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TOP1 Antibody (N-term)

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AM2253a

Specification

TOP1 Antibody (N-term) - Product Information

Application	**WB, FC,E**
Primary Accession	P11387
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgG1,κ**
Calculated MW	**90726**

TOP1 Antibody (N-term) - Additional Information

Gene ID 7150

Other Names
DNA topoisomerase 1, DNA topoisomerase I, TOP1

Target/Specificity
This TOP1 antibody is generated from a mouse immunized with a recombinant protein from the N-terminal region of human TOP1.

Dilution
WB~~1:1000
FC~~1:25

Format
Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
TOP1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

TOP1 Antibody (N-term) - Protein Information

Name TOP1

Function Releases the supercoiling and torsional tension of DNA introduced during the DNA replication and transcription 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). Regulates the alternative splicing of tissue factor (F3) pre-mRNA in endothelial cells. Involved in the circadian transcription of the core circadian clock component BMAL1 by altering the chromatin structure around the ROR response elements (ROREs) on the BMAL1 promoter.

Cellular Location
Nucleus, nucleolus. Nucleus, nucleoplasm. Note=Diffuse nuclear localization with some enrichment in nucleoli. On CPT treatment, cleared from nucleoli into nucleoplasm. Sumoylated forms found in both nucleoplasm and nucleoli

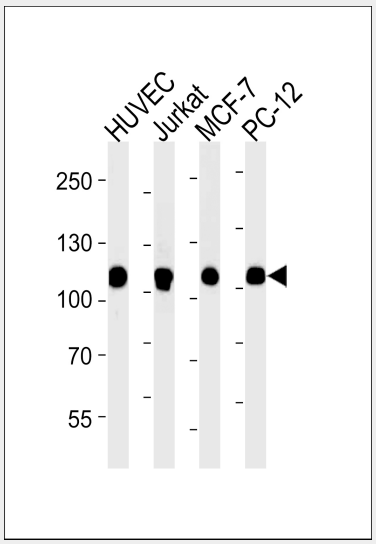
Tissue Location
Endothelial cells..

TOP1 Antibody (N-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

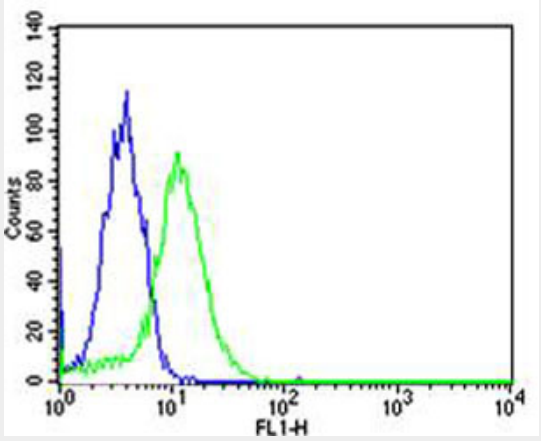
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

TOP1 Antibody (N-term) - Images



Western blot analysis of lysates from HUVEC, Jurkat, MCF-7, PC-12 cell line (from left to right), using TOP1 Antibody (N-term) (Cat. #AM2253a). AM2253a was diluted at 1:1000 at each lane. A goat anti-mouse IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody. Lysates at 35µg per lane.

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Flow cytometric analysis of Hela cells using TOP1 Antibody (N-term)(green, Cat#AM2253a) compared to an isotype control of mouse IgG1(blue). AM2253a was diluted at 1:25 dilution. An Alexa Fluor® 488 goat anti-mouse IgG at 1:400 dilution was used as the secondary antibody.

TOP1 Antibody (N-term) - Background

Releases the supercoiling and torsional tension of DNA introduced during the DNA replication and transcription 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 (By similarity). Regulates the alternative splicing of tissue factor (F3) pre-mRNA in endothelial cells.

TOP1 Antibody (N-term) - References

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