# Product datasheet

## Anti-Prohibitin antibody - Mitochondrial Marker

**ab28172**

### Overview

<table>
<thead>
<tr>
<th>Product name</th>
<th>Anti-Prohibitin antibody - Mitochondrial Marker</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
<td>Rabbit polyclonal to Prohibitin - Mitochondrial Marker</td>
</tr>
<tr>
<td><strong>Host species</strong></td>
<td>Rabbit</td>
</tr>
<tr>
<td><strong>Tested applications</strong></td>
<td>Suitable for: WB, ICC/IF, IHC-P</td>
</tr>
<tr>
<td><strong>Species reactivity</strong></td>
<td>Reacts with: Mouse, Rat, Human</td>
</tr>
<tr>
<td><strong>Predicted to work with</strong></td>
<td>Cow, Dog, Pig</td>
</tr>
<tr>
<td><strong>Immunogen</strong></td>
<td>Synthetic peptide conjugated to KLH derived from within residues 200 - 300 of Human Prohibitin. Read Abcam's proprietary immunogen policy (Peptide available as ab28492.)</td>
</tr>
<tr>
<td><strong>Positive control</strong></td>
<td>Recombinant Human Prohibitin protein (ab114204) can be used as a positive control in WB. ab28172 antibody gave a positive signal in the following Whole Cell Lysates: HeLa, A431, Jurkat, NIH 3T3, MEF-1 and PC12. In addition, ab28172 antibody gave a positive signal in the following Tissue Lysates: Brain (Mouse), Liver (Mouse), Heart (Mouse), Kidney (Mouse), Pancreas (Mouse), Testis (Mouse), Skeletal Muscle (Mouse), Spinal Cord (Mouse), Ovary (Mouse), Brain (Rat), Liver (Rat) and Heart (Rat).</td>
</tr>
<tr>
<td><strong>General notes</strong></td>
<td>Reproducibility is key to advancing scientific discovery and accelerating scientists’ next breakthrough. Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility. We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications &amp; species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise™ guarantee. In preparation for this, we have started to update the applications &amp; species that this product is Abpromise guaranteed for. We are also updating the applications &amp; species that this product has been &quot;predicted to work with,&quot; however this information is not covered by our Abpromise guarantee. Applications &amp; species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee. 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</td>
</tr>
</tbody>
</table>

### 5 Abreviews  48 References  6 Images
ahead of purchase. Recommended alternatives for this product can be found below, as well as customer reviews and Q&As.

Properties

<table>
<thead>
<tr>
<th>Form</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage instructions</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>Storage buffer</td>
<td>pH: 7.40; Preservative: 0.02% Sodium azide; Constituent: PBS</td>
</tr>
</tbody>
</table>

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

Our Abpromise guarantee covers the use of ab28172 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>WB</td>
<td></td>
<td>Use a concentration of 1 - 5 µg/ml. Detects a band of approximately 30 kDa (predicted molecular weight: 30 kDa).</td>
</tr>
<tr>
<td>ICC/IF</td>
<td>🌟🌟🌟🌟🌟</td>
<td>Use a concentration of 5 µg/ml.</td>
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<tr>
<td>IHC-P</td>
<td>🌟🌟🌟🌟🌟</td>
<td>Use a concentration of 5 µg/ml. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.</td>
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</table>

Target

Function

Prohibitin inhibits DNA synthesis. It has a role in regulating proliferation. As yet it is unclear if the protein or the mRNA exhibits this effect. May play a role in regulating mitochondrial respiration activity and in aging.

Tissue specificity

Widely expressed in different tissues.

Sequence similarities

Belongs to the prohibitin family.

Developmental stage

Levels of expression in fibroblasts decrease heterogeneously during cellular aging.

Cellular localization

Mitochondrion inner membrane.
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Prohibitin antibody - Mitochondrial Marker (ab28172)

IHC image of Prohibitin staining in human liver FFPE section, performed on a Bond™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab28172, 5µg/ml, for 8 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

Western blot - Anti-Prohibitin antibody - Mitochondrial Marker (ab28172)

**All lanes**: Anti-Prohibitin antibody - Mitochondrial Marker (ab28172) at 1 µg/ml

**Lane 1**: NIH 3T3 whole cell lysate (ab7179)

**Lane 2**: MEF1 (Mouse embryonic fibroblast cell line) Whole Cell Lysate

**Lane 3**: Brain (Mouse) Tissue Lysate

**Lane 4**: Liver (Mouse) Tissue Lysate - normal tissue

**Lane 5**: Heart (Mouse) Tissue Lysate

**Lane 6**: Kidney (Mouse) Tissue Lysate

**Lane 7**: Mouse pancreas tissue lysate - total protein (ab29363)

**Lane 8**: Testis (Mouse) Tissue Lysate - normal tissue

**Lane 9**: Mouse skeletal muscle tissue lysate - total protein (ab29711)

**Lane 10**: Spinal Cord (Mouse) Tissue Lysate

**Lane 11**: Ovary (Mouse) Tissue Lysate - normal tissue

**Lane 12**: PC12 (Rat adrenal pheochromocytoma cell line) Whole Cell Lysate

**Lane 13**: Brain (Rat) Tissue Lysate - normal tissue

**Lane 14**: Liver (Rat) Tissue Lysate

**Lane 15**: Heart (Rat) Tissue Lysate

Lysates/proteins at 10 µg per lane.

**Secondary**

**All lanes**: IRDye 680 Conjugated Goat Anti-Rabbit IgG (H+L) at 1/10000 dilution

Performed under reducing conditions.
**Predicted band size**: 30 kDa  
**Observed band size**: 30 kDa

ab28172 staining Prohibitin in MCF7 cells. The cells were fixed with 100% methanol (5 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Triton for 1h. The cells were then incubated with the antibody ab28172 at 5µg/ml and ab7291 (Mouse monoclonal to alpha Tubulin - Loading Control) used at a 1/1000 dilution overnight at +4°C. The secondary antibodies were ab150081, Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed, (pseudo-colored green) and ab150120, Goat polyclonal Secondary Antibody to Mouse IgG - H&L (Alexa Fluor® 594) preadsorbed, (colored red), both used at a 1/1000 dilution for 1 hour at room temperature. DAPI was used to stain the cell nuclei (colored blue) at a concentration of 1.43 µM for 1hour at room temperature.

ab28172 staining Prohibitin in mouse liver tissue section by Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections). Tissue underwent fixation in formaldehyde, heat mediated antigen retrieval in Citrate buffer pH 6.0 and blocking in 1.5% serum for 10 minutes. The primary antibody was diluted, 1/400 and incubated with sample for 1 hour. A HRP conjugated goat polyclonal to rabbit IgG was used undiluted as secondary.

**All lanes**: Anti-Prohibitin antibody - Mitochondrial Marker (ab28172) at 1 µg/ml

- **Lane 1**: HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate
- **Lane 2**: Jurkat whole cell lysate (ab7899)
- **Lane 3**: A431 whole cell lysate (ab7909)

Lysates/proteins at 20 µg per lane.
Secondary

**All lanes**: Goat polyclonal to Rabbit IgG - H&L - Pre-Adsorbed (HRP) at 1/10000 dilution

Performed under reducing conditions.

**Predicted band size**: 30 kDa

**Observed band size**: 30 kDa

![Image](https://www.abcam.com/abpromise)

Immunocytochemistry/ Immunofluorescence - Anti-Prohibitin antibody - Mitochondrial Marker (ab28172)

ICC/IF image of ab28172 stained human HeLa cells. The cells were methanol fixed (5 min) and incubated with the antibody (ab28172, 1µg/ml) for 1h at room temperature. The secondary antibody (green) was Alexa Fluor® 488 goat anti-rabbit IgG (H+L) used at a 1/1000 dilution for 1h. Image-iT® FX Signal Enhancer was used to quench autofluorescence. 5% BSA (in TBS-T) was used for all other blocking steps. DAPI was used to stain the cell nuclei (blue). Alexa Fluor® 594 WGA was used to label plasma membranes (red).

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

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