abcam

Product datasheet

Anti-TopBP1 antibody ab105109

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Overview

Product name Anti-TopBP1 antibody

Description Rabbit polyclonal to TopBP1

Host species Rabbit

Tested applications Suitable for: WB

Species reactivity Reacts with: Human

Predicted to work with: Mouse, Rabbit, Horse, Cow, Dog, Xenopus laevis, Macaque monkey,

Gorilla, Chinese hamster

Immunogen Synthetic peptide corresponding to Human TopBP1 aa 800-900 conjugated to keyhole limpet

haemocyanin.

(Peptide available as ab127877)

General notesThe 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

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Clonality Polyclonal

Isotype IgG

Applications

The Abpromise guarantee

Our Abpromise quarantee covers the use of ab105109 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	*** <u>*</u>	Use a concentration of 1 µg/ml. Detects a band of approximately 180 kDa (predicted molecular weight: 171 kDa).

Target

Function

Required for DNA replication. Plays a role in the rescue of stalled replication forks and checkpoint control. Binds double-stranded DNA breaks and nicks as well as single-stranded DNA. Recruits the SWI/SNF chromatin remodeling complex to E2F1-responsive promoters. Down-regulates E2F1 activity and inhibits E2F1-dependent apoptosis during G1/S transition and after DNA damage. Induces a large increase in the kinase activity of ATR.

Tissue specificity

Highly expressed in heart, brain, placenta, lung and kidney.

Sequence similarities

Contains 8 BRCT domains.

Post-translational

Phosphorylated on serine and threonine residues in response to X-ray irradiation.

modifications

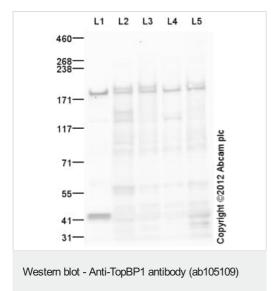
Ubiquitinated and degraded by the proteasome. X-ray irradiation reduces ubiquitination.

Cellular localization

Nucleus. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm, cytoskeleton, spindle pole. Chromosome. Detected on unpaired autosomes in meiotic prophase cells. Detected on X and Y chromosomes during later stages of prophase. Colocalizes with ATR and H2AFX at unsynapsed chromosome cores during prophase (By similarity). Has a uniform nuclear distribution during G phase. Colocalizes with BRCA1 at stalled replication forks during S phase. In mitotic cells it colocalizes with BRCA1 at spindle poles and centrosomes during metaphase and anaphase. Detected in discrete foci together with PML and numerous DNA repair enzymes after DNA damage by alkylating agents, UV or gamma irradiation. Localizes to

sites of DNA damage in a H2AX- independent manner.

Images



All lanes: Anti-TopBP1 antibody (ab105109) at 1 µg/ml

Lane 1: Human brain tissue lysate - total protein (ab29466)

 $\textbf{Lane 2:} \ \textbf{HEK293 (Human embryonic kidney cell line) Whole Cell}$

Lysate

Lane 3: HeLa (Human epithelial carcinoma cell line) Whole Cell

Lysate

Lane 4: MCF7 (Human breast adenocarcinoma cell line) Whole

Cell Lysate

Lane 5: U2OS (Human osteosarcoma cell line) Whole Cell Lysate

Lysates/proteins at 10 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit lgG H&L (HRP) preadsorbed (ab97080) at 1/5000 dilution

Developed using the ECL technique.

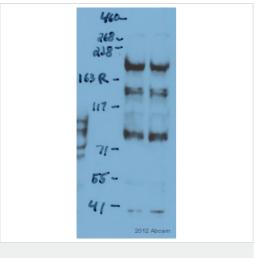
Performed under reducing conditions.

Predicted band size: 171 kDa **Observed band size:** 180 kDa

Additional bands at: 120 kDa, 42 kDa, 56 kDa. We are unsure as

to the identity of these extra bands.

Exposure time: 1 minute



Western blot - Anti-TopBP1 antibody (ab105109)

This image is courtesy of an anonymous Abreview

All lanes: Anti-TopBP1 antibody (ab105109) at 0.5 μg/ml

All lanes: Mouse ES whole cell lysate

Lysates/proteins at 200 µg per lane.

Secondary

All lanes: HRP Goat anti-rabbit lgG polyclonal at 1/10000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 171 kDa **Observed band size:** 200 kDa

Additional bands at: 145 kDa (possible non-specific binding), 85

kDa (possible non-specific binding)

Exposure time: 30 seconds

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

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