

DESCRIPTION

Species Reactivity	Human/Mouse
Specificity	Detects human TOP2B in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 75% cross-reactivity with recombinant mouse TOP2B and no cross-reactivity with recombinant human TOP2A is observed.
Source	Monoclonal Mouse IgG _{2B} Clone # 681417
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human TOP2B Phe1192-Asp1621 Accession # Q02880
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunocytochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

TOP2B (DNA Topoisomerase II beta) is a 180-185 kDa member of the type IIA subfamily, topoisomerase family of molecules. It is ubiquitously expressed, and represents the larger of two known topoisomerases (the 2A/a-form being 170 kDa in size). TOP2A is essential for cell division, while TOP2B is active postmitotically. In an ATP-dependent manner, homodimeric TOP2B relieves torsional stress created in DNA during transcription or as a consequence of replication. TOP2B first induces cleavage of double-stranded DNA, creating a space that allows for the physical repositioning of chromatin and a reduction in tension. This is followed by closure and ligation of the cleaved ends to recreate the original DNA structure. Human TOP2B is 1626 amino acids (aa) in length. It contains an ATPase domain (aa 101-201), an NES (aa 1034-1044), more than 30 Ser/Thr phosphorylation sites and a C-terminal DTHCT region (aa 1508-1611). There is one splice variant that shows a deletion of aa 24-28. Over aa 1187-1621, human TOP2B shares 91% aa identity with mouse TOP2B.

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