

TOP1 Antibody (N-term) Blocking peptide
Synthetic peptide
Catalog # BP13897a**Specification**

TOP1 Antibody (N-term) Blocking peptide - Product InformationPrimary Accession [P11387](#)**TOP1 Antibody (N-term) Blocking peptide - Additional Information****Gene ID** 7150**Other Names**

DNA topoisomerase 1, DNA topoisomerase I, TOP1

Target/Specificity

The synthetic peptide sequence used to generate the antibody AP13897a was selected from the N-term region of TOP1. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

TOP1 Antibody (N-term) Blocking peptide - 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) Blocking peptide - Protocols

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

- [Blocking Peptides](#)

TOP1 Antibody (N-term) Blocking peptide - Images**TOP1 Antibody (N-term) Blocking peptide - Background**

This gene encodes a DNA topoisomerase, an enzyme that controls and alters the topologic states of DNA during transcription. This enzyme catalyzes the transient breaking and rejoining of a single strand of DNA which allows the strands to pass through one another, thus altering the topology of DNA. This gene is localized to chromosome 20 and has pseudogenes which reside on chromosomes 1 and 22.

TOP1 Antibody (N-term) Blocking peptide - References

Kjeldsen, E., et al. Anticancer Res. 30(9):3257-3265(2010) Reinhold, W.C., et al. Cancer Res. 70(6):2191-2203(2010) Tesaro, C., et al. Biochem. J. 425(3):531-539(2010) Ballot, C., et al. Mol. Cancer Ther. 8(12):3307-3317(2009) Lebedeva, N.A., et al. Biochemistry Mosc. 74(11):1278-1284(2009)