

Mouse Anti-Topoisomerase (DNA) I Mitochondrial (TOP1MT) [TOP1MT/488]: MC0094

Intended Use: For Research Use Only

Description: DNA topoisomerases are nuclear enzymes that regulate the topological structure of DNA in eukaryotic cells by transiently breaking and rejoining DNA strands. Due to their roles in DNA replication, recombination, and transcription, DNA topoisomerases have been identified as targets of numerous anticancer drugs. Mitochondrial Topo I (DNA topoisomerase I, mitochondrial) is a 601 amino acid protein that primarily acts to relieve DNA strain that may occur during duplication of mitochondrial DNA. As a type IB topoisomerase, mitochondrial Topo I requires a divalent metal, either, calcium or magnesium, as well as an alkaline pH for optimal activity.

Specifications

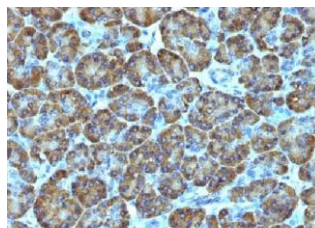
Clone: TOP1MT/488
Source: Mouse
Isotype: IgG2b/k
Reactivity: Human
Localization: Cytoplasm
Formulation: Protein A/G purified antibody from bioreactor concentrate. Prepared in 10mM PBS with 0.2% BSA and < 0.09% sodium azide (NaN₃)
Storage: Store at 2°- 8°C. For longer periods of storage, store at -20°C. Avoid repeat freeze-thaw cycles
Applications: IHC, Flow Cyt, ICC/IF
Package:

Description	Catalog No.	Size
Topoisomerase (DNA) I Mitochondrial (TOP1MT) Concentrated	MC0094	1 ml

IHC Procedure*

Positive Control Tissue: A431 cells. Heart, Skeletal muscle, brain or fetal liver
Concentrated Dilution: 50-200
Pretreatment: Citrate pH6.0, 15 minutes using Pressure Cooker, or 30-60 minutes using water bath at 95°-99°C
Incubation Time and Temp: 30-60 minutes @ RT
Detection: Refer to the detection system manual

* Result should be confirmed by an established diagnostic procedure.



FFPE human pancreas stained with anti-TopoI MT using DAB

References

1. Mitochondrial topoisomerase I (top1mt) is a novel limiting factor of doxorubicin cardiotoxicity. Khiati S1, et al. Clin Cancer Res. Sep 15;20(18):4873-81, 2014.
2. Screening of JAK2 V617F and MPL W515 K/L negative essential thrombocythaemia patients for mutations in SESN2, DNAJC17, ST13, TOP1MT, and NTRK1. Al Assaf C, et al. Br J Haematol. Jun;165(5):734-7, 2014.
3. Mitochondrial topoisomerases and alternative splicing of the human TOP1mt gene. Zhang, H., et al. Biochimie 89: 474-481, 2007.
4. Mitochondrial topoisomerases and alternative splicing of the human TOP1mt gene. Zhang H, et al. Biochimie. Apr;89(4):474-81, 2007.
5. Human mitochondrial topoisomerase I. Zhang, H., et al. Proc. Natl. Acad. Sci. USA 98: 10608-10613, 2001.