

## Product datasheet for **RC208637**

### TOP1MT (NM\_052963) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	TOP1MT (NM_052963) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	TOP1MT
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC208637 representing NM\_052963  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGCGCGTGGTGGGCTGCTGCGGCTCCGGGCGGCTCTGACGCTGCTCGGGAGGTCCCCGCCGCCGG  
 CCTCCCGGGTGTCCCGGCTCGCGCAGGACGCAGAAGGGCAGTGGAGCCAGGTGGGAGAAGGAGAAGCA  
 CGAAGACGGGTGAAGTGGAGACAGCTGGAGCACAAGGGCCGTACTTCGCACCCCCATACGAGCCCTT  
 CCCGACGGAGTGCCTTTCTTCTATGAAGGAAGGCTGTGAGATTGAGCGTGGCAGCGGAGGAGTGC  
 CTTTTTATGGGAGGATGTAGATCATGAATACACAACAAAGGAGTTCGGAAGAAGTCTTCAATGA  
 CTGGCGAAAGGAAATGGCGGTGGAAGAGAGGGAAGTCAAGAGCCTGGACAAGTGTGACTTCACGGAG  
 ATCCACAGATACTTTGTGGACAAGGCCGACGCCGAAAGTCTGAGCAGGGAGGAGAAGCAGAAGCTAA  
 AAGAAGAGGCAGAAAACTTCAGCAAGAGTTCGGCTACTGTATTTAGATGGTACCAAGAAAAATAGG  
 CAACTTCAAGATTGAGCCGCTGGCTTGTCCGTGGCCGTGGCGACCATCCAAGATGGGGATGCTGAAG  
 AGAAGGATCACGCCAGAGGATGTGGTTATCAACTGCAGCAGGGACTCGAAGATCCCCGAGCCGCCGCGG  
 GGCACCAAGTGAAGGAGGTGCGCTCCGATAACACCGTACGTGGCTGGCAGCTTGGACCGAGAGCGTTCA  
 GAACTCCATCAAGTACATCATGCTGAACCTTGTCTGAAGCTGAAGGGGAGACAGCTTGGCAGAAGTTT  
 GAAACAGCTCGACGCCTGCGGGGATTTGTGGACGAGATCCGCTCCAGTACCGGGCTGACTGGAAGTCTC  
 GGGAAATGAAGACGAGACAGCGGGCGGTGGCCCTGTATTTTCATCGATAAGCTGGCACTGAGAGCAGGAAA  
 TGAGAAGGAGGACGGTGGGCGGCCGACACCGTGGGCTGCTGTTCCCTCCCGTGGAGCAGTCCAGCTG  
 CACCCGGAGGCCGATGGCTGCCAACACGTGGTGAATTTGACTTCTGGGAAGGACTGCATCCGCTACT  
 ACAACAGAGTCCCGTGGAGAAGCCGGTACAAGAAGTACAGCTCTTTATGGAGAACAAGGACCCCGG  
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 ACGGCCAAGTGTTCGGACCTACAACCGCTCCATCACTCTGCAGGAGCAGCTGCGGGCCCTGACGCGCG  
 CCGAGGACAGCATAGCAGCTAAGATCTTATCCTACAACCGAGCCAACCGAGTCTGGCCATTCTCTGCAA  
 CCATCAGCGAGCAACCCAGTACGTTTCGAGAAGTCGATGCAGAATCTCCAGACGAAGTCCAGGCAAAAG  
 AAGGAGCAGTGGCTGAGGCCAGGGCAGAGCTGAGGAGGGCGAGGGCTGAGCACAAGCCCAAGGGGATG  
 GCAAGTCCAGGAGTGTCTGGAGAAGAAGAGCGGCTCCTGGAGAAGCTGCAGGAGCAGCTGGCGCAGCT  
 GAGTGTGACAGGCCACGGACAAGGAGGAGAACAAGCAGGTGGCCCTGGGCAGTCCAAGCTCAACTACCTG  
 GACCCAGGATCAGCATTGCCTGGTGAAGCGGTTCAAGGTGCCAGTGGAGAAGTCTACAGCAAAACAC  
 AGCGGGAGAGTTGCGCTGGGCTCTCGCATGGCAGGAGAAGACTTTGAATTC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC208637 representing NM\_052963  
 Red=Cloning site Green=Tags(s)

MRVVRLRLRAALTLLGEVPRRPPASRGVPGSRRTQKGS GARWEKEKHEDGVKWRQLEHKGPYFAPPYEPL  
 PDGVRFFYEGRPVRLSVAEEVATFYGRMLDHEYTTKEVFRKNFFNDWRKEMAVEEREVIKSLDKDFTE  
 IHRYFVDKAAARKVLSREEKQKLKEAEKLLQEFGYCILDGHQEKIGNFKIEPPGLFRGRGDHPKMGMLK  
 RRITPEDVVINCSRDSKIPPEPAGHQWKEVRSNDNTVTLAAWTESVQNSIKYIMLNPCSKLKGETAWQKF  
 ETARRLRGFVDEIRSQYRADWKSREMKTRQRAVALYFIDKLALRAGNEKEDGEAADTVGCCSLRVEHVQL  
 HPEADGCQHVVDFDLGKDCIRYNNRVPVEKPVYKNLQLFMENKDPDDLDLFDRLTTTSLNKLQELMDGL  
 TAKVFRTYNASITLQEQLRALTRAEDSIAAKILSYNRRANRVVAILCNHQATPSTFEKSMQNLQTKIQAK  
 KEQVAEARAELRRARAEHKAQGDGKSRSVLEKKRRLLEKLQEQLAQLSVQATDKEENKQVALGTSKLNLYL  
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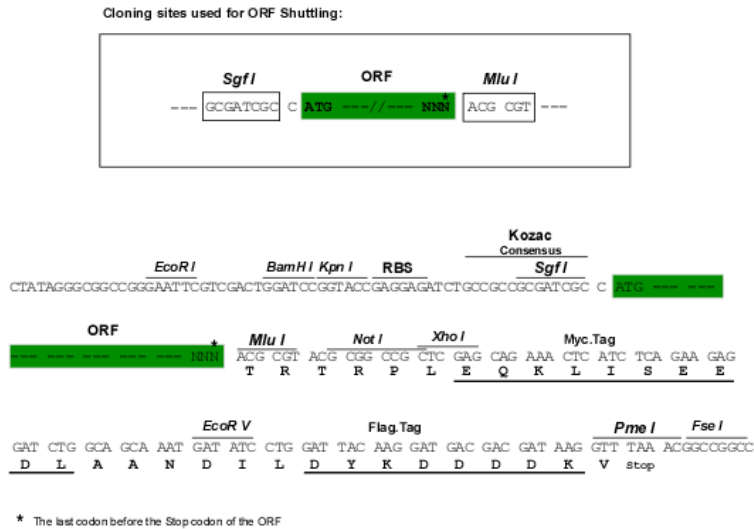
**TRTRPLEQKLI**SEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk8113\\_h04.zip](https://cdn.origene.com/chromatograms/mk8113_h04.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_052963

**ORF Size:** 1803 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\\_052963.3](#)

**RefSeq Size:** 1953 bp

**RefSeq ORF:** 1806 bp

**Locus ID:** 116447

UniProt ID: [Q969P6](#)

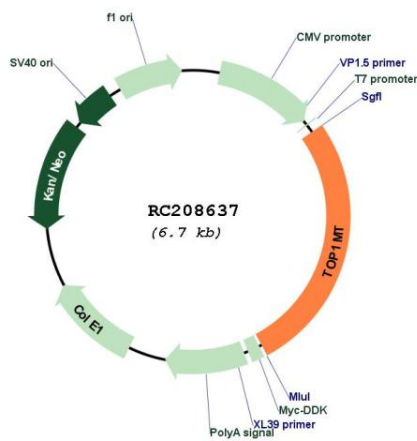
Cytogenetics: 8q24.3

Protein Families: Druggable Genome

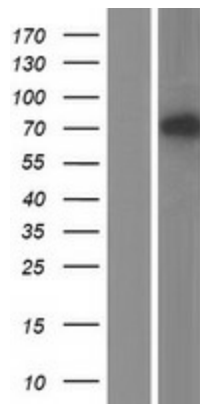
MW: 69.9 kDa

**Gene Summary:** This gene encodes a mitochondrial DNA topoisomerase that plays a role in the modification of DNA topology. The encoded protein is a type IB topoisomerase and catalyzes the transient breaking and rejoining of DNA to relieve tension and DNA supercoiling generated in the mitochondrial genome during replication and transcription. Alternatively spliced transcript variants encoding multiple isoforms have been observed for this gene. [provided by RefSeq, May 2012]

**Product images:**



Circular map for RC208637



Western blot validation of overexpression lysate (Cat# [LY409364]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC208637 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).