

## Rabbit Anti-TOP1MT antibody

SL1211R

**Product Name** TOP1MT

**Chinese Name** MitochondrionDNA 拓普西异构酶I抗体

**Alias** Topoisomerase (DNA) I, mitochondrial; mitochondrial DNA topoisomerase I; DNA topoisomerase I, mitochondrial; TOP1mt; 2900052H09Rik; TOP1MT; TOP1M\_HUMAN; DNA topoisomerase I, mitochondrial; mitochondrial; TOP1mt; Topoisomerase I mitochondrial.

**Research Area** Tumour Chromatin and nuclear signals transcriptional regulatory factor Kinases and Phosphatases Mitochondrion

**Immunogen Species** Rabbit

**Clonality** Polyclonal

**React Species** Human Mouse Rat

**Applications** WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500 (Paraffin sections need antigen repair)  
not yet tested in other applications.  
optimal dilutions/concentrations should be determined by the end user.

**Theoretical molecular weight** 66kDa

**Cellular localization** cytoplasmic Mitochondrion

**Form** Liquid

**Concentration** 1mg/ml

**immunogen** KLH conjugated synthetic peptide derived from human TOP1mt: 366-488/601

**Lsotype** IgG

**Purification** affinity purified by Protein A

**Buffer Solution** Human,Mouse,Rat1M TBS(pH7.4) with 1% BSA, Human,Mouse,Rat3% Proclin300 and 50% Glycerol.

**Storage** Shipped at 4°C. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.

**Attention** This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

**PubMed**

[PubMed](#)

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].

**Function:**

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 undergoes passage around the unbroken 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.

**Subcellular Location:**

Mitochondrion.

**Product  
Detail**

**Tissue Specificity:**

Ubiquitous; highest in skeletal muscle, heart, brain and fetal liver.

**Similarity:**

Belongs to the type IB topoisomerase family.

**SWISS:**

Q969P6

**Gene ID:**

116447

**Database links:**

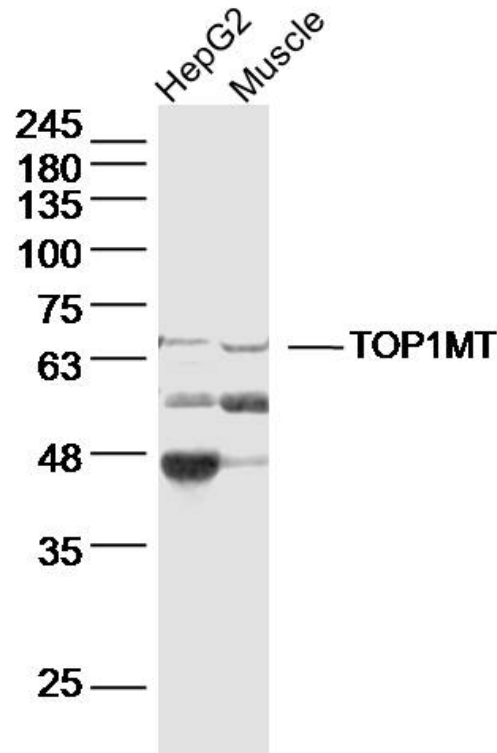
[Entrez Gene: 116447](#) Human

[Omim: 606387](#) Human

[SwissProt: Q969P6](#) Human

[Unigene: 528574](#) Human

**Product  
Picture**



Sample:

HepG2 Cell Lysate at 40 ug

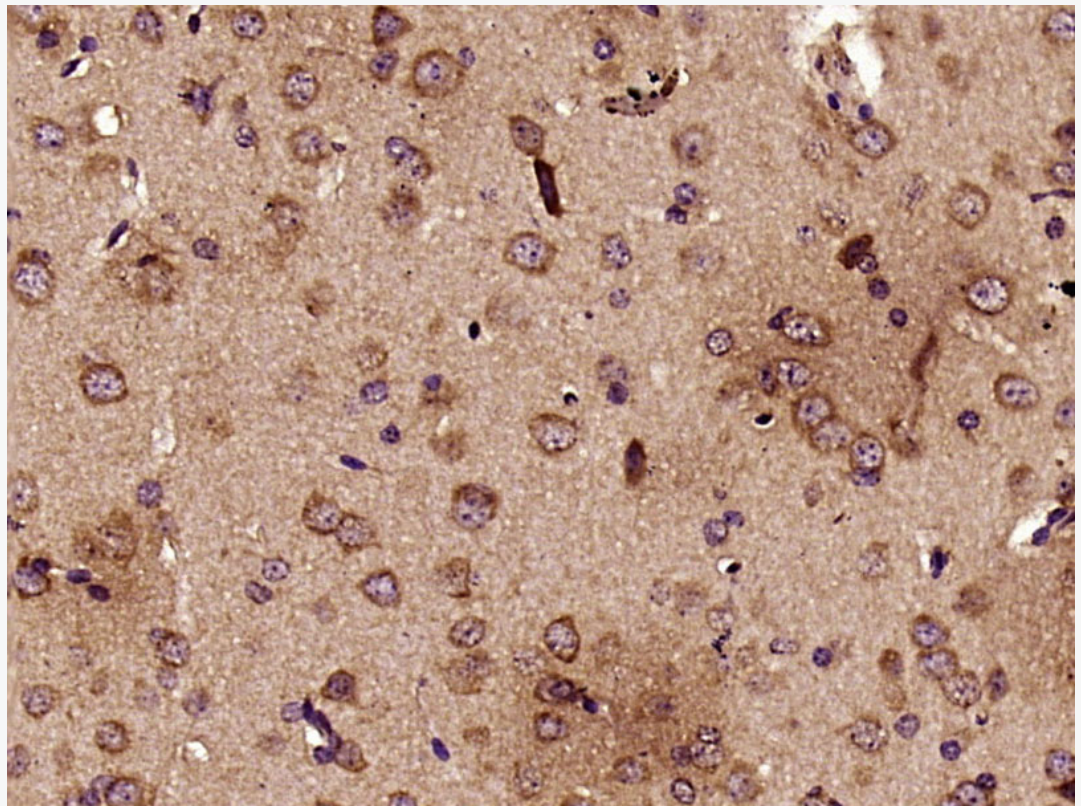
Muscle (Mouse) Lysate at 40 ug

Primary: Anti-TOP1MT (SL1211R) at 1/300 dilution

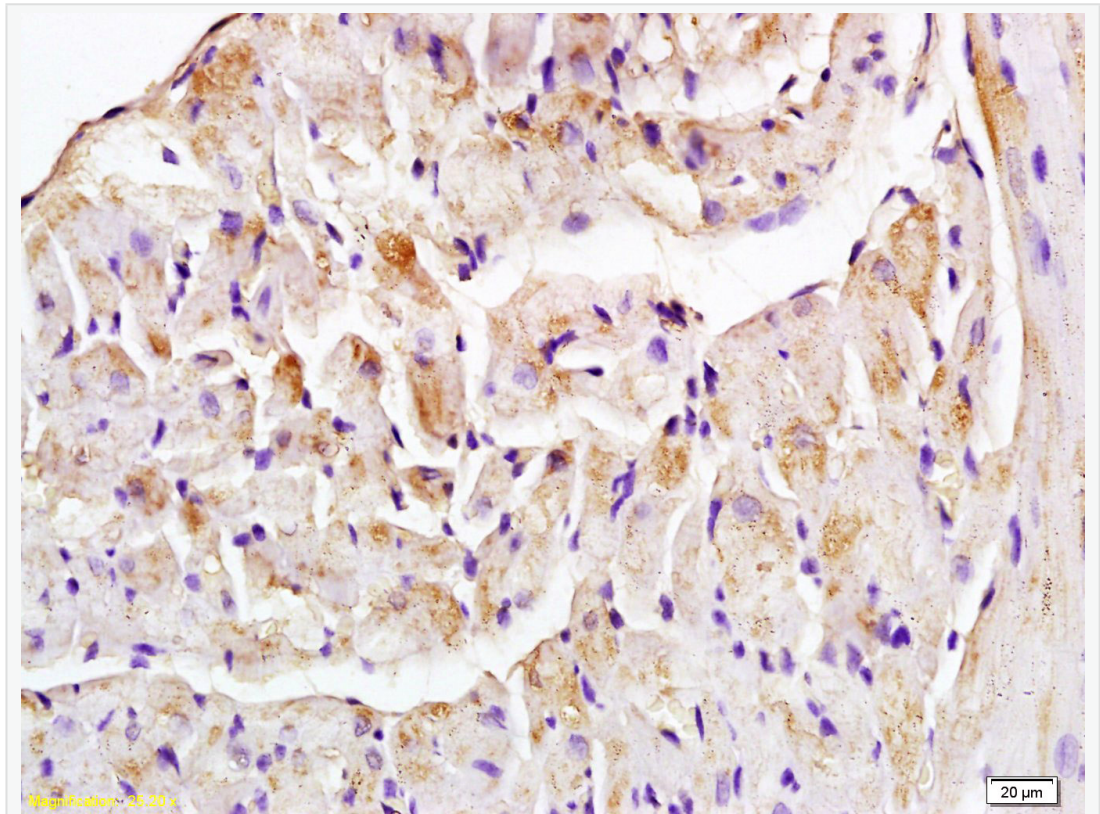
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 66 kD

Observed band size: 66 kD



Paraformaldehyde-fixed, paraffin embedded (Mouse brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (TOP1MT) Polyclonal Antibody, Unconjugated (SL1211R) at 1:500 overnight at 4°C, followed by a conjugated secondary (sp-0023) for 20 minutes and DAB staining.



Tissue/cell: rat heart tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;  
Antigen retrieval: citrate buffer ( Human,Mouse,Rat1M, pH 6.0 ), Boiling bathing  
for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min;  
Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;  
Incubation: Anti-TOP1mt/TOPO-I Polyclonal Antibody,  
Unconjugated(SL1211R) 1:200, overnight at 4°C, followed by conjugation to the  
secondary antibody(SP-0023) and DAB(C-0010) staining