

Anti-Topoisomerase II Alpha Antibody
Catalog # ABO10582**Specification****Anti-Topoisomerase II Alpha Antibody - Product Information**

Application	WB
Primary Accession	P11388
Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Format	Lyophilized

Description

Rabbit IgG polyclonal antibody for DNA topoisomerase 2-alpha(TOP2A) detection. Tested with WB in Human.

Reconstitution

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-Topoisomerase II Alpha Antibody - Additional Information

Gene ID 7153

Other Names

DNA topoisomerase 2-alpha, 5.99.1.3, DNA topoisomerase II, alpha isozyme, TOP2A, TOP2

Calculated MW

174385 MW KDa

Application Details

Western blot, 0.1-0.5 µg/ml, Human

Subcellular Localization

Cytoplasm . Nucleus, nucleoplasm . Generally located in the nucleoplasm.

Protein Name

DNA topoisomerase 2-alpha

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg Thimerosal, 0.05mg NaN₃.

Immunogen

A synthetic peptide corresponding to a sequence at the C-terminus of human Topoisomerase II alpha(1466-1480aa RKPSTSDSDSNFEK), different from the related rat sequence by three amino acids, and different from the related mouse sequence by four amino acids

Purification

Immunogen affinity purified.

Cross Reactivity

No cross reactivity with other proteins

Storage

At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.

Sequence Similarities

Belongs to the type II topoisomerase family.

Anti-Topoisomerase II Alpha Antibody - Protein Information

Name TOP2A

Synonyms TOP2

Function

Key decatenating enzyme that alters DNA topology by binding to two double-stranded DNA molecules, generating a double-stranded break in one of the strands, passing the intact strand through the broken strand, and religating the broken strand (PubMed:17567603, PubMed:18790802, PubMed:22013166, PubMed:22323612). May play a role in regulating the period length of BMAL1 transcriptional oscillation (By similarity).

Cellular Location

Cytoplasm. Nucleus, nucleoplasm. Nucleus. Nucleus, nucleolus

Tissue Location

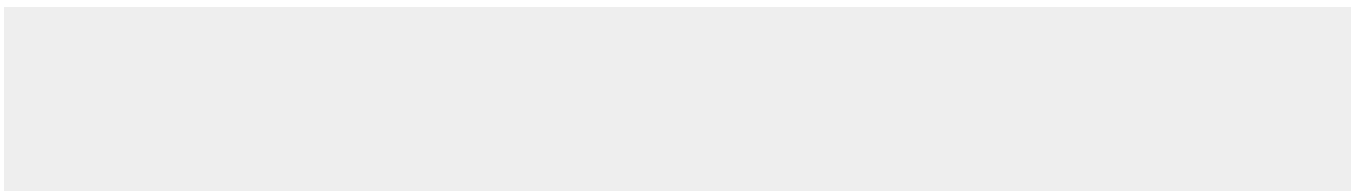
Expressed in the tonsil, spleen, lymph node, thymus, skin, pancreas, testis, colon, kidney, liver, brain and lung (PubMed:9155056). Also found in high-grade lymphomas, squamous cell lung tumors and seminomas (PubMed:9155056)

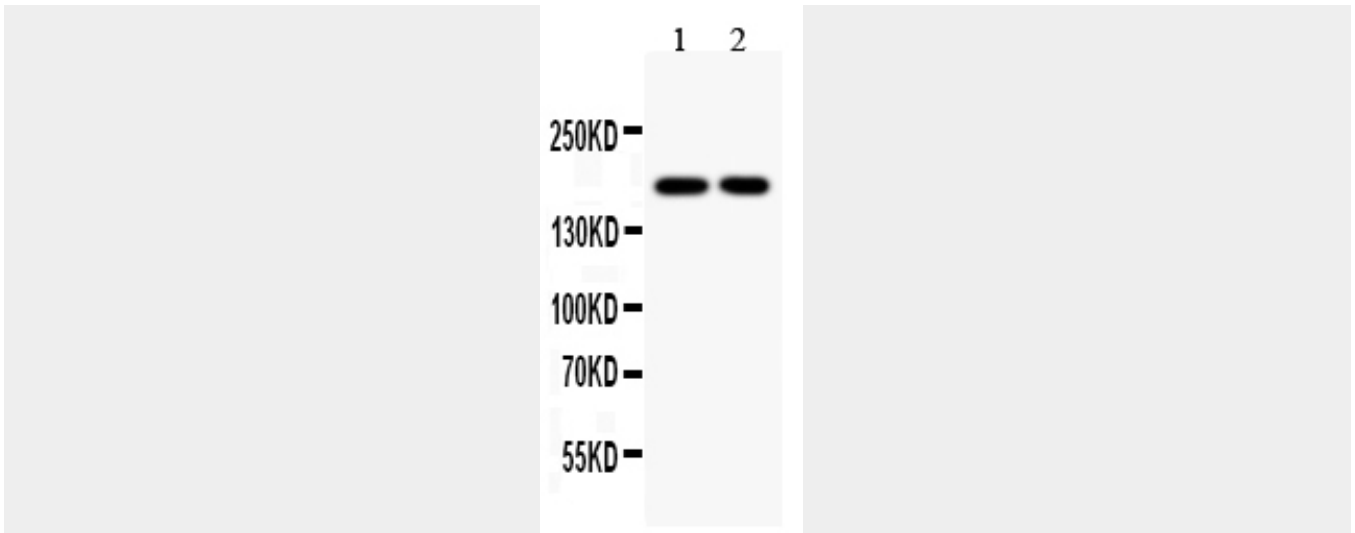
Anti-Topoisomerase II Alpha Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Anti-Topoisomerase II Alpha Antibody - Images





Anti-Topoisomerase II alpha antibody, ABO10582, Western blotting All lanes: Anti Topoisomerase II alpha (ABO10582) at 0.5ug/ml Lane 1: HELA Whole Cell Lysate at 40ug Lane 2: JURKAT Whole Cell Lysate at 40ug Predicted bind size: 174KD Observed bind size: 174KD

Anti-Topoisomerase II Alpha Antibody - Background

The human topoisomerase II enzyme is encoded by a single-copy gene which is mapped to 17q21-q22. The TOP2A gene spans approximately 30 kb and contains 35 exons. Furthermore, DNA topoisomerases are enzymes that control and alter the topologic states of DNA in both prokaryotes and eukaryotes. Topoisomerase II from eukaryotic cells catalyzes the relaxation of supercoiled DNA molecules, catenation, decatenation, knotting, and unknotting of circular DNA. It appears likely that the reaction catalyzed by topoisomerase II involves the crossing-over of 2 DNA segments. There are about 100,000 molecules of topoisomerase II per HeLa cell nucleus, constituting about 0.1% of the nuclear extract. DNA topoisomerase II-alpha is associated with the pol II holoenzyme and is a required component of chromatin-dependent coactivation. Specific inhibitors of topoisomerase II blocked transcription on chromatin templates, but did not affect transcription on naked templates. Addition of purified topoisomerase II-alpha reconstituted chromatin-dependent activation activity in reactions with core pol II.