



Topoisomerase I Rabbit mAb

Catalog No	YP-rAb-17163
Isotype	IgG
Reactivity	Human,Mouse,Rat
Applications	WB,IHC,IF,ELISA
Gene Name	TOP1
Protein Name	DNA topoisomerase 1
Purification Process	Protein A
Specificity	Endogenous
Formulation	PBS, 50% glycerol, 0.05% Proclin 300, 0.05%BSA
Source	Monoclonal, Rabbit,IgG
Dilution	IHC 1:200-1:1000; WB 1:2000-1:10000; IF 1:200-1:1000; ELISA 1:5000-1:20000; Note: For IHC, we suggest antigen retrieval with TE buffer pH 9.0
Concentration	0.5 mg/ml
Purity	≥90%
Storage Stability	-15 ° C to -25 ° C/1 year(Do not lower than -25 ° C)
Synonyms	Topoisomerase I;DNA topoisomerase 1;TOP1 ; DNA topoisomerase 1 ; DNA topoisomerase I;TOP1
Observed Band	91kD
Calculated Molecular Weight	91kD
Cell Pathway	Nucleus, nucleolus . Nucleus, nucleoplasm . 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 Specificity	Endothelial cells.
Function	Catalytic activity:ATP-independent breakage of single-stranded DNA, followed by passage and rejoining.,Disease:A chromosomal aberration involving TOP1 is found in a form of therapy-related myelodysplastic syndrome. Translocation t(11;20)(p15;q11) with NUP98.,enzyme regulation:Specifically inhibited by camptothecin (CPT), a plant alkaloid with antitumor activity.,Function:The reaction catalyzed by topoisomerases leads to the conversion of one topological isomer of DNA to another.,miscellaneous:Eukaryotic topoisomerase I and II can relax both negative and positive supercoils, whereas prokaryotic enzymes relax only negative supercoils.,miscellaneous:When a topoisomerase transiently breaks a DNA backbone bond, it simultaneously forms a protein-DNA link, in which a tyrosyl oxygen in the enzyme is joined to a DNA phosphorus at one end of the enzyme-severed DNA strand.,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.,similarity:Belongs to the eukaryotic type I topoisomerase family.,subcellular location:Diffuse nuclear localization with some enrichment in nucleoli. On CPT treatment, cleared from nucleoli into nucleoplasm. Sumolyated forms found in both nucleoplasm and nucleoli.,subunit:Monomer. Interacts with SV40 Large T antigen; this interactions allows viral DNA replication.,

Background

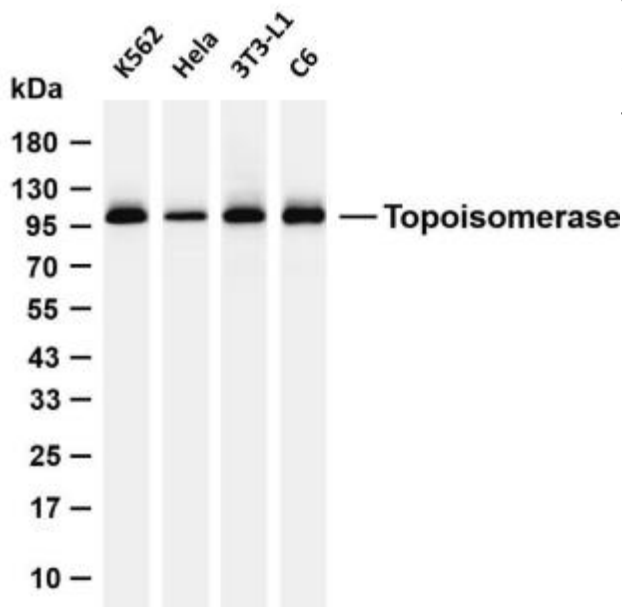
This gene encodes a DNA topoisomerase, an enzyme that controls and alters the topologic states of DNA during transcription. This enzyme catalyzes the transient breaking and rejoining of a single strand of DNA which allows the strands to pass through one another, thus altering the topology of DNA. This gene is localized to chromosome 20 and has pseudogenes which reside on chromosomes 1 and 22. [provided by RefSeq, Jul 2008],

matters needing attention

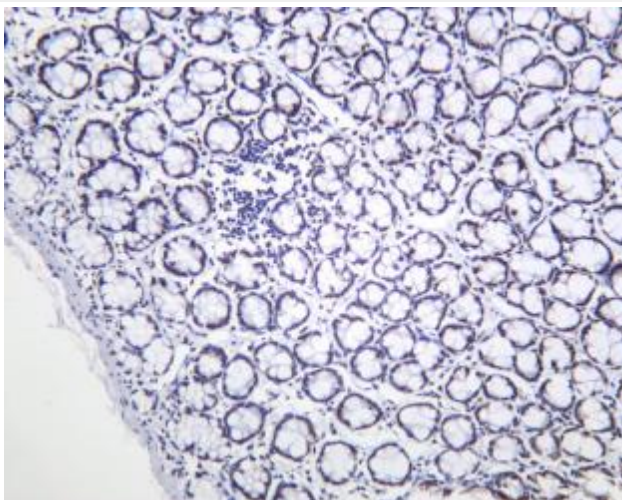
Avoid repeated freezing and thawing!

Usage suggestions

This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.



Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-Topoisomerase I antibody. The HRP-conjugated Goat anti-Rabbit IgG (H + L) antibody was used to detect the antibody. Lane 1: K562 Lane 2: HeLa Lane 3: 3T3-L1 Lane 4: C6 Predicted band size: 91kDa Observed band size: 91kDa



Rat colon was stained with anti-Topoisomerase I Rabbit antibody

