

Anti-TOP1 Antibody (4H437)

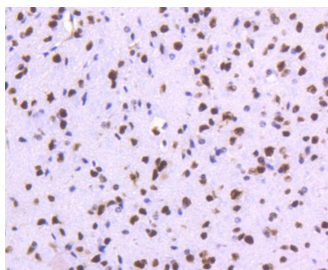
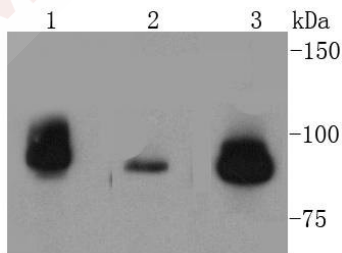
Product Details

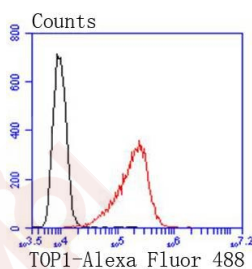
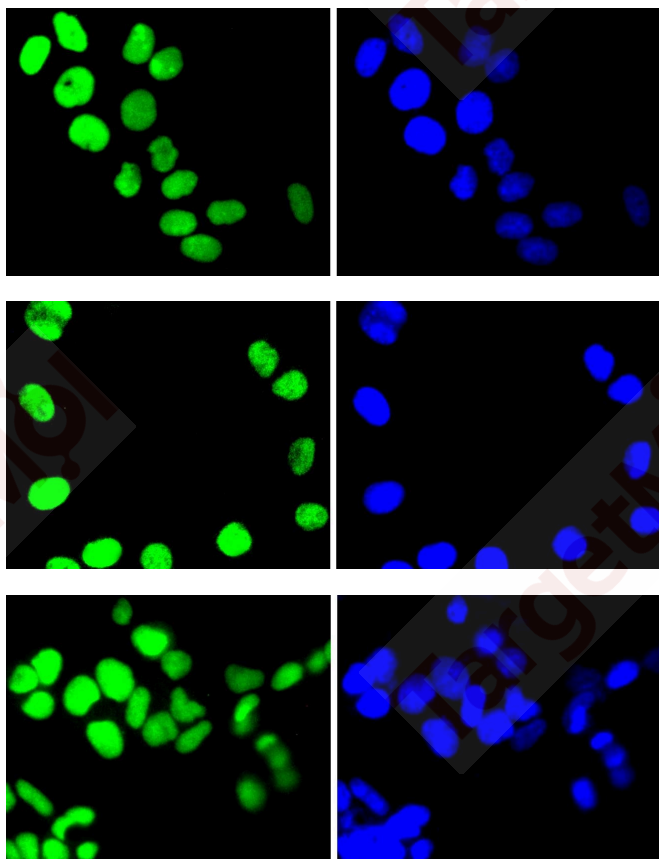
Ig Type:	IgG
Reactivity:	Human,Mouse
Conjugation:	Unconjugated
Molecular Weight:	Theoretical: 91 kDa.
Clone:	4H437
Purification:	ProA affinity purified

Applications

Verified Activity:

1. Western blot analysis of TOP1 on different lysates using anti-TOP1 antibody at 1/1,000 dilution. Positive control: Lane 1: HepG2, Lane 2: Jurkat, Lane 3: MCF-7.
2. Immunohistochemical analysis of paraffin-embedded mouse brain tissue using anti-TOP1 antibody. Counter stained with hematoxylin.
3. ICC staining TOP1 in Hela cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.
4. ICC staining TOP1 in SHG-44 cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.
5. ICC staining TOP1 in 293 cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.
6. Flow cytometric analysis of HepG2 cells with TOP1 antibody at 1/50 dilution (red) compared with an unlabelled control (cells without incubation with primary antibody; black). Alexa Fluor 488-conjugated goat anti rabbit IgG was used as the secondary antibody.





Application: FCM, ICC/IF, IHC, WB

Recommended WB: 1:1000-5000; IHC: 1:50-200; ICC/IF: 1:50-500; FCM: 1:50-100

Properties

Stability & Storage: Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles.

Shipping: Shipping with blue ice.

Antigen Details

Immunogen: Recombinant Protein

Uniprot ID: P11387

Research Background

DNA topoisomerases play essential roles in many DNA metabolic processes including DNA repair. Topoisomerases can introduce DNA damage upon exposure to drugs that stabilize the covalent protein-DNA intermediate of the topoisomerase reaction. Lesions in DNA are also able to trap topoisomerase-DNA intermediates. DNA topoisomerase I (Top1) catalyzes the relaxation of supercoiled DNA by a mechanism of transient DNA strand cleavage characterized by the formation of a phosphotyrosyl bond between the DNA end and active site tyrosine. The antitumor agent camptothecin (CPT) reversibly stabilizes the covalent enzyme-DNA intermediate by inhibiting

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DNA religation. When a replication fork collides with a DNA Top1 cleavage complex, the covalently bound enzyme must be removed from the DNA 3' end before recombination-dependent replication restart. The tyrosyl-DNA phosphodiesterase Tdp1 and the structure-specific endonuclease Rad1-Rad10 function as primary alternative pathways of Top1 repair in *Saccharomyces cerevisiae*. In the budding yeast *S. cerevisiae*, DNA topoisomerases I and II can functionally substitute for each other in removing positive and negative DNA supercoils.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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