Rabbit TOP2A Polyclonal Antibody | anti-TOP2A antibody

Phospho-TOP2A (Ser1337) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA329955	**Rabbit**	**Human, Mouse, RatPredicted Reactivity: Pig (89%), Bovine (100%), Sheep (100%)**	**ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry, Western Blot**

PRODUCT SYNONYMS

TOP2A; Polyclonal Antibody; Phospho-TOP2A (Ser1337) Antibody; alpha isozyme; ATP hydrolyzing DNA topoisomerase II alfa; DNA gyrase; DNA topoisomerase (ATP hydrolyzing); DNA topoisomerase 2 alpha; DNA topoisomerase 2-alpha; DNA topoisomerase II 170KD; DNA topoisomerase II alpha isozyme; DNA topoisomerase II; DNA Topoisomerase2; TOP 2A; TOP2; TOP2A_HUMAN; Topoisomerase DNA II alpha 170kDa; TP2A; anti-TOP2A antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat Predicted Reactivity: Pig (89%), Bovine (100%), Sheep (100%)
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Phospho-TOP2A (Ser1337) Antibody detects endogenous levels of TOP2A only when phosphorylated at Ser1337.
Purity/Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-TOP2A antibody	ELISA (Peptide ELISA), ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human TOP2A around the phosphorylation site of Ser1337.
Conjugation	Unconjugated
Fragment	Fab fragment
Post Translational Modifications	Phosphorylation has no effect on catalytic activity. However, phosphorylation at Ser-1106 by CSNK1D/CK1 promotes DNA cleavable complex formation.
Subunit Structure	Homodimer. Interacts with COPS5. Interacts with RECQL5; this stimulates DNA decatenation. Interacts with SETMAR; stimulates the topoisomerase activity. Interacts with DHX9; this interaction occurs in a E2 enzyme UBE2I- and RNA-dependent manner, negatively regulates DHX9-mediated double-stranded DNA and RNA duplex helicase activity and stimulates TOP2A-mediated supercoiled DNA relaxation activity. Interacts with HNRNPU (via C-terminus); this interaction protects the topoisomerase TOP2A from degradation and positively regulates the relaxation of supercoiled DNA in a RNA-dependent manner (By similarity). Interacts with MCM3AP isoform GANP. Interacts with ERCC6.
Similarity	The N-terminus has several structural domains; the ATPase domain (about residues 1-265), the transducer domain (about 266-428) and the toprim domain (455-572) (PubMed:25202966). Comparing different structures shows ATP hydrolysis induces domain shifts in the N-terminus that are probably part of the mechanism of DNA cleavage and rejoining (PubMed:25202966).Belongs to the type II topoisomerase family.
Subcellular Location	Cytoplasm. Nucleus>Nucleoplasm. Note: Generally located in the nucleoplasm.

Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES

Application Data
At 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary antibody.

IHC (Immunohistochemistry)
At 1/100 staining Mouse brain tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.

IHC (Immunohistochemisry)
At 1/100 staining Rat brain tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.

WB (Western Blot)
Western blot analysis of TOP2A (Phospho-Ser1337) using 293 whole cell lysates.-/+ means absence or presence of N peptideï¼ˆnon-phospho peptide) and P peptide(phospho peptide).

WB (Western Blot)
Western blot analysis of extracts from Hela, using TOP2A (Phospho-Ser1337) Antibody. Lane 1 was treated with the blocking peptide.

ADDITIONAL INFORMATION

Related Product Information for anti-TOP2A antibody	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. May play a role in regulating the period length of ARNTL/BMAL1 transcriptional oscillation (By similarity).

NCBI AND UNIPROT INFORMATION

NCBI GI #	19913406
NCBI GeneID	7153
NCBI Accession #	NP_001058.2
NCBI GenBank Nucleotide #	NM_001067.3
UniProt Accession #	P11388; Q71UN1; Q71UQ5; Q9HB24; Q9HB25; Q9HB26; Q9UP44; Q9UQP9; B2RTS1
Molecular Weight	174,385 Da
NCBI Official Full Name	DNA topoisomerase 2-alpha
NCBI Official Synonym Full Names	topoisomerase (DNA) II alpha 170kDa
NCBI Official Symbol	TOP2A
NCBI Official Synonym Symbols	TOP2; TP2A
NCBI Protein Information	DNA topoisomerase 2-alpha; DNA gyrase; DNA topoisomerase II, 170 kD; DNA topoisomerase (ATP-hydrolyzing); DNA topoisomerase II, alpha isozyme

UniProt Protein Name	DNA topoisomerase 2-alpha
UniProt Gene Name	**TOP2A**
UniProt Synonym Gene Names	TOP2
UniProt Entry Name	TOP2A_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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