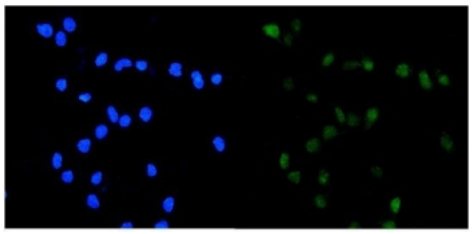
TOP2A Antibody for IF / Topoisomerase II Alpha Immunofluorescence Antibody (RQ5605)

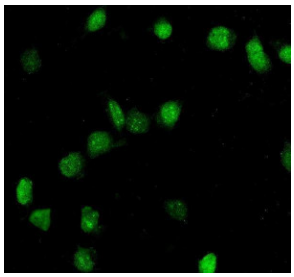
Catalog No.	Formulation	Size
RQ5605	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

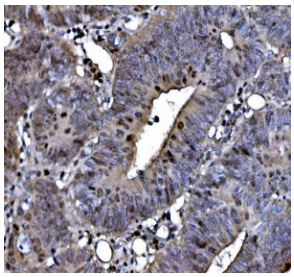
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	P11388
Localization	Nuclear
Applications	Western blot: 0.25-0.5ug/ml Immunohistochemistry (FFPE): 1-2ug/ml Flow cytometry: 1-3ug/million cells Immunofluorescence: 2-4ug/ml
Limitations	This TOP2A antibody is available for research use only.



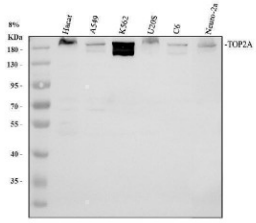
TOP2A Antibody U-2 OS Cell IF. Immunofluorescent staining of FFPE human U-2 OS cells using TOP2A Antibody for IF / Topoisomerase II Alpha Immunofluorescence Antibody. Heat-induced epitope retrieval was performed using pH6 citrate buffer prior to staining. TOP2A immunoreactivity (green) is predominantly localized to the nuclei, while DAPI (blue) counterstains cell nuclei. The staining pattern is consistent with the expected nuclear localization of Topoisomerase II alpha in proliferating cells. This TOP2A Antibody for IF is suitable for studies of nuclear protein localization, DNA replication, chromosome segregation, and cell cycle regulation.



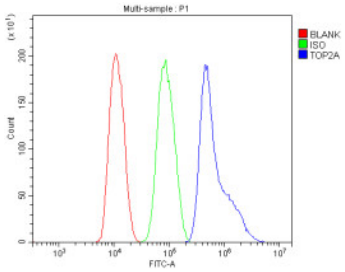
TOP2A Antibody U-2 OS Nuclear IF. Immunofluorescent staining of fixed and permeabilized human U-2 OS cells using TOP2A Antibody for IF / Topoisomerase II Alpha Immunofluorescence Antibody at 5 ug/ml. Cells underwent enzyme-mediated antigen retrieval for 15 minutes, followed by detection with a Fluoro488-conjugated goat anti-rabbit IgG secondary antibody (green). TOP2A staining is predominantly localized to the nuclei, consistent with the expected distribution of this DNA topoisomerase in proliferating cells. This TOP2A Antibody for IF is suitable for studies of nuclear protein localization, DNA replication, chromosome segregation, and cell cycle regulation.



TOP2A Antibody Human Rectal Cancer IHC. Immunohistochemical staining of FFPE human rectal cancer tissue using TOP2A Antibody / Topoisomerase II Alpha Antibody at 2 ug/ml. Heat-induced epitope retrieval was performed using pH 8.0 EDTA buffer, followed by HRP-conjugated secondary antibody detection and DAB chromogen. Predominantly nuclear staining is observed in the tumor cells, consistent with the expected localization of TOP2A in actively proliferating cells. This TOP2A Antibody, also called Topoisomerase II Alpha Antibody, is suitable for studies of cell proliferation, DNA replication, chromosome segregation, and cancer biology.



TOP2A Antibody Human, Rat and Mouse WB. Western blot analysis of human HaCaT (lane 1), A549 (lane 2), K562 (lane 3), and U-2 OS (lane 4) whole cell lysates, along with rat C6 (lane 5) and mouse Neuro-2a (lane 6) whole cell lysates using TOP2A Antibody / Topoisomerase II Alpha Antibody at 0.5 ug/ml. A specific band was detected at approximately 174 kDa in all samples, consistent with the expected molecular weight of TOP2A. This TOP2A Antibody, also called Topoisomerase II Alpha Antibody, is suitable for studies of DNA replication, chromosome segregation, cell proliferation, and cancer biology.



TOP2A Antibody HepG2 Cell FACS. Flow cytometric analysis of fixed and permeabilized human HepG2 cells using TOP2A Antibody / Topoisomerase II Alpha Antibody at 1 ug/10^6 cells. The blue histogram represents TOP2A staining, the green histogram shows the rabbit IgG isotype control, and the red histogram represents the unstained control. A clear rightward shift of the TOP2A-stained population demonstrates specific intracellular detection of TOP2A. This TOP2A Antibody, also called Topoisomerase II Alpha Antibody, is suitable for studies of cell proliferation, DNA replication, chromosome segregation, and cancer biology.

Description

DNA topoisomerase II alpha (TOP2A) is a nuclear enzyme that regulates DNA topology during replication, transcription, and chromosome segregation. As a member of the type II DNA topoisomerase family, the enzyme introduces transient double strand breaks that relieve torsional stress generated during DNA replication and chromatin condensation. TOP2A expression increases during S phase and mitosis, making the protein a widely studied nuclear proliferation marker in rapidly dividing cells. The enzyme localizes predominantly within the nucleus where it associates with replicating chromatin and mitotic chromosomes.

TOP2A Antibody for IF enables fluorescence microscopy based visualization of Topoisomerase II alpha protein within individual cells. Immunofluorescence staining allows researchers to directly observe nuclear localization of TOP2A at high spatial resolution, providing a powerful tool for examining cell cycle related changes in nuclear protein distribution. In immunofluorescence imaging experiments, TOP2A antibody staining typically produces strong nuclear fluorescence corresponding to regions of active DNA replication and chromosome condensation.

Immunofluorescence microscopy offers several advantages for studying TOP2A protein compared with bulk biochemical assays. Fluorescent antibody staining preserves cellular morphology, allowing investigators to visualize nuclear TOP2A

distribution while simultaneously examining cell structure and chromatin organization. Because the signal is detected at the single cell level, TOP2A Antibody for IF is particularly valuable for studies investigating proliferating cell populations, mitotic progression, and nuclear protein dynamics.

TOP2A immunofluorescence staining is frequently combined with fluorescent cytoskeletal markers or nuclear dyes to provide contextual cellular information. For example, co-staining with phalloidin can reveal actin filament organization while nuclear counterstaining with DAPI highlights DNA. These multiplex immunofluorescence approaches allow TOP2A localization to be examined relative to nuclear architecture and cytoskeletal organization within the same cells. Such imaging strategies are widely used in cell biology research where precise spatial localization of nuclear enzymes is required.

In proliferating cell cultures, immunofluorescence staining of TOP2A commonly highlights nuclei of cells undergoing DNA synthesis or mitosis. Because the enzyme is associated with replicating chromatin and mitotic chromosome condensation, fluorescence intensity often correlates with cell cycle activity. This characteristic nuclear staining pattern makes the Topoisomerase II alpha Immunofluorescence Antibody useful for microscopy based analysis of cell proliferation and chromosome related processes.

Rabbit polyclonal TOP2A Antibody for IF provides sensitive detection of nuclear Topoisomerase II alpha protein in fluorescence imaging workflows. The antibody enables clear visualization of nuclear fluorescence signals corresponding to TOP2A enriched chromatin regions within proliferating cells. This capability supports immunofluorescence-based studies examining DNA replication mechanisms, chromatin organization, and nuclear enzyme localization in cultured cells and cell derived samples.

Learn more about TOP2A biology, its role as a chromosome segregation enzyme, and our microarray-validated TOP2A Antibody by visiting our TOP2A Antibody / Chromosome Segregation Enzyme Antibody page.

Application Notes

Optimal dilution of the TOP2A Antibody for IF / Topoisomerase II Alpha Immunofluorescence Antibody should be determined by the researcher.

Immunogen

Amino acids EDYLYGQTTTYLTYND were used as the immunogen for the TOP2A Antibody for IF / Topoisomerase II Alpha Immunofluorescence Antibody.

Storage

After reconstitution, the TOP2A antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

Topoisomerase II alpha antibody, DNA Topoisomerase II alpha antibody, Topoisomerase IIa antibody, DNA topoisomerase II antibody, TOP2A nuclear protein antibody

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