

Product datasheet

Anti-Topoisomerase I antibody [EPR5375] ab109374

Recombinant RabMAb

★★★★★ 8 Abreviews 36 References 13 Images

Overview

Product name	Anti-Topoisomerase I antibody [EPR5375]
Description	Rabbit monoclonal [EPR5375] to Topoisomerase I
Host species	Rabbit
Tested applications	Suitable for: Flow Cyt (Intra), WB, IHC-P, ICC/IF Unsuitable for: IP
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB; Jurkat, SW480, MCF7, HepG2, Neuro-2a, PC-12, and K562 cell lysates; IHC-P: Human breast carcinoma, Human colonic carcinoma tissues, Human clear cell carcinoma of kidney and Mouse kidney, and Rat colon tissue; ICC/IF: MCF7 cells;
General notes	This product is a recombinant monoclonal antibody, which offers several advantages including: <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information see here . Our RabMAb [®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents .

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. Stable for 12 months at -20°C.
Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol, 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR5375

Isotype

IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab109374 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
Flow Cyt (Intra)		1/10 - 1/100. ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
WB	★★★★★ (5)	1/10000 - 1/50000. Predicted molecular weight: 91 kDa.
IHC-P		1/100 - 1/250. Perform heat mediated antigen retrieval before commencing with IHC staining protocol. See IHC antigen retrieval protocols .
ICC/IF	★★★★★ (1)	1/500. For unpurified use at 1/100 - 1/250

Application notes

Is unsuitable for IP.

Target

Function

The reaction catalyzed by topoisomerases leads to the conversion of one topological isomer of DNA to another.

Involvement in disease

Note=A chromosomal aberration involving TOP1 is found in a form of therapy-related myelodysplastic syndrome. Translocation t(11;20)(p15;q11) with NUP98.

Sequence similarities

Belongs to the eukaryotic type I topoisomerase family.

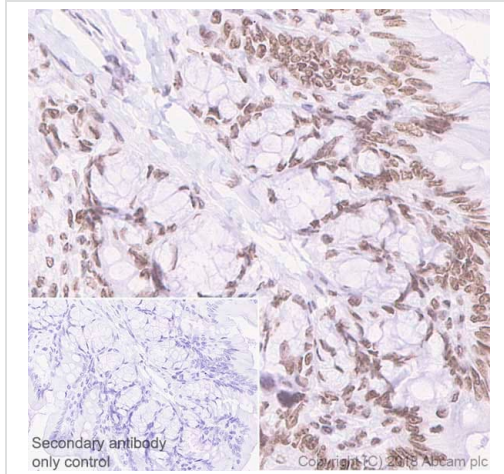
Post-translational modifications

Sumoylated. Lys-117 is the main site of sumoylation. Sumoylation plays a role in partitioning TOP1 between nucleoli and nucleoplasm. Levels are dramatically increased on camptothecin (CPT) treatment.

Cellular localization

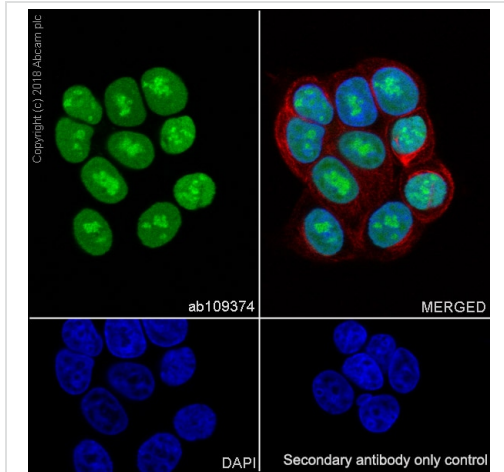
Nucleus > nucleolus. Nucleus > nucleoplasm. Diffuse nuclear localization with some enrichment in nucleoli. On CPT treatment, cleared from nucleoli into nucleoplasm. Sumolyated forms found in both nucleoplasm and nucleoli.

Images



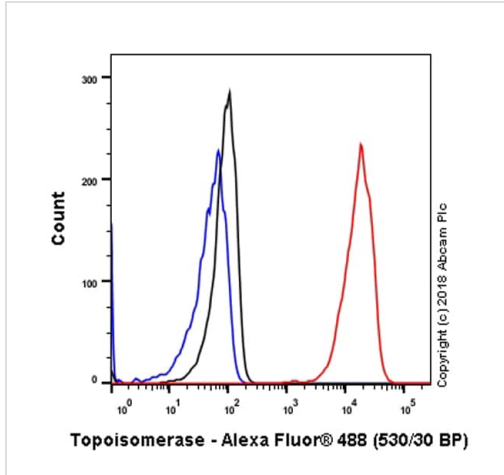
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Topoisomerase I antibody [EPR5375] (ab109374)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Rat colon tissue sections labeling Topoisomerase I with purified ab109374 at 1:100 dilution (1.29 µg/ml). Heat mediated antigen retrieval was performed using **ab93684** (Tris/EDTA buffer, pH 9.0). ImmunoHistoProbe one step HRP Polymer (ready to use) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



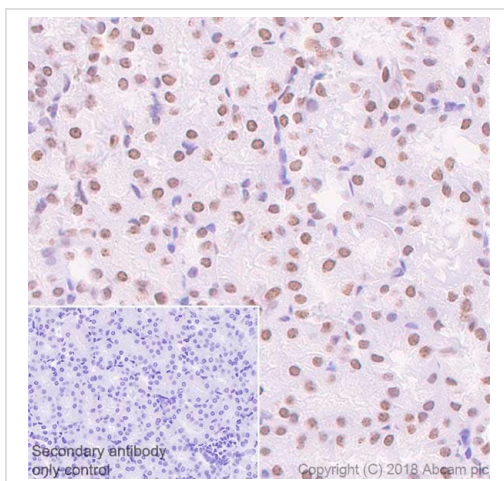
Immunocytochemistry/ Immunofluorescence - Anti-Topoisomerase I antibody [EPR5375] (ab109374)

Immunocytochemistry/ Immunofluorescence analysis of MCF7 (Human breast adenocarcinoma epithelial cell) cells labeling Topoisomerase I with Purified ab109374 at 1/500 dilution (0.3 µg/ml). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with Ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1:200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, **ab150077**) was used as the secondary antibody at 1/1000 (2 µg/ml) dilution. DAPI nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



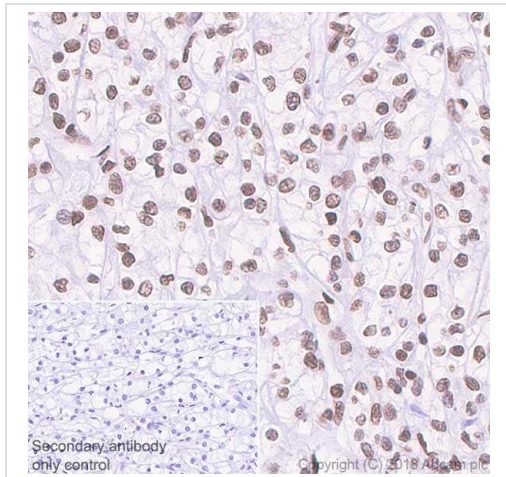
Flow Cytometry (Intracellular) - Anti-Topoisomerase I antibody [EPR5375] (ab109374)

Intracellular Flow Cytometry analysis of HepG2 (Human hepatocellular carcinoma epithelial cell) cells labeling Topoisomerase I with Purified ab109374 at 1/20 dilution (10µg/ml) (red). Cells were fixed with 80% Methanol. A Goat anti rabbit IgG (Alexa Fluor® 488, [ab150077](#)) secondary antibody was used at 1/2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).



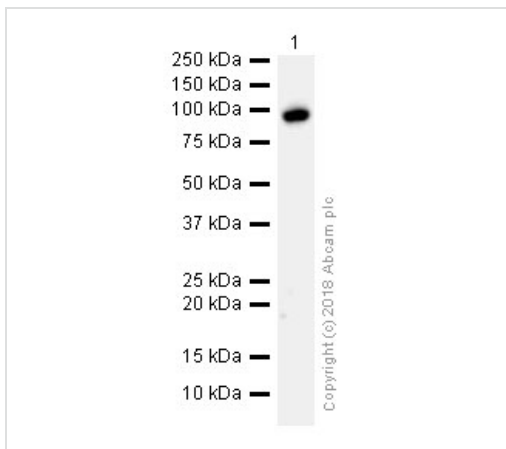
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Topoisomerase I antibody [EPR5375] (ab109374)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Mouse kidney tissue sections labeling Topoisomerase I with purified ab109374 at 1:100 dilution (1.29 µg/ml). Heat mediated antigen retrieval was performed using [ab93684](#) (Tris/EDTA buffer, pH 9.0). ImmunoHistoProbe one step HRP Polymer (ready to use) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Topoisomerase I antibody [EPR5375] (ab109374)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human clear cell carcinoma of kidney tissue sections labeling Topoisomerase I with Purified ab109374 at 1:100 dilution (1.29 µg/ml). Heat mediated antigen retrieval was performed using **ab93684** (Tris/EDTA buffer, pH 9.0). ImmunoHistoProbe one step HRP Polymer (ready to use) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



Western blot - Anti-Topoisomerase I antibody [EPR5375] (ab109374)

Anti-Topoisomerase I antibody [EPR5375] (ab109374) at 1/50000 dilution (Purified) + PC-12 (Rat adrenal gland pheochromocytoma) whole cell lysates at 20 µg

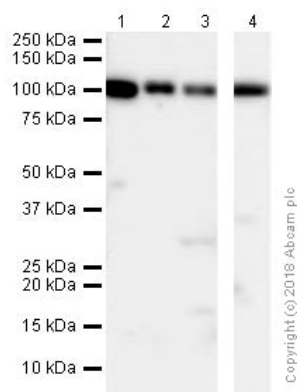
Secondary

Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

Predicted band size: 91 kDa

Observed band size: 91 kDa

Blocking and diluting buffer and concentration: 5% NFDM/TBST



Western blot - Anti-Topoisomerase I antibody [EPR5375] (ab109374)

All lanes : Anti-Topoisomerase I antibody [EPR5375] (ab109374) at 1/10000 dilution (Purified)

Lane 1 : MCF7 (Human breast adenocarcinoma epithelial cell) whole cell lysates

Lane 2 : Jurkat (Human T cell leukemia T lymphocyte) whole cell lysates

Lane 3 : HepG2 (Human hepatocellular carcinoma epithelial cell) whole cell lysates

Lane 4 : Neuro-2a (Mouse neuroblastoma neuroblast) whole cell lysates

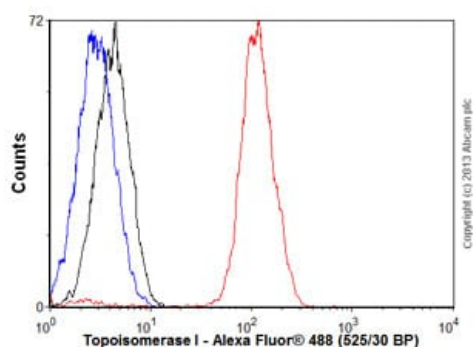
Lysates/proteins at 20 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

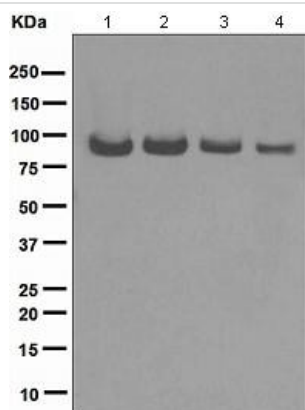
Predicted band size: 91 kDa

Observed band size: 91 kDa



Flow Cytometry (Intracellular) - Anti-Topoisomerase I antibody [EPR5375] (ab109374)

Overlay histogram showing HepG2 cells stained with ab109374 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab109374, 1/100 dilution) for 30 min at 22°C. The secondary antibody used was Alexa Fluor® 488 goat anti-rabbit IgG (H&L) (**ab150077**) at 1/2000 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal) (1µg/1x10⁶ cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control. Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter.



Western blot - Anti-Topoisomerase I antibody
[EPR5375] (ab109374)

All lanes : Anti-Topoisomerase I antibody [EPR5375] (ab109374)
at 1/10000 dilution

Lane 1 : Jurkat cell lysate

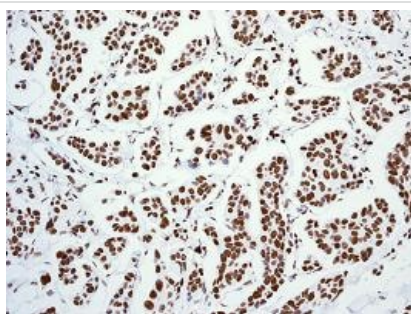
Lane 2 : MCF7 cell lysate

Lane 3 : SW480 cell lysate

Lane 4 : K562 cell lysate

Lysates/proteins at 10 µg per lane.

Predicted band size: 91 kDa



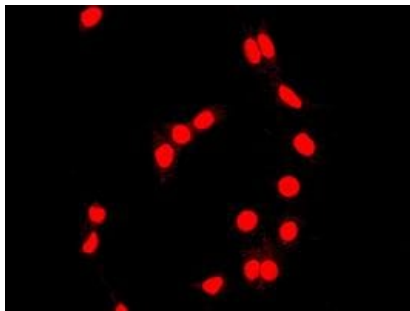
Immunohistochemistry (Formalin/PFA-fixed paraffin-
embedded sections) - Anti-Topoisomerase I antibody
[EPR5375] (ab109374)

Immunohistochemical analysis of paraffin-embedded Human breast carcinoma tissue using ab109374 at a dilution of 1/100. Heat mediated antigen retrieval was performed before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-
embedded sections) - Anti-Topoisomerase I antibody
[EPR5375] (ab109374)

Immunohistochemical analysis of paraffin-embedded Human colonic carcinoma tissue using ab109374 at a dilution of 1/100. Heat mediated antigen retrieval was performed before commencing with IHC staining protocol.



Immunofluorescent staining of MCF7 cells using ab109374 at a dilution of 1/100.

Immunocytochemistry/ Immunofluorescence - Anti-Topoisomerase I antibody [EPR5375] (ab109374)

Why choose a recombinant antibody?



Research with confidence
Consistent and reproducible results



Long-term and scalable supply
Recombinant technology



Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

Anti-Topoisomerase I antibody [EPR5375]
(ab109374)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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