abcam

Product datasheet

Anti-Topoisomerase II beta/TOP2B antibody ab125297

KO VALIDATED

2 References 3 Images

Overview

Product name	Anti-Topoisomerase II beta/TOP2B antibody
Description	Rabbit polyclonal to Topoisomerase II beta/TOP2B
Host species	Rabbit
Tested applications	**Suitable for:** WB
Species reactivity	**Reacts with:** Mouse, Human **Predicted to work with:** Rat, Cow, Dog, Pig, Chimpanzee, Macaque monkey, Gorilla, Orangutan
Immunogen	Synthetic peptide corresponding to Human Topoisomerase II beta/TOP2B aa 1-100 conjugated to keyhole limpet haemocyanin. (Peptide available as **ab156303**)
Positive control	WB: Wild-type NALM-6 cell lysate. HeLa and NIH/3T3 whole cell lysate. Jurkat, K562, MCF7 and HepG2 cell lysate.
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.40 Preservative: 0.02% Sodium azide Constituent: PBS Batches of this product that have a concentration < 1mg/ml may have BSA added as a stabilising

	agent. If you would like information about the formulation of a specific lot, please contact our scientific support team who will be happy to help.
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab125297 in the following tested applications.

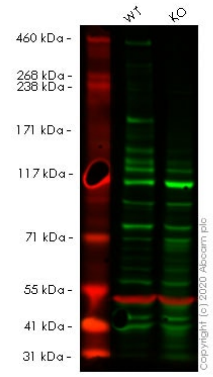
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		Use a concentration of 1 µg/ml. Detects a band of approximately 183 kDa (predicted molecular weight: 183 kDa). Abcam recommends using milk as the blocking agent - 5%

Target

Function	Control of topological states of DNA by transient breakage and subsequent rejoining of DNA strands. Topoisomerase II makes double-strand breaks. Indirectly involved in vitamin D-coupled transcription regulation via its association with the WINAC complex, a chromatin-remodeling complex recruited by vitamin D receptor (VDR), which is required for the ligand-bound VDR-mediated transrepression of the CYP27B1 gene.
Sequence similarities	Belongs to the type II topoisomerase family.
Post-translational modifications	Phosphorylated upon DNA damage, probably by ATM or ATR.
Cellular localization	Cytoplasm. Nucleus > nucleolus.

Images



Western blot - Anti-Topoisomerase II beta/TOP2B antibody (ab125297)

All lanes : Anti-Topoisomerase II beta/TOP2B antibody (ab125297)

Lane 1 : Wild-type HEK-293T cell lysate
Lane 2 : TOP2B knockout HEK-293T cell lysate

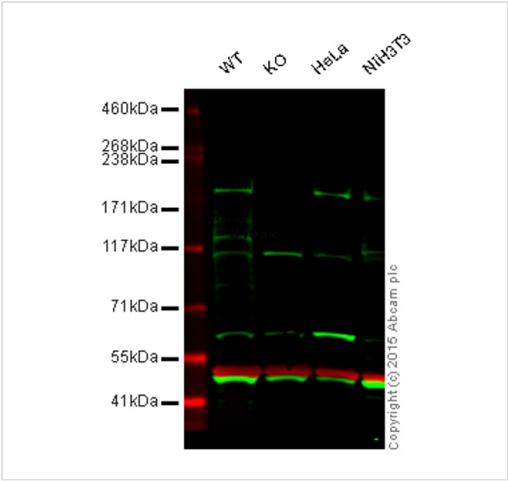
Lysates/proteins at 40 µg per lane.

Performed under reducing conditions.

Predicted band size: 183 kDa
Observed band size: 183 kDa

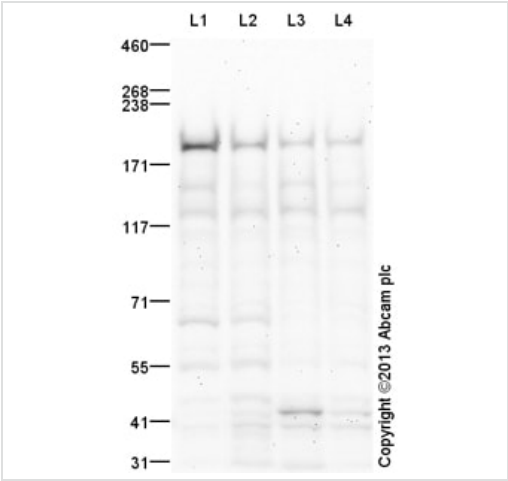
Lanes 1- 2: Merged signal (red and green). Green - ab125297 observed at 183 kDa. Red - Anti-alpha Tubulin antibody [DM1A] - Loading Control (**ab7291**) observed at 50 kDa.

ab125297 was shown to react with Topoisomerase II beta/TOP2B in wild-type HEK-293T cells in western blot. Loss of signal was observed when knockout cell line **ab266340** (knockout cell lysate **ab257286**) was used. Wild-type HEK-293T and TOP2B knockout HEK-293T cell lysates were subjected to SDS-PAGE. ab125297 and Anti-alpha Tubulin antibody [DM1A] - Loading Control (**ab7291**) overnight at 4°C at a 1 µg/ml and a 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye®800CW) preadsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye®680RD) preadsorbed (**ab216776**) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.



Western blot - Anti-Topoisomerase II beta/TOP2B antibody (ab125297)

Lane 1: Wild-type NALM-6 cell lysate (20 µg)
Lane 2: Topoisomerase II beta/TOP2B knockout NALM-6 cell lysate (20 µg)
Lane 3: HeLa cell lysate (20 µg)
Lane 4: NIH/3T3 cell lysate (20 µg)
Lanes 1 - 4: Merged signal (red and green). Green - ab125297 observed at 200 kDa. Red - loading control, **ab7291**, observed at 50 kDa.
ab125297 was shown to recognize Topoisomerase II beta/TOP2B when Topoisomerase II beta/TOP2B knockout samples were used, along with additional cross-reactive bands. Wild-type and Topoisomerase II beta/TOP2B knockout samples were subjected to SDS-PAGE. ab125297 and **ab7291** (loading control to alpha tubulin) were diluted 1 µg/mL and 1/2000 and incubated overnight at 4°C. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed **ab216773** and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed **ab216776** secondary antibodies at 1/10000 dilution for 1 h at room temperature before imaging.



Western blot - Anti-Topoisomerase II beta/TOP2B antibody (ab125297)

All lanes : Anti-Topoisomerase II beta/TOP2B antibody (ab125297) at 1 µg/ml (Milk blocking - 5%)

Lane 1 : Jurkat (Human T cell lymphoblast-like cell line) Whole Cell Lysate
Lane 2 : K562 (Human erythromyeloblastoid leukemia cell line) Whole Cell Lysate
Lane 3 : MCF7 (Human breast adenocarcinoma cell line) Whole Cell Lysate
Lane 4 : HepG2 (Human hepatocellular liver carcinoma cell line) Whole Cell Lysate

Lysates/proteins at 25 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/10000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 183 kDa
Observed band size: 183 kDa

Additional bands at: 120 kDa, 150 kDa, 42 kDa, 55 kDa, 66 kDa. We are unsure as to the identity of these extra bands.

Exposure time: 8 minutes

Abcam recommends using milk as the blocking agent - 5%. This blot was produced using a 3-8% Tris Acetate gel under the TA buffer system. The gel was run at 150V for 60 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes. The membrane was then blocked for an hour using 5% Milk before being incubated with ab125297 overnight at 4°C. Antibody binding was detected using an anti-rabbit antibody conjugated to HRP, and visualised using ECL development solution.

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