Data Sheet (Cat.No.TMAH-01197)

Anti-TOP1 Antibody (9S687)

Product Details

Ig Type:	Rabbit IgG
Reactivity:	Human
Conjugation:	Unconjugated
Clone:	9S687
Purification:	Affinity-chromatography

Applications

Verified Activity:

1. Western Blot
-Positive WB detected in: Hela whole cell lysate, MCF-7 whole cell lysate, K562 whole cell lysate, HL60 whole cell lysate, PC-3 whole cell lysate
-All lanes: TOP1 antibody at 1:2000
-Secondary: Goat polyclonal to rabbit IgG at 1/50000 dilution
-Predicted band size: 91 kDa
-Observed band size: 91 kDa
2. IHC image of TMAH-01197 diluted at 1:100 and staining in paraffin-embedded human small intestine tissue performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.
3. IHC image of TMAH-01197 diluted at 1:100 and staining in paraffin-embedded human colon cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.
4. Overlay histogram showing HepG2 cells stained with TMAH-01197 (red line) at 1:50. The cells were fixed with 70% Ethylalcohol (18h) and then incubated in 10% normal goat serum to block non-specific protein-protein interactions followedby the antibody (1µg/1*10^6 cells) for 1 h at 4°C.The secondary antibody used was FITC-conjugated goat anti-rabbit IgG (H+L) at 1/200 dilution for 30min at 4°C. Control antibody (green line) was Rabbit IgG (1µg/1*10^6 cells) used under the same conditions. Acquisition of >10,000 events was performed.
5. Immunoprecipitating TOP1 in K562 whole cell lysate
-Lane 1: Rabbit control IgG instead of TMAH-01197 in K562 whole cell lysate.
For western blotting,a HRP-conjugated Protein G antibody was used as the secondary antibody (1/2000)
-Lane 2: TMAH-01197(2µg)+ K562 whole cell lysate(500µg)
-Lane 3: K562 whole cell lysate (10µg)

Application:	ELISA, WB, IHC, FCM, IP
Recommended	WB:1:500-1:5000; IHC:1:50-1:200; FCM:1:20-1:200; IP:1:200-1:1000.

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:	A synthetic peptide: Human TOP1
Antigen Species:	Human
Gene ID:	7150
Uniprot ID:	P11387
Biology Area:	Epigenetics and Nuclear Signaling, Cancer

Research 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 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. 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.

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