

Purified anti-TOP2A Antibody

Catalog# / Size	623701 / 25 µg 623702 / 100 µg
Clone	W18080B
Regulatory Status	RUO
Other Names	DNA Topoisomerase II α, TOP2, DNA Gyrase
Isotype	Rat IgG2a, κ
Description	DNA Topoisomerase-II α, or TOP2A, alters the topological states of DNA during various cellular processes, including transcription, meiosis, mitosis, and chromatin segregation. The enzyme functions by breaking and religating two strands of DNA, allowing each strand to pass through one another. Multiple classes of anti-cancer drugs initiate cell death by increasing the frequency of potentially deleterious TOP2A-mediated DNA breaks.

Product Details

Verified Reactivity	Human, Mouse
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	Partial recombinant protein corresponding to amino acids 1232-1531 of TOP2A
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C.
Application	WB - Quality tested ICC - Verified
Recommended Usage	Each lot of this antibody is quality control tested by Western blotting . For Western blotting, the suggested use of this reagent is 0.1 - 1.0 µg per ml. For immunocytochemistry, a concentration range of 1.0 - 5.0 µg/ml is recommended. It is recommended that the reagent be titrated for optimal performance for each application.
Application Notes	W18080B failed IP testing. When used for ICC, W18080B may produce light cytosolic staining. It is unclear if this represents background or TOP2A localized to the cytosol (Ramamoorthy M, <i>et al.</i> 2012. <i>Nucleic Acids Res.</i> 40:1621). W18080B was ICC-tested on PFA-fixed HeLa cells permeabilized with Triton X-100 or methanol. The clone was compatible with both permeabilization methods.
RRID	AB_2814484 (BioLegend Cat. No. 623701) AB_2814485 (BioLegend Cat. No. 623702)

Antigen Details

Structure	TOP2A is a 1,531 amino acid protein with a predicted molecular weight of 174 kD
Distribution	Nucleus/ubiquitously expressed
Function	Regulate DNA topology

Biology Area Cell Biology, Cell Cycle/DNA Replication, Chromatin Remodeling/Epigenetics, DNA Repair/Replication

Molecular Family Enzymes and Regulators

Antigen References

1. Champoux JJ. 1977. *Proc. Natl. Acad. Sci. USA.* 74:5328.
2. Brown PO and Cozzarelli NR. 1979. *Science.* 206:1081.

Gene ID [7153](#)

Related Protocols

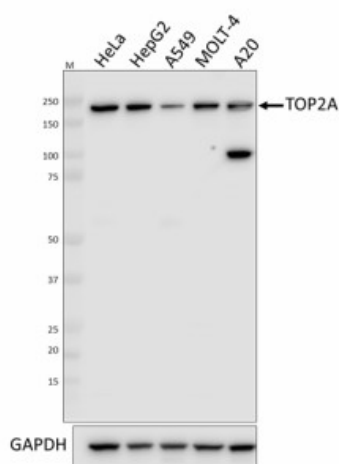
[Immunocytochemistry Staining Protocol](#)

[Western Blotting Protocol](#)

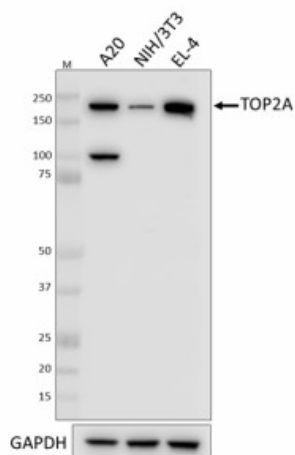
Other Formats

Purified anti-TOP2A

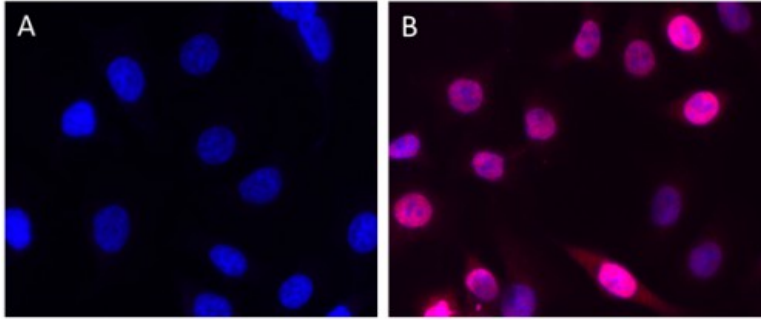
Product Data



Whole cell extracts (15 µg protein) from the indicated cell lines were resolved by 4-12% Bis-Tris gel electrophoresis, transferred to a PVDF membrane, and probed with 1.0 µg/mL (1:500 dilution) of Purified anti-TOP2A Antibody, clone W18080B, overnight at 4°C. Proteins were visualized by chemiluminescence detection using HRP goat anti-rat IgG Antibody (Cat. No. 405405) at a 1:3000 dilution. Direct-Blot™ HRP anti-GAPDH Antibody (Cat. No. 607904) was used as a loading control at a 1:25000 dilution (lower). Lane M: Molecular Weight marker.



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HeLa cells were fixed with 4% paraformaldehyde for 10 minutes, permeabilized with ice-cold methanol for 10 minutes, and blocked with 5% FBS for 60 minutes. Cells were then intracellularly stained with a 1:100 dilution (5.0 $\mu\text{g}/\text{mL}$) of either Purified Rat IgG2a, κ isotype control antibody (Cat. No. 400602, panel A) or Purified anti-TOP2A Antibody (panel B) overnight at 4°C, followed by incubation with Alexa Fluor® 594 goat anti-rat IgG (Cat. No. 405422) at 2.0 $\mu\text{g}/\text{mL}$. Nuclei were counter-stained with DAPI, and the image was captured with a 60X objective.

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