### Overview

<table>
<thead>
<tr>
<th><strong>Product name</strong></th>
<th>Anti-TopBP1 antibody</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
<td>Rabbit polyclonal to TopBP1</td>
</tr>
<tr>
<td><strong>Host species</strong></td>
<td>Rabbit</td>
</tr>
<tr>
<td><strong>Tested applications</strong></td>
<td>Suitable for: ICC/IF, WB</td>
</tr>
<tr>
<td><strong>Species reactivity</strong></td>
<td>Reacts with: Mouse, Human, Xenopus laevis; Predicted to work with: Rabbit, Horse, Cow, Dog, Macaque monkey, Gorilla, Chinese hamster</td>
</tr>
<tr>
<td><strong>Immunogen</strong></td>
<td>Synthetic peptide corresponding to Human TopBP1 aa 800-900 conjugated to keyhole limpet haemocyanin. (Peptide available as ab127877)</td>
</tr>
<tr>
<td><strong>Positive control</strong></td>
<td>This antibody gave a positive signal in Human Brain tissue lysate as well as the following whole cell lysates: HEK293; HeLa; MCF7; U20S.</td>
</tr>
</tbody>
</table>

### Properties

<table>
<thead>
<tr>
<th><strong>Form</strong></th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Storage instructions</strong></td>
<td>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.</td>
</tr>
<tr>
<td><strong>Storage buffer</strong></td>
<td>pH: 7.40; Preservative: 0.02% Sodium azide; Constituent: PBS</td>
</tr>
<tr>
<td><strong>Batches</strong></td>
<td>Batches of this product that have a concentration &lt; 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.</td>
</tr>
<tr>
<td><strong>Purity</strong></td>
<td>Immunogen affinity purified</td>
</tr>
<tr>
<td><strong>Clonality</strong></td>
<td>Polyclonal</td>
</tr>
<tr>
<td><strong>Isotype</strong></td>
<td>IgG</td>
</tr>
</tbody>
</table>

### Applications
Our Abpromise guarantee 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.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICC/IF</td>
<td>⭐⭐⭐⭐⭐</td>
<td>1/500.</td>
</tr>
<tr>
<td>WB</td>
<td>⭐⭐⭐⭐⭐</td>
<td>Use a concentration of 1 µg/ml. Detects a band of approximately 180 kDa (predicted molecular weight: 171 kDa).</td>
</tr>
</tbody>
</table>

### 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 modifications**
Phosphorylated on serine and threonine residues in response to X-ray irradiation. 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
Western blot - Anti-TopBP1 antibody (ab105109)

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

Lane 1: Human brain tissue lysate - total protein (ab29466)
Lane 2: 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 IgG 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
why is the actual band size different from the predicted?

Additional bands at: 120 kDa, 42 kDa, 56 kDa. We are unsure as to the identity of these extra bands.

Exposure time: 1 minute

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 IgG polyclonal at 1/10000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 171 kDa
**Observed band size:** 200 kDa  *why is the actual band size different from the predicted?*

**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"

---

**Our Abpromise to you: Quality guaranteed and expert technical support**

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit [https://www.abcam.com/abpromise](https://www.abcam.com/abpromise) or contact our technical team.

---

**Terms and conditions**

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors