10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

TOP1MT Rabbit pAb

Catalog # AP99873

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	Q969P6
Other Accession	Q969P6
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	69872
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human TOP1mt
Epitope Specificity	366-488/601
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the type IB topoisomerase family.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	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].

Additional Information

Gene ID	116447
Other Names	TOP1M_HUMAN; TOP1MT; 5.6.2.1; DNA topoisomerase I mitochondrial; topoisomerase (DNA) I, mitochondrial
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	TOP1MT

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 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).
Cellular Location	Mitochondrion.
Tissue Location	Ubiquitous; highest in skeletal muscle, heart, brain and fetal liver.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.