

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human TOP2A in direct ELISAs and Western blots. In direct ELISAs, no cross-reactivity with recombinant TOP2B from human or mouse is observed.
<b>Source</b>	Monoclonal Mouse IgG <sub>2A</sub> Clone # 680130
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	<i>E.coli</i> -derived recombinant human TOP2A Phe1174-Phe1531 Accession # P11388
<b>Formulation</b>	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.

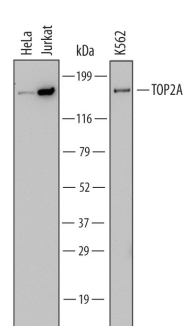
## APPLICATIONS

**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
<b>Western Blot</b>	0.5 µg/mL	See Below
<b>Immunocytochemistry</b>	5-15 µg/mL	See Below

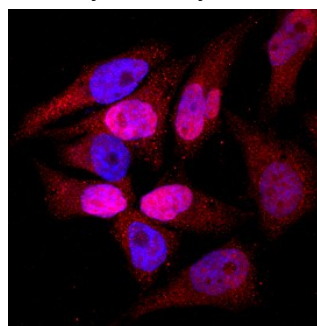
## DATA

### Western Blot



**Detection of Human TOP2A by Western Blot.** Western blot shows lysates of HeLa human cervical epithelial carcinoma cell line, Jurkat human acute T cell leukemia cell line, and K562 human chronic myelogenous leukemia cell line. PVDF Membrane was probed with 0.5 µg/mL of Mouse Anti-Human TOP2A Monoclonal Antibody (Catalog # MAB6540) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for TOP2A at approximately 170 kDa (as indicated). This experiment was conducted under reducing conditions and using *Immunoblot Buffer Group 1*.

### Immunocytochemistry



**TOP2A in HeLa Human Cell Line.** TOP2A was detected in immersion fixed HeLa human cervical epithelial carcinoma cell line using Mouse Anti-Human TOP2A Monoclonal Antibody (Catalog # MAB6540) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm and nuclei. View our protocol for *Fluorescent ICC Staining of Cells on Coverslips*.

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Sterile PBS to a final concentration of 0.5 mg/mL.
<b>Shipping</b>	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
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

DNA topoisomerase 2-alpha (TOP2A; also DNA topoisomerase II, alpha isozyme) is a 170 kDa member of the type II topoisomerase family. Human TOP2A is 1531 amino acids (aa) in length, and splicing variants produce three additional isoforms which have substitutions following Lys321, Gln355, or Ala401. TOP2A contains a histidine kinase-like ATPases domain (aa 80-193), a TopoIIA Trans ScTopoIIA domain (aa 265-417), a TOPRIM TopoIIA: topoisomerase-primase domain (aa 455-575), a DNA Topoisomerase IV domain (aa 697-1169), and a NES (aa 1018-1028). There are multiple potential Ser/Thr phosphorylation sites. Human TOP2A shares 89% aa sequence identity with mouse TOP2A.