

DESCRIPTION

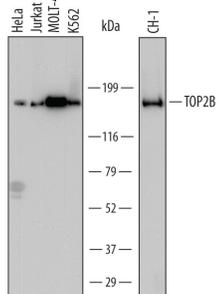
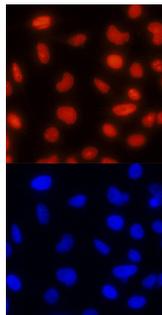
Species Reactivity	Human/Mouse
Specificity	Detects human TOP2B in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 75% cross-reactivity with recombinant mouse TOP2B and no cross-reactivity with recombinant human TOP2A is observed.
Source	Monoclonal Mouse IgG _{2B} Clone # 681417
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human TOP2B Phe1192-Asp1621 Accession # Q02880
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Immunocytochemistry	8-25 µg/mL	See Below

DATA

<p>Western Blot</p>  <p>Detection of Human and Mouse TOP2B by Western Blot. Western blot shows lysates of HeLa human cervical epithelial carcinoma cell line, Jurkat human acute T cell leukemia cell line, MOLT-4 human acute lymphoblastic leukemia cell line, K562 human chronic myelogenous leukemia cell line, and CH-1 mouse B cell lymphoma cell line. PVDF Membrane was probed with 1 µg/mL of Mouse Anti-Human/Mouse TOP2B Monoclonal Antibody (Catalog # MAB6348) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for TOP2B at approximately 185 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.</p>	<p>Immunocytochemistry</p>  <p>TOP2B in HeLa Human Cell Line. TOP2B was detected in immersion fixed HeLa human cervical epithelial carcinoma cell line using Mouse Anti-Human/Mouse TOP2B Monoclonal Antibody (Catalog # MAB6348) at 25 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red, upper panel; Catalog # NL007) and counterstained with DAPI (blue, lower panel). Specific staining was localized to nuclei. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.</p>
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PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

TOP2B (DNA Topoisomerase II beta) is a 180-185 kDa member of the type IIA subfamily, topoisomerase family of molecules. It is ubiquitously expressed, and represents the larger of two known topoisomerases (the 2A/a-form being 170 kDa in size). TOP2A is essential for cell division, while TOP2B is active postmitotically. In an ATP-dependent manner, homodimeric TOP2B relieves torsional stress created in DNA during transcription or as a consequence of replication. TOP2B first induces cleavage of double-stranded DNA, creating a space that allows for the physical repositioning of chromatin and a reduction in tension. This is followed by closure and ligation of the cleaved ends to recreate the original DNA structure. Human TOP2B is 1626 amino acids (aa) in length. It contains an ATPase domain (aa 101-201), an NES (aa 1034-1044), more than 30 Ser/Thr phosphorylation sites and a C-terminal DTHCT region (aa 1508-1611). There is one splice variant that shows a deletion of aa 24-28. Over aa 1187-1621, human TOP2B shares 91% aa identity with mouse TOP2B.