

## Product datasheet for **RG208637**

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

#### Product data:

|                           |   |
|---------------------------|---|
| Product Type:             | Expression Plasmids                       |
| Product Name:             | TOP1MT (NM_052963) Human Tagged ORF Clone |
| Tag:                      | TurboGFP                                  |
| Symbol:                   | TOP1MT                                    |
| Mammalian Cell Selection: | Neomycin                                  |
| Vector:                   | pCMV6-AC-GFP (PS100010)                   |
| E. coli Selection:        | Ampicillin (100 ug/mL)                    |



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**ORF Nucleotide Sequence:**

>RG208637 representing NM\_052963  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGCGCGTGGTGGGCTGCTGCGGCTCCGGGCGGCTCTGACGCTGCTCGGGAGGTCCCCGCCGCCGG  
 CCTCCCGGGTGTCCCGGCTCGCGCAGGACGCAAGGGCAGTGGAGCCAGGTGGGAGAAGGAGAAGCA  
 CGAAGACGGGTGAAGTGGAGACAGCTGGAGCACAAGGGCCGTAATTCCGACCCCCATACGAGCCCTT  
 CCCGACGGAGTGCCTTTCTTCTATGAAGGAAGGCTGTGAGATTGAGCGTGGCAGCGGAGGAGTGC  
 CTTTTTATGGGAGGATGTAGATCATGAATACACAACAAAGGAGTTCGGAAGAACTTCTTCAATGA  
 CTGGCGAAAGGAAATGGCGGTGGAAGAGAGGGAAGTCAAGAGCCTGGACAAGTGTGACTTCACGGAG  
 ATCCACAGATACTTTGTGGACAAGGCCGACGCCGAAAGTCTGAGCAGGGAGGAGAAGCAGAAGCTAA  
 AAGAAGAGGCAGAAAACTTCAGCAAGAGTTCGGCTACTGTATTTAGATGGTACCAAGAAAAATAGG  
 CAACTTCAAGATTGAGCCGCTGGCTTGTCCGTGGCCGTGGCGACCATCCAAGATGGGGATGCTGAAG  
 AGAAGGATCACGCCAGAGGATGTGGTTATCAACTGCAGCAGGGACTCGAAGATCCCCGAGCCGCCGG  
 GGCACCAAGTGAAGGAGGTGCGCTCCGATAACACCGTCACTGGCTGGCAGCTTGGACCGAGAGCGTTCA  
 GAACTCCATCAAGTACATCATGCTGAACCTTGTCTGAAGCTGAAGGGGAGACAGCTTGGCAGAAGTTT  
 GAAACAGCTCGACGCCTGCGGGGATTTGTGGACGAGATCCGCTCCAGTACCGGGCTGACTGGAAGTCTC  
 GGGAAATGAAGACGAGACAGCGGGCGGTGGCCCTGTATTTTCATCGATAAGCTGGCACTGAGAGCAGGAAA  
 TGAGAAGGAGGACGGTGGAGCGGCCGACACCGTGGGCTGCTGTTCCCTCCGCGTGGAGCAGTCCAGCTG  
 CACCCGGAGGCCGATGGCTGCCAACACGTGGTGAATTTGACTTCTGGGAAGGACTGCATCCGCTACT  
 ACAACAGAGTCCGGTGGAGAAGCCGGTACAAGAACTTACAGCTTTTATGGAGAACAAGGACCCCGG  
 GGACGACCTCTTCGACAGGCTGACCACGACCGCTGAACAAGCACCTCCAGGAGCTGATGGACGGGCTG  
 ACGGCCAAGTGTTCGGACCTACAACCGCTCCATCACTCTGCAGGAGCAGCTGCGGGCCCTGACGCGCG  
 CCGAGGACAGCATAGCAGCTAAGATCTTATCCTACAACCGAGCCAACCGAGTCTGGCCATTCTCTGCAA  
 CCATCAGCGAGCAACCCAGTACGTTTCGAGAAGTCGATCGAGAATCTCCAGACGAAGTCCAGGCAAAAG  
 AAGGAGCAGTGGCTGAGGCCAGGGCAGAGCTGAGGAGGGCGAGGGCTGAGCACAAGCCCAAGGGGATG  
 GCAAGTCCAGGAGTGTCTGGAGAAGAAGAGCGGCTCCTGGAGAAGCTGCAGGAGCAGCTGGCGCAGCT  
 GAGTGTGACAGCCACGGACAAGGAGGAGAACAAGCAGGTGGCCCTGGGCAGTCCAAGCTCAACTACCTG  
 GACCCAGGATCAGCATTGCCTGGTGAAGCGGTTTCAGGGTGCCAGTGGAGAAGTCTACAGCAAAACAC  
 AGCGGGAGAGTTTCGCTGGGCTCTCGCATGGCAGGAGAAGACTTTGAATTC

**ACGCGTACGCGGCCGCTCGAG** – GFP Tag – GTTTAA

**Protein Sequence:**

>RG208637 representing NM\_052963  
 Red=Cloning site Green=Tags(s)

MRVVRLRLRAAL TLLGEVPRR PASRGVPGSRRTQKGS GARWEKEKHEDGVKWRQLEHKGPYFAPPYEPL  
 PDGVRFFYEGRPVRLSVAEEVATFYGRMLDHEYTTKEVFRKNFNDWRKEMAVEEREVIKSLDKDFTE  
 IHRYFVDKAAARKVLSREEKQKLKEEAELQEFGYCILDGHQEKIGNFKIEPPLFRFRGDHPKMGMLK  
 RRIITPEDVVINCSRDSKIPPEPAGHQWKEVRSNDNTVTLAAWTESVQNSIKYIMLNPCSKLKGETAQWKF  
 ETARRLRGFVDEIRSQYRADWKSREMKTRQRAVALYFIDKLALRAGNEKEDGAAADTVGCCSLRVEHVQL  
 HPEADGCQHVEFDLFLGKDCIRYYNRVPVEKPVYKNLQLFMENKDPDDLFDRLLTTSLNKLQELMDGL  
 TAKVFRYNASITLQEQLRALTRAEDSIAAKILSYNRANRVVAIILCNHQATPSTFEKSMQNLQTKIQAK  
 KEQVAEARAELRRARAEHKAQGDGKSRVLEKKRRLLEKLQEQLAQLSVQATDKEENKQVALGTSKLNLYL  
 DPRISIAWCKRFRVPVEKIYSKTQRERFAWALAMAGEDFEF

**TRTRPLE** – GFP Tag – V

**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

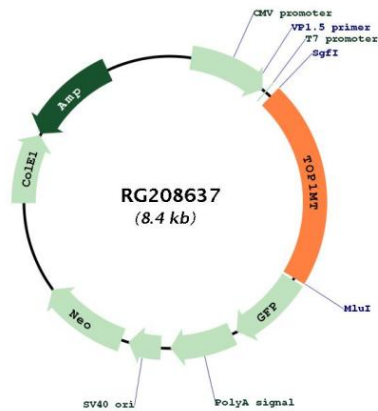
**UniProt ID:** [Q969P6](#)

**Cytogenetics:** 8q24.3

**Protein Families:** Druggable Genome

**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 RG208637