NM\_001166666) 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:** >MC223841 representing NM\_001166666  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGCCAGGGTAGTCCTGAATGGTGTGACAGTGGATTTCTTTCCAGCCCTACCCATGCCAACAGGAAT  
 ATATGACCAAGGTGCTAGAATGTCTCCAGAAGAAAGTGAATGGCATCCTGGAGAGCCCCACAGGCACTGG  
 GAAGACGCTGTGCCTCCTCTGTTCCACCTTGGCCTGGCAACAACATCTCCGAGATGCAGTTTCTTCCCTA  
 AAGATTGCTGAGAGAGTTCAAGGGAACTTTGCCAGTCGGACCTTGTCATCCTGGGGGAGTGTGCTGTG  
 CCGCCAGCGGAGACTCAATAGAGTGTACACAGATATCCCAAAGATCATCTATGTTCTAGAACGCACTC  
 CCAGCTAACTCAGGTATCCGTGAGCTTCGGAATACCGCCTACCGGCCAAGGTATGTGTGCTGGGCTCC  
 CGGGAGCAGCTGTGTATTCATCCTGAAGTGAAGAAGCAGGAGAGTAATCATGCAGATCAGTTTGTGCC  
 GCAAGAAGGTAGCAAGTCGCTCCTGTCAATTTCTACAACAATGTGGAAGCGAAATTCCTGGAGCAAGATT  
 GGCTACCCCATCCTGGATATTGAGGACCTTGCAAGAATGGAAGCAAACAAAAATGTGCCATACTAC  
 CTTTCTCGAAACATGAAACAGCAAGCGGACATCATCTTTATGCCATACAATTACCTGTTGGATGCTAAGA  
 GTCGTAAGGCGCACAGCATTGACCTGAAGGGAACAGTTGTGATCTTTGATGAAGCTCACAAATGTGGAGAA  
 GATATGTGAGGAGTCAGCCTCCTTTGACTTGACTCCCCGTGATGTGGCTTCAGGACTGGAGATTATCAAC  
 CAGGTTTTGGAGGAACAAGCCGGGTGACTCAGCAGGGTGAACCTCAACAGGAGTTCATTGTAGACACGT  
 CCAGCTCAGGACTCAACATGGAGCTGGAAGACATCGCAAAGCTAAAGATGATCCTGCTTCGCTGGAGGA  
 GGCTATTGATGCCGTTACAGTGCCTGGGGATGACAGAGGCGTCACCAAACCTGGAAGCTATATCTTCGAG  
 CTGTTTGTGAAGCTCAAATAACATTTCAAACAAAGGCTGCATTTTGAATCACTGGACCAGATAATCC  
 AGCACCTGGCAGGCCGACTGGTGTGTTACCAACACGGCTGGGTGCAGAAGCTTATGGACATTATCCA  
 GATTGTGTTACAGCTGGACCTCCGGAAGGCAGCCCTGGTCTCTGGTGGGCTGGGTATCTCACATTCC  
 TATAAGGTACACATACACCTGAAACCAGCCACCGGAGAGCAGCTAAGCGGTGATGCCTGGAGTACCA  
 CTGCATCCAGGAAACAAGGGAAGGTGCTGAGCTATTGGTCTTCACTCCAGCCAGAGTATGCGGGAAC  
 GGTCTGCCAAGGAGTTCGTACCTTATCCTCACCAGCGGTACCCTGGCTCCACTGTCTTCTTTGCTCTG  
 GAGATGCAGATTCATTCCAGTCTGTCTGGAGAATCCACACATCATTGACAAGAACCAGCTCTGGGTGG



GGATTGTCCCAGAGGCCCTGATGGTGTTCAGCTAAGCTCTGCCTATGACAAAAGGTTTTCTGAAGAGTG  
 TTTATCTTCCCTGGGGAAGGCTCTGAGCAACATTGCTCGCGTGGTGCCCATGGGCTTCTGGTCTTCTTC  
 CCTTCTACCTGTCAATGGAGAAAAGCCTGGAGTTCTGGCAGGTACAAGGATTGGCCAGGAAGGTAGAGG  
 CACTAAAGCCTCTGTTTCGTGGAACCCAGGAACAAAGGCAGCTTCTCAGAGGTCATTGATGCCTACTACCA  
 ACAAGTTGCCTCCCCTGCGTCTAATGGGGCCACCTTCTTAGCAGTGTGTCGGGAAAAGGCCAGCGAAGGG  
 CTGGACTTCTCAGACATGAATGGTCTGGTGTGATTGTCACGGCCTCCCATATCCTCCACGCATGGATC  
 CCCGTGTTGTCTCAAGATGCACTTCTGGATGAGATGAGAGGCCGGAGTGGGGTTGGAGGCCAGTGCCT  
 CTCTGGGCAGGAATGGTACCAGCAGCAAGCATCCAGGGCTGTGAACCAGGCTATTGGGAGGTTATTGCA  
 CACCGCCATGACTATGGGGCCATCTTCTGTGTGACCACAGGTTGCGCTATGCTGATGCCAGGGCCAGC  
 TGCCCTCTGGGTGCGCCCTACCTTAAGGTGTATGACAACTTTGGCCATGTCATCCGAGATGTGGCCCA  
 GTTCTTCCGTGTTGCTCAGAAAATGATGCCTTTGCCAGTTCCTCAGGCTGTGACCTCAAGTGTGAGTGA  
 GGAGAAATTGCTCTCAAGGATGTACATTGTCCAGCTACTCCCTCTACCAGGAAAGCCATGAGTTTGG  
 ATGTGCATGTGCCAGCCTGAGGCAGAAGCCATAGGATTACCAGCTGCTGGAGACTCTGAGAGCAGCCT  
 GTGTGGGAGTATGAGCAGCAGACATTTCTGCCAGCAGAGACCTATGGGACTGCTAGTGCCTTAGAA  
 TACAACGAGCAGAAGGCTGGGGCATCTGAGGAGCAGGCACTGGGCTCCTCCACCCATCTCTCCGGTGG  
 AGAAGAGGCTGTCTACTGAGCAAAAAGGAGGAAGGAAGAAAGTCAAGGCTGGTCAACCATCCGGAGGAAC  
 AATGGCTGGCACACAGGCAGGCAGAGCCAAGATGTTTATGGTGGCTGTGAAGCAAGCACTGAGCCAAGCT  
 AACTTTGACACCTTTACCCAGGCCCTGCAGCACTATAAGATTCTGATGACTTTGAAGCCCTAGTGGCCT  
 CTCTCACCTGTCTTTTGTGAAGACCCCAAGAAACACACCCTGCTTAAAGGTTTCTACCAGTTTGTTCG  
 ACCCCACCACAAGCAGCAGTTTGGAGACATCTGCTTCCAGCTAACAGGCCAACGATGTGGTACCAGCCA  
 GCTCATTTTTCCAACCAGGACACACCAGCCATTGTACAAAAGTGGGATGTGCAGTAGAAAAACCTGGCC  
 AGCCTGCTGTGAGTGACTACCTATCTGATGTCCACAAGGCTCTGGGATCTGCAAGCTGCAACCAGCTTAC  
 GGCAGCTCTGAGGCATACAAACAGGATGATGACCTGGACAAGGTGGTGGCTGTGGTGGCAGCACTGACC  
 ACTGCAAAACCTGAACACTTACCCTTGCTACAGAGATTTGGCATGTTTGTGCGTGGCATATAAGCCTC  
 AGTTCCTACAGACCTGTGCAGACCTAATGGCCTGCCTACCACAGGCAAGGACTTGGAGCTCGAAGGTCC  
 CAGAGATGAGAGCCCACTGTGCCTCTGAGCTTACCCATGAGGACCTGAAACCAGGGCCCTCGATGTCC  
 AAGAAACCTGAGAAGACCAGAGTAAGATCTCATCTTCTTTAGACAGAGGCCAGATGAGAGTGTGAGGT  
 CTGATGATACCACCCCAAGCCATGCAACTTCTCTAGACTACCCATGAGCTTATGAAGCCTCATCG  
 GAGTAAGCAATAG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

- Restriction Sites:** SgfI-MluI
- ACCN:** NM\_001166666
- Insert Size:** 3513 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\\_001166666.1](#), [NP\\_001160138.1](#)

**RefSeq Size:** 4334 bp

**RefSeq ORF:** 3513 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 (3) lacks an in-frame exon in the CDS, as compared to variant 1. The resulting isoform (3) lacks an internal segment, as compared to isoform 1.