Datasheet for ABIN968562

anti-TOP2B antibody (AA 1281-1494)

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Overview

Quantity:	150 µg
Target:	TOP2B
Binding Specificity:	AA 1281-1494
Reactivity:	Human
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This TOP2B antibody is un-conjugated
Application:	Western Blotting (WB), Immunofluorescence (IF), BioImaging (BI)

Product Details

Immunogen:	Human Topo IIbeta aa. 1281-1494
Clone:	40-Topo IIbeta
Isotype:	IgG1
Characteristics:	1. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing. 2. Since applications vary, each investigator should titrate the reagent to obtain optimal results. 3. Source of all serum proteins is from USDA inspected abattoirs located in the United States. 4. Please refer to us for technical protocols.
Purification:	The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Target Details

Target:	TOP2B
Alternative Name:	Topo II beta (TOP2B Products)
Background:	Eukaryotic DNA topoisomerase II, a ubiquitous ATP-dependent type II topoisomerase, is an essential nuclear enzyme in DNA replication and transcription, chromatin segregation, and cell cycle progression. Topoisomerases transiently break a pair of complementary strands in double-stranded DNA to form a gate for the passage of duplex DNA. Two isoforms of DNA topoisomerase II have been identified: topo IIalpha and topo IIß. These exhibit a high degree of homology, except for some divergence in the C-terminal region. Both contain multiple bipartite nuclear localization sequences (NLS) that mediate their subnuclear localization. Topo IIalpha levels rise during late S phase and peak in G2-M, whereas topo IIß levels remain constant throughout the cell cycle. In addition, topo IIalpha is expressed in proliferating cells, while topo IIß is expressed in a wide range of tissues. Although the exact role of these two isoforms during cell proliferation is not known, the differences in cellular expression implicate different physiological roles. Both isoforms may also be important targets for anticancer agents that exert cytotoxicity in proliferating cells via stabilization of a topo II-DNA complex. This antibody is routinely tested by Western blot analysis and immunofluorescent imaging.
Molecular Weight:	180 kDa

Application Details

Application Notes:	Methanol Procedure for a 96 well plate: Remove media from wells. Add 100 µl/well fresh 3.7% Formaldehyde in PBS. Incubate for 10 minutes at room temperature (RT). Flick out and add 100 µl/well 90% methanol. Incubate for 5 minutes at RT. Flick out and wash twice with PBS. Flick out PBS and add 100 µl/well blocking buffer (3% FBS in PBS). Incubate for 30 minutes at RT. Flick out and add diluted antibody (diluted in blocking buffer). Incubate for 1 hour at RT. Wash three times with PBS. Flick out PBS and add second step reagent. Incubate for 1 hour at RT. Wash three times with PBS. Triton-X 100 Procedure for a 96 well plate: Remove media from wells. Add 100 µl/well fresh 3.7% Formaldehyde in PBS. Incubate for 10 minutes at room temperature (RT). Flick out and add 100 µl/well 0.1% Triton-X 100. Incubate for 5 minutes at RT. Flick out and wash twice with PBS. Flick out PBS and add 100 µl/well blocking buffer (3% FBS in PBS). Incubate for 30 minutes at RT. Flick out and add diluted antibody (diluted in blocking buffer). Incubate for 1 hour at RT. Flick out and wash three times with PBS. Flick out and add second step reagent. Incubate for 1 hour at RT. Flick out and wash three times with PBS.
Comment:	Related Products: ABIN968537, ABIN967389

Application Details

Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	250 µg/mL
Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09 % sodium azide.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C
Storage Comment:	Store undiluted at -20° C.

Publications

Product cited in:

Shain, Landowski, Dalton et al.: "Adhesion-mediated intracellular redistribution of c-Fas-associated death domain-like IL-1-converting enzyme-like inhibitory protein-long confers resistance to CD95-induced apoptosis in hematopoietic ..." in: **Journal of immunology (Baltimore, Md. : 1950)**, Vol. 168, Issue 5, pp. 2544-53, (2002) (PubMed).

Suzuki, Tomida, Tsuruo: "Dephosphorylated hypoxia-inducible factor 1alpha as a mediator of p53-dependent apoptosis during hypoxia." in: **Oncogene**, Vol. 20, Issue 41, pp. 5779-88, (2001) (PubMed).

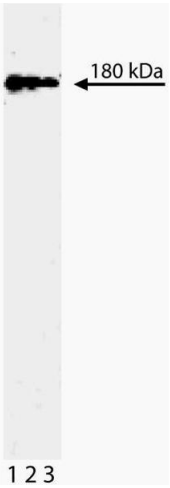
Brown, Holden, Rahn, Perkins: "Immunohistochemical staining for DNA topoisomerase IIa in Hodgkin's disease." in: **American journal of clinical pathology**, Vol. 109, Issue 1, pp. 39-44, (1998) (PubMed).

Herzog, Holmes, Tuschong, Ganapathi, Zwelling: "Absence of topoisomerase IIbeta in an amsacrine-resistant human leukemia cell line with mutant topoisomerase IIalpha." in: **Cancer research**, Vol. 58, Issue 23, pp. 5298-300, (1998) (PubMed).

Tsai-Pflugfelder, Liu, Liu, Tewey, Whang-Peng, Knutsen, Huebner, Croce, Wang: "Cloning and sequencing of cDNA encoding human DNA topoisomerase II and localization of the gene to chromosome region 17q21-22." in: **Proceedings of the National Academy of Sciences of the**

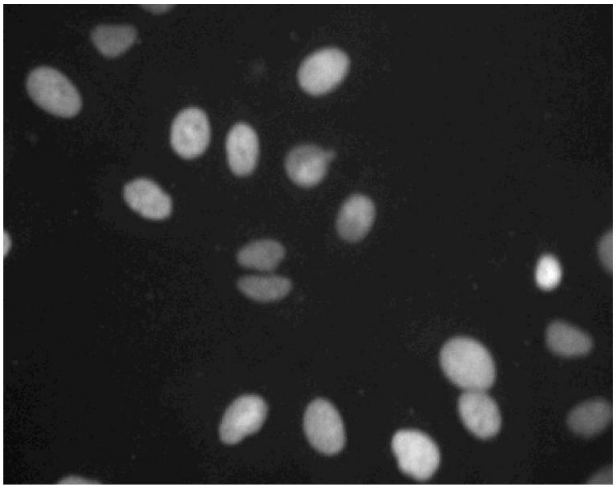
United States of America, Vol. 85, Issue 19, pp. 7177-81, (1988) (PubMed).

Images



Western Blotting

Image 1. Western blot analysis of Topo IIbeta on a Jurkat lysate. Lane 1: 1:1000, lane 2: 1:2000, lane 3: 1:4000 dilution of the Topo IIbeta antibody.



Immunofluorescence

Image 2. Immunofluorescent staining of A549 cells. Cells were seeded in a 96 well imaging plate at ~ 10 000 cells per well. After overnight incubation, cells were stained using the methanol fix/perm protocol and the anti-Topisomerase IIbeta antibody. The second step reagent was FITC goat anti mouse Ig. The image was taken on a Pathway 850 imager using a 20x objective. This antibody also stained HeLa and U2OS cells and can be used with either fix/perm protocol.

Image 3.