

ARG43780 anti-Topoisomerase I antibody

Package: 50 µg
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes Topoisomerase I
Tested Reactivity	Hu, Ms, Rat
Tested Application	ELISA, ICC/IF, WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	Topoisomerase I
Species	Human
Immunogen	Recombinant protein corresponding to E526-F765 of Human Topoisomerase I.
Conjugation	Un-conjugated
Alternate Names	DNA topoisomerase 1; DNA topoisomerase I; TOPI; EC 5.99.1.2; Scl-70 Antigen; Topoisomerase (DNA) I

Application Instructions

Application table	Application	Dilution
	ELISA	0.1 - 0.5 µg/ml (Detect TOP1 antigen)
	ICC/IF	0.5 - 2 µg/ml
	WB	0.1 - 1 µg/ml
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	
Positive Control	Daudi; MOLT-4; MCF-7; Rat brain; Mouse brain	
Observed Size	~ 100 kDa	

Properties

Form	Liquid
Purification	Affinity purification with immunogen.
Buffer	0.9% NaCl, 0.2% Na ₂ HPO ₄ , 0.05% Sodium azide and 4% Trehalose.
Preservative	0.05% Sodium azide
Stabilizer	4% Trehalose
Concentration	0.5 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed

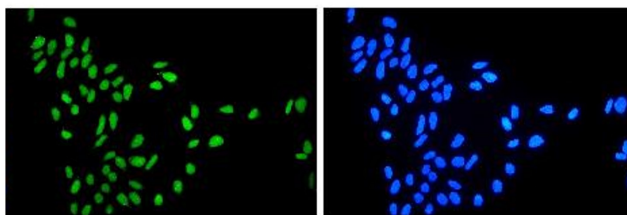
before use.

Note For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Gene Symbol	TOP1
Gene Full Name	topoisomerase (DNA) I
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. [provided by RefSeq, Jul 2008]
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 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. Involved in the circadian transcription of the core circadian clock component ARNTL/BMAL1 by altering the chromatin structure around the ROR response elements (ROREs) on the ARNTL/BMAL1 promoter. [UniProt]
Calculated Mw	91 kDa
PTM	Sumoylated. Lys-117 is the main site of sumoylation. Sumoylation plays a role in partitioning TOP1 between nucleoli and nucleoplasm. Levels are dramatically increased on camptothecin (CPT) treatment. Phosphorylation at Ser-506 by CK2 increases binding to supercoiled DNA and sensitivity to camptothecin.
Cellular Localization	Nucleus, nucleolus. Nucleus, nucleoplasm. Note=Diffuse nuclear localization with some enrichment in nucleoli. On CPT treatment, cleared from nucleoli into nucleoplasm. Sumolyated forms found in both nucleoplasm and nucleoli

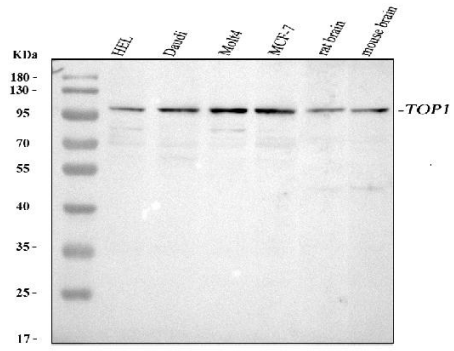
Images



ARG43780 anti-Topoisomerase I antibody ICC/IF image

Immunofluorescence: Cells stained with 2 $\mu\text{g/ml}$ of Topoisomerase I antibody (ARG43780) at 4°C for overnight. DAPI was used as a counter-stain.

ARG43780 anti-Topoisomerase I antibody WB image



Western blot: 30µg of HELI, Daudi, MOLT-4, MCF-7, Rat brain and Mouse brain lysates stained with ARG43780 anti-Topoisomerase I antibody.