abcam

Product datasheet

Anti-Prohibitin antibody - Mitochondrial Marker ab28172

6 Abreviews 59 References 6 Images

Overview

Product name	Anti-Prohibitin antibody - Mitochondrial Marker
Description	Rabbit polyclonal to Prohibitin - Mitochondrial Marker
Host species	Rabbit
Specificity	From Jan 2024, QC testing of replenishment batches of this polyclonal changed. All tested and expected application and reactive species combinations are still covered by our Abcam product promise. However, we no longer test all applications. For more information on a specific batch, please contact our Scientific Support who will be happy to help.
Tested applications	**Suitable for:** WB, ICC/IF, IHC-P
Species reactivity	**Reacts with:** Mouse, Rat, Human **Predicted to work with:** Cow, Dog, Pig
Immunogen	Synthetic peptide conjugated to KLH derived from within residues 200 - 300 of Human Prohibitin. Read Abcam's proprietary immunogen policy (Peptide available as **ab28492**.)
Positive control	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).
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 ab28172 in the following tested applications.

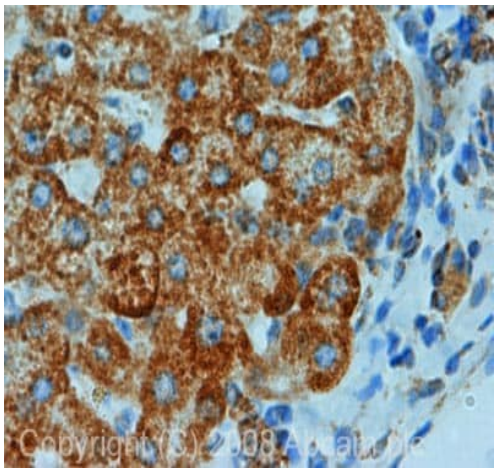
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		Use a concentration of 1 - 5 µg/ml. Detects a band of approximately 30 kDa (predicted molecular weight: 30 kDa).
ICC/IF	★★★★☆ (3)	Use a concentration of 5 µg/ml.
IHC-P	★★★★★ (3)	Use a concentration of 5 µg/ml. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

Target

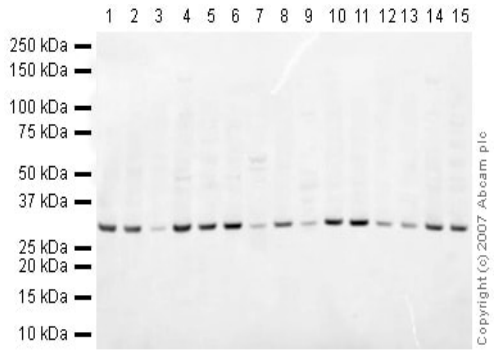
Function	Prohibitin inhibits DNA synthesis. It has a role in regulating proliferation. As yet it is unclear if the protein or the mRNA exhibits this effect. May play a role in regulating mitochondrial respiration activity and in aging.
Tissue specificity	Widely expressed in different tissues.
Sequence similarities	Belongs to the prohibitin family.
Developmental stage	Levels of expression in fibroblasts decrease heterogeneously during cellular aging.
Cellular localization	Mitochondrion inner membrane.

Images



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

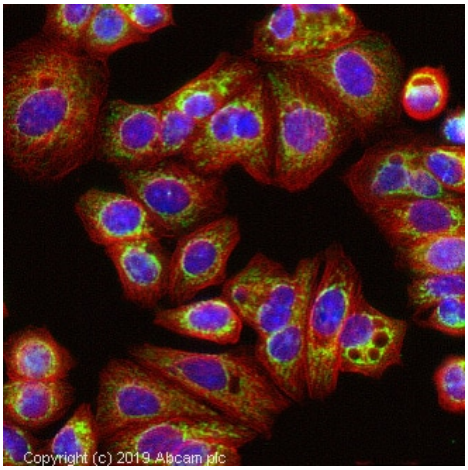
Lysates/proteins at 10 µg per lane.

Secondary

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

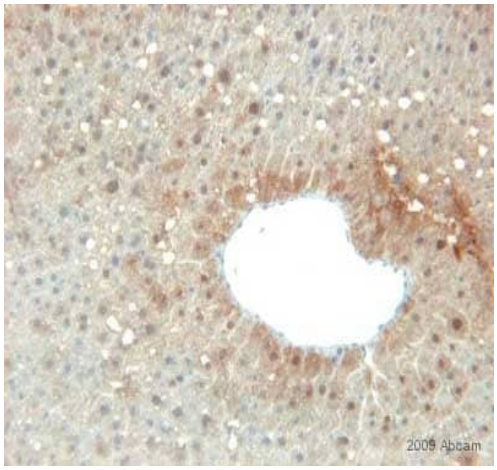
Performed under reducing conditions.

Predicted band size: 30 kDa
Observed band size: 30 kDa



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

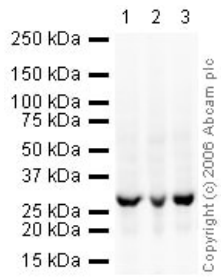
ab28172 staining Prohibitin in MCF7 cells. The cells were fixed with 100% methanol (5 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Triton for 1h. The cells were then incubated with the antibody ab28172 at 5µg/ml and **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.



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

This image is courtesy of an anonymous Abreview

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.



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

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

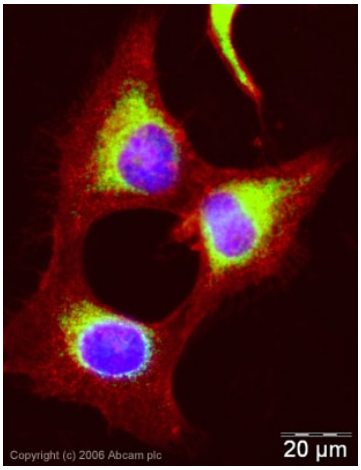
Lane 1 : HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate
Lane 2 : Jurkat whole cell lysate (**ab7899**)
Lane 3 : A-431 whole cell lysate (**ab7909**)

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



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^{TM} 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).

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** or contact our technical team.

Terms and conditions

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