

Product datasheet for **RN204378**

Top1mt (NM_001002798) Rat Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Top1mt (NM_001002798) Rat Untagged Clone
Tag:	Tag Free
Symbol:	Top1mt
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



[View online »](#)

Fully Sequenced ORF: >RN204378 representing NM_001002798
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCTGCTGCTATGGCTCAGAGCTCTGTGCCGGCTTTCCAGCATGTCCCCGCCGCTCCCCAGCCGCC
 AAGTGTCCCGGGCTCGAAGGCGAGCAGAGCCGGTGGGAGAGACGAGCAAGAGCAGTGTGAAGTGGAA
 GCAACTGGAGCACAAGGGTCCGTGCTTCGCCCCAGCCTATGAGCCCTTCTGATGGAGTACGTTTCTTC
 TATGATGGCAAGCCAGTGAAGCTGAGCTTGGCAGCGGAGGAGTTGCTACTTTCTATGGGAAAATGCTGC
 ATCTCGAGTGTACGACCAAGGAAGTCTCCGGAGGAAGTCTTCAGCGACTGGCAGAAGGAAATGACAGC
 TGAGGAGAGGAAGCTCATCACACACCTGGACAAGTGCAGCTTCTCGGAGATCCATAGGCACCTTCATGGAA
 AGAGCTGAGGCCCGCAGGACCTTCCCAGGGAGCAGAAGCAGAACTAAAAGAAGAGGCAGAGAAGCTTC
 AGCAGGAGTTGGCTACTGTATTTAGATGGCCACAGAGAGAAAATAGGCAATTTCAAGACGGAACCACC
 CGGCTTGTTCGCGGCCGAGGCGACCATCCAAGATGGGGATGTTGAAGAGGAGGGTCATGCCAGAGGAT
 GTGGTCATTAAGTGTAGCAGAGATTCCAAGATCCAGAGCCCCCGCTGGTCATCAGTGGAAAGAGGTCC
 GCTCGGATAACACAGTCATGTGGCTGGCTGCCTGGGTGGAGAACATCCAGAACTCCTTCAAGTACATCAT
 ACTGAACCCAGCTCCAAGCCGAAGGGAGAGATGGATTGGCAGAAGTATGAGGTAGCACGACGCTTGAAG
 GGGGTTGTGGACAAGATCCGTGCTCAGTATCAGGCTGACTGGAAGTACCAGAAAATGAAGAAAAGGCAGC
 TGGCTGTAGCCCTTTATTTTATTGATAAGCTGGCACTGCGAACAGGAAATGAGAAGGAAGAGGGTGAAGC
 GGCCGACACCGTGGGCTGCTGTTTCGCTCCGAGTGGAGCACGTCCGACTGCACACGCCCGCAGATGGCCAG
 GAGCATGTGGTAGAGCTGGACTTCTTGGGAAGGATCCATCCGTTATAAGAATCACGTGACGGTGGAGA
 AGCTTGTGTTCCAGAACCTTCAGCACTTCATGGAAGACAAGGACCCTAGGACGACCTCTTCGATGCATC
 GACTACTTCCAGCCTGAACAAGCACTTGCAGGACTTGATGGAGGGGCTGACAGCCAAGGTGTTTCGACC
 TACAATGCCTCCATCACTCTGCAGGAGCAGCTGCGGGTGTGACCCGTGCTGAAGACAGCCTAACCTGCA
 AAGTCTTAGCTTACAACCGGGCAAACCGGGCTGTGGCGTCTCTGTAACCATCAGAGAGCAATTCCTAA
 GACCTTCGAGGAGTCCATGCAGACACTGCAGAAAAAGATTGAGACAAAAGAAGGCACAGGTGGCTGAGGCA
 CAGGTGGAGCTGCAGAAGGCAGAGACTGACCTTAGAATGAGAGGGGACAGCAAGTCCAAAAGTTTCCTTC
 AGAAGCAGCAGCGGCTGCTGAAGCTGGAGGAGCAGCTGGCTCGACTGTGCACGAAGGCCACAGACAAGGA
 GGAGAATAAGCAAGTGGCCCTGGGCACCCCAAGCTCAACTACCTGGACCCCGGATCAGCATTGCATGG
 TGTAAGAGATTTGGTGTGCCCGTAGAGAAGATCTACAACAAGACCCAGAGAGAGAGGTTTGGCTGGCCCT
 TCAACCAGGCAGGTGAAGACTTTGAATTT**TAA**

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

- Restriction Sites:** Sgfl-MluI
- ACCN:** NM_001002798
- Insert Size:** 1782 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_001002798.1](#), [NP_001002798.1](#)

RefSeq Size: 1887 bp

RefSeq ORF: 1782 bp

Locus ID: 300029

UniProt ID: [Q6IM78](#)

Cytogenetics: 7q34

Gene Summary: Releases the supercoiling and torsional tension of DNA introduced during duplication of mitochondrial DNA by transiently cleaving and rejoining one strand of the DNA duplex. Introduces a single-strand break via transesterification at a target site in duplex DNA. The scissile phosphodiester is attacked by the catalytic tyrosine of the enzyme, resulting in the formation of a DNA-(3'-phosphotyrosyl)-enzyme intermediate and the expulsion of a 5'-OH DNA strand. The free DNA strand then rotates around the intact phosphodiester bond on the opposing strand, thus removing DNA supercoils. Finally, in the religation step, the DNA 5'-OH attacks the covalent intermediate to expel the active-site tyrosine and restore the DNA phosphodiester backbone (By similarity).[UniProtKB/Swiss-Prot Function]