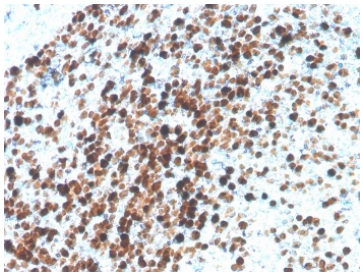
TOP2A Antibody / Topoisomerase II Alpha Antibody [clone TOP2A/4397R] (V8444)

Catalog No.	Formulation	Size
V8444-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V8444-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V8444SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

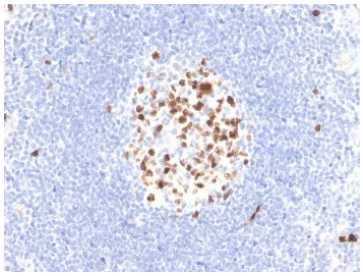
Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	TOP2A/4397R
Purity	Protein A affinity chromatography
UniProt	P11388
Localization	Nuclear
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 minutes at RT
Limitations	This recombinant TOP2A antibody is available for research use only.



TOP2A Antibody / Topoisomerase II Alpha Antibody (clone TOP2A/4397R). Immunohistochemistry analysis of FFPE human tonsil tissue demonstrates strong nuclear staining consistent with expression of the Topoisomerase II alpha protein in proliferating lymphoid cells. Staining is predominantly localized to nuclei within germinal center lymphocytes, reflecting the role of Topoisomerase II alpha as a DNA replication enzyme highly expressed in actively dividing cells. The Topoisomerase II Alpha Antibody highlights proliferative lymphoid populations within tonsillar tissue, producing a distinct nuclear immunoreactivity pattern typical of cell cycle associated proteins. Antigen retrieval was performed by boiling tissue sections in pH 9 Tris-EDTA buffer prior to immunohistochemistry staining.



TOP2A Antibody / Topoisomerase II Alpha Antibody (clone TOP2A/4397R). Immunohistochemistry analysis of FFPE human lymph node tissue demonstrates nuclear staining consistent with expression of the Topoisomerase II alpha protein in proliferating lymphoid cells. Nuclear immunoreactivity is concentrated within germinal center lymphocytes, reflecting the known association of Topoisomerase II alpha with actively dividing cells undergoing DNA replication and mitosis. The Topoisomerase II Alpha Antibody highlights proliferative lymphoid populations within the germinal center while surrounding resting lymphocytes show minimal staining. Antigen retrieval was performed by boiling tissue sections in pH 9 Tris-EDTA buffer prior to immunohistochemistry staining.

Description

DNA topoisomerase II alpha (TOP2A) is a nuclear enzyme that regulates DNA topology during replication, transcription, and chromosome segregation. The protein belongs to the type II DNA topoisomerase family and introduces transient double strand DNA breaks that relieve torsional stress generated during DNA replication and chromatin condensation. Because the enzyme is highly expressed in dividing cells, it is widely studied in research focused on cell cycle progression, chromosome dynamics, and tumor proliferation.

TOP2A antibody, also known as Topoisomerase II alpha antibody or DNA Topoisomerase II alpha antibody, recognizes the nuclear enzyme responsible for controlling DNA supercoiling during chromosome duplication. The term Topoisomerase II Alpha Antibody is frequently used in scientific literature when referring to antibodies targeting the full protein name rather than the gene symbol TOP2A. This naming convention is common in biochemical and molecular biology studies examining DNA replication enzymes and chromosomal topology regulators.

TOP2A Antibody / Topoisomerase II Alpha Antibody (clone TOP2A/4397R) is a recombinant rabbit monoclonal antibody designed to detect the Topoisomerase II alpha protein. Recombinant monoclonal antibodies provide consistent binding performance and reproducible detection of the target protein across experiments. As a Topoisomerase II alpha antibody, clone TOP2A/4397R enables researchers to examine expression of this DNA replication enzyme in proliferating cells and experimental model systems.

The Topoisomerase II Alpha Antibody is particularly useful for studies investigating chromosome condensation and segregation during mitosis. Topoisomerase II alpha plays a central role in resolving DNA entanglements that occur during chromosome replication and separation. Because of this function, antibodies recognizing Topoisomerase II alpha are widely used in research examining chromosomal architecture, DNA replication processes, and mitotic progression.

Topoisomerase II alpha expression increases during the S phase and G2/M phases of the cell cycle, reflecting the enzyme's role in DNA replication and chromosome segregation. As a result, the Topoisomerase II Alpha Antibody is frequently applied in studies evaluating proliferating cell populations and tumor biology. Increased expression of the enzyme has been reported in numerous cancers including breast carcinoma, colorectal carcinoma, and other rapidly dividing malignancies.

Antibodies directed against Topoisomerase II alpha therefore provide valuable tools for investigating nuclear enzymes that regulate DNA topology and chromosomal organization. The Topoisomerase II Alpha Antibody clone TOP2A/4397R enables researchers to examine expression of this essential DNA replication enzyme while studying cell cycle regulation, chromosome segregation, and proliferation related cellular processes.

Application Notes

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

Immunogen

A portion of amino acids 1431-1531 from the human protein was used as the immunogen for the TOP2A Antibody / Topoisomerase II Alpha Antibody antibody.

Storage

Store the recombinant TOP2A antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

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