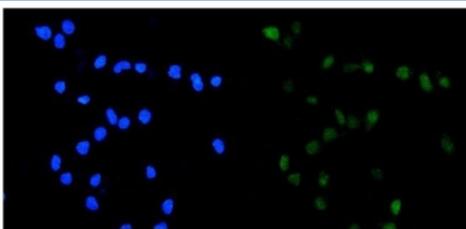


## TOP2A Antibody for IF / Topoisomerase II Alpha Immunofluorescence Antibody (RQ5605)

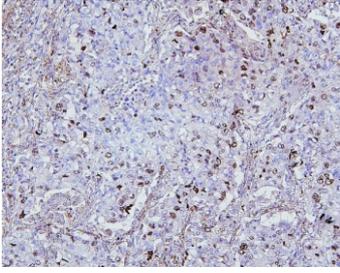
Catalog No.	Formulation	Size
RQ5605	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

[Bulk quote request](#)

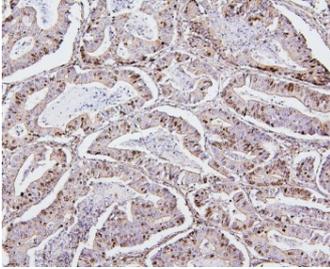
<b>Availability</b>	1-3 business days
<b>Species Reactivity</b>	Human
<b>Format</b>	Antigen affinity purified
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal (rabbit origin)
<b>Isotype</b>	Rabbit IgG
<b>Purity</b>	Affinity purified
<b>Buffer</b>	Lyophilized from 1X PBS with 2% Trehalose and 0.025% sodium azide
<b>UniProt</b>	P11388
<b>Localization</b>	Nuclear
<b>Applications</b>	Western Blot : 0.25-0.5ug/ml Immunohistochemistry (FFPE) : 1-2ug/ml Flow Cytometry : 1-3ug/million cells Immunofluorescence : 2-4ug/ml
<b>Limitations</b>	This TOP2A antibody is available for research use only.



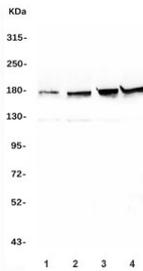
TOP2A Antibody for IF / Topoisomerase II Alpha Immunofluorescence Antibody. Immunofluorescence analysis of FFPE human U-2 OS cells using a TOP2A antibody reveals distinct nuclear fluorescence consistent with the known localization of Topoisomerase II alpha in proliferating cells. Cells were stained with TOP2A antibody (green) to visualize nuclear distribution of the DNA topoisomerase II alpha protein, while DAPI (blue) highlights cell nuclei. Antigen retrieval was performed by steaming sections in pH6 citrate buffer prior to staining to enable optimal immunofluorescence detection in FFPE cells. The merged immunofluorescence pattern demonstrates nuclear enrichment of TOP2A signal within U-2 OS cells, consistent with the role of this enzyme in DNA replication and chromosome segregation. This IF staining pattern supports the use of the TOP2A Antibody for IF in immunofluorescence microscopy studies examining nuclear protein localization, proliferating cell populations, and cell cycle associated chromatin dynamics.



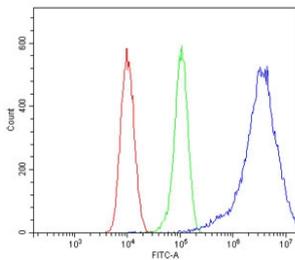
IHC staining of FFPE human lung cancer with TOP2A antibody. HIER: boil tissue sections in pH6, 10mM citrate buffer, for 20 min and allow to cool before testing.



IHC staining of FFPE human rectal cancer with TOP2A antibody. HIER: boil tissue sections in pH6, 10mM citrate buffer, for 20 min and allow to cool before testing.



Western blot testing of human 1) A549, 2) U-2 OS, 3) HEK293 and 4) K562 cell lysate with TOP2A antibody. Expected molecular weight ~174 kDa.



Flow cytometry testing of human 293T cells with TOP2A antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= TOP2A antibody.

## 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.

## Application Notes

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

## Immunogen

Amino acids EDYLYGQTTTTYLYND 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