

## Rabbit Anti-TOP2A antibody

SL1203R

**Product Name** TOP2A

**Chinese Name** DNA 拓普西异构酶II抗体

**Alias** DNA topoisomeraseIIalpha; TOPO II; DNA topoisomerase 2-alpha; DNA topoisomerase II, alpha isozyme; TOP2; TP2A; DNA topoisomerase II 170 kD; DNA topoisomerase II alpha isozyme; DNA Topoisomerase2; TOP 2A; TopII alpha; Topo II alpha; Topoisomerase DNA II alpha 170kDa; Topoisomerase II alpha 170 kDa; TOP2A\_HUMAN; Topo II $\alpha$ ; Topo-II $\alpha$ ; Topoisomerase II- $\alpha$ . Topoisomerase II- $\alpha$ ;

**Research Area** Tumour transcriptional regulatory factor Kinases and Phosphatases

**Immunogen Species** Rabbit

**Clonality** Polyclonal

**React Species** Rat, (predicted: Human, Mouse, )  
IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500 (Paraffin sections need antigen repair)

**Applications** not yet tested in other applications.  
optimal dilutions/concentrations should be determined by the end user.

**Theoretical molecular weight** 174kDa

**Cellular localization** The nucleus cytoplasmic

**Form** Liquid

**Concentration** 1mg/ml

**immunogen** KLH conjugated synthetic peptide derived from human TOPO II alpha: 121-230/1531

**Lsotype** IgG

**Purification** affinity purified by Protein A

**Buffer Solution** 1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.

**Storage** Shipped at 4°C. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.

**Attention** This product as supplied is intended for research use only, not for use in human,

therapeutic or diagnostic applications.

**PubMed**

[PubMed](#)

This gene encodes a DNA topoisomerase, an enzyme that controls and alters the topologic states of DNA during transcription. This nuclear enzyme is involved in processes such as chromosome condensation, chromatid separation, and the relief of torsional stress that occurs during DNA transcription and replication. It catalyzes the transient breaking and rejoining of two strands of duplex DNA which allows the strands to pass through one another, thus altering the topology of DNA. Two forms of this enzyme exist as likely products of a gene duplication event. The gene encoding this form, alpha, is localized to chromosome 17 and the beta gene is localized to chromosome 3. The gene encoding this enzyme functions as the target for several anticancer agents and a variety of mutations in this gene have been associated with the development of drug resistance. Reduced activity of this enzyme may also play a role in ataxia-telangiectasia. [provided by RefSeq].

**Function:**

Control of topological states of DNA by transient breakage and subsequent rejoining of DNA strands. Topoisomerase II makes double-strand breaks. Essential during mitosis and meiosis for proper segregation of daughter chromosomes.

**Subunit:**

Homodimer. Interacts with COPS5.

**Product  
Detail**

**Subcellular Location:**

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

**Post-translational modifications:**

Phosphorylation has no effect on catalytic activity. However, phosphorylation at Ser-1106 by CSNK1D/CK1 promotes DNA cleavable complex formation.

**Similarity:**

Belongs to the type II topoisomerase family.  
Contains 1 Toprim domain.

**SWISS:**

P11388

**Gene ID:**

7153

**Database links:**

[Entrez Gene: 7153](#) Human

[Entrez Gene: 21973](#) Mouse

[Entrez Gene: 360243](#) Rat

[Omim: 126430](#) Human

[SwissProt: P11388](#) Human

[SwissProt: Q01320](#) Mouse

[SwissProt: P41516](#) Rat

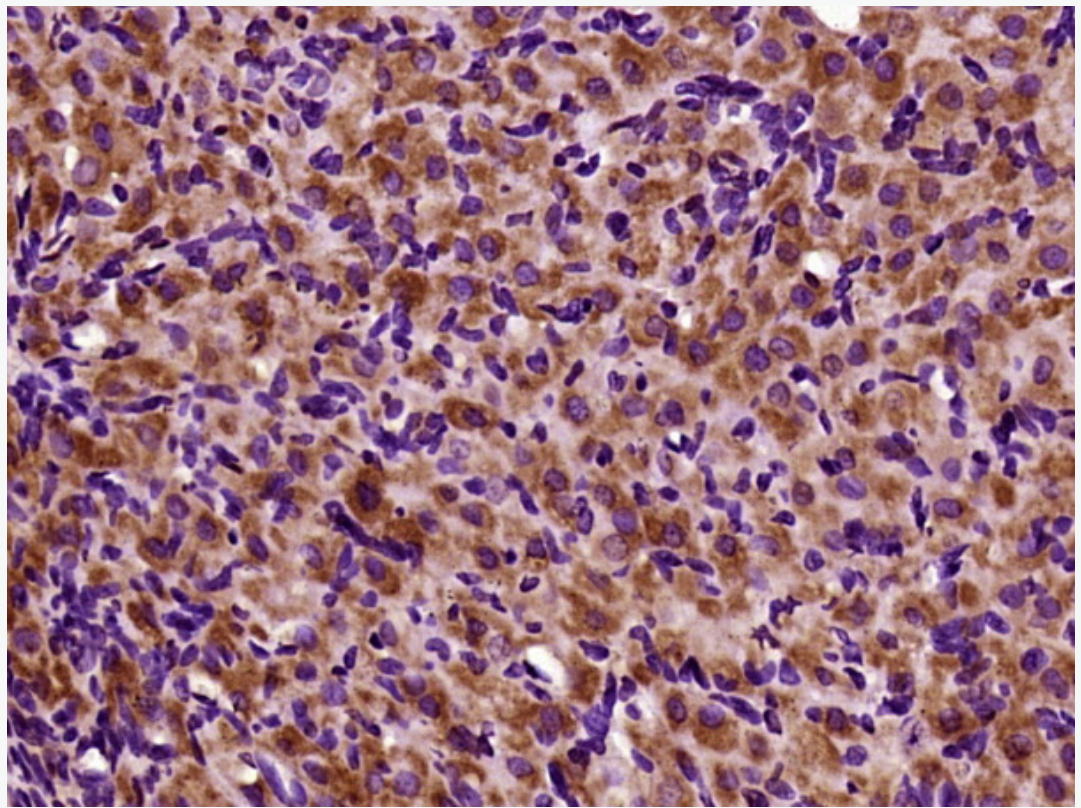
[Unigene: 156346](#) Human

[Unigene: 4237](#) Mouse

[Unigene: 90996](#) Rat

拓扑异构酶 II 是一种能催化 DNA 拓扑异构体相互变换, 调节 DNA 三维结构的核酶。与染色质或染色体的组装与分组装、基因组复制、DNA 重组、基因转录及 DNA 损伤后修复等有密切的关系。许多人的恶性 Tumour 都有拓扑异构酶 II 的过表达, 因此, 拓扑异构酶 II 是许多化疗药的靶标。大部分以拓扑异构酶 II 为重要靶标抗 Tumour 的化疗药物是通过稳定的 DNA 与拓扑异构酶 II 的复合物激发凋亡的。

**Product  
Picture**



Paraformaldehyde-fixed, paraffin embedded (Rat ovary); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (TOP2A) Polyclonal Antibody, Unconjugated (SL1203R) at 1:400 overnight at 4°C, followed by a conjugated secondary antibody (sp-0023) for 20 minutes and DAB staining.