abcam

Product datasheet

Anti-P4HB antibody [EPR9498] - BSA and Azide free ab248832

KO VALIDATED Recombinant RabMAb

4 Images

Overview

Product name	Anti-P4HB antibody [EPR9498] - BSA and Azide free
Description	Rabbit monoclonal [EPR9498] to P4HB - BSA and Azide free
Host species	Rabbit
Tested applications	**Suitable for:** IHC-P, WB **Unsuitable for:** FM,ICC/IF or IP
Species reactivity	**Reacts with:** Human **Predicted to work with:** Mouse, Rat
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
General notes	ab248832 is the carrier-free version of **ab137119**. Our **carrier-free** antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications. Use our **conjugation kits** for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold. This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc. This product is a recombinant monoclonal antibody, which offers several advantages including: - 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. Do Not Freeze.
Storage buffer	pH: 7.2 Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR9498
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab248832 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
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
WB		Use at an assay dependent concentration. Detects a band of approximately 57 kDa (predicted molecular weight: 57 kDa).

Application notes Is unsuitable for FM,ICC/IF or IP.

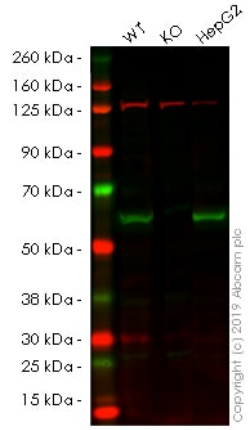
Target

Function This multifunctional protein catalyzes the formation, breakage and rearrangement of disulfide bonds. At the cell surface, seems to act as a reductase that cleaves disulfide bonds of proteins attached to the cell. May therefore cause structural modifications of exofacial proteins. Inside the cell, seems to form/rearrange disulfide bonds of nascent proteins. At high concentrations, functions as a chaperone that inhibits aggregation of misfolded proteins. At low concentrations, facilitates aggregation (anti-chaperone activity). May be involved with other chaperones in the structural modification of the TG precursor in hormone biogenesis. Also acts a structural subunit of various enzymes such as prolyl 4-hydroxylase and microsomal triacylglycerol transfer protein MTTP.

Sequence similarities Belongs to the protein disulfide isomerase family.
Contains 2 thioredoxin domains.

Cellular localization Endoplasmic reticulum lumen. Melanosome. Cell membrane. Highly abundant. In some cell types, seems to be also secreted or associated with the plasma membrane, where it undergoes constant shedding and replacement from intracellular sources (Probable). Localizes near CD4-enriched regions on lymphoid cell surfaces. Identified by mass spectrometry in melanosome fractions from stage I to stage IV.

Images



Western blot - Anti-P4HB antibody [EPR9498] - BSA and Azide free (ab248832)

All lanes : Anti-P4HB antibody [EPR9498] (**ab137119**) at 1 µg/ml

Lane 1 : Wild-type HeLa whole cell lysate
Lane 2 : P4HB knockout HeLa whole cell lysate
Lane 3 : HEP G2 whole cell lysate

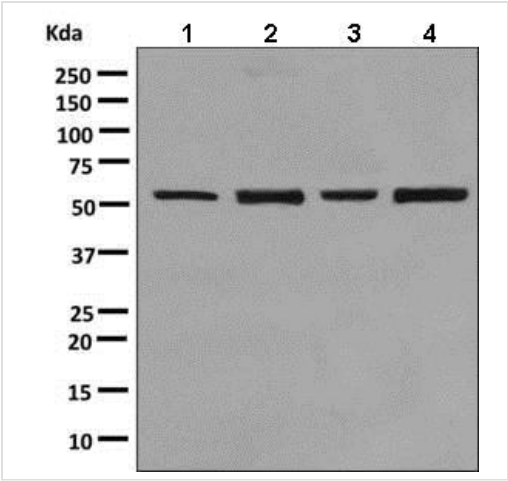
Lysates/proteins at 20 µg per lane.

Predicted band size: 57 kDa

This data was developed using **ab137119**, the same antibody clone in a different buffer formulation.

Lanes 1 - 3: Merged signal (red and green). Green - **ab137119** observed at 57 kDa. Red - loading control, **ab9484**, observed at 37 kDa.

ab137119 was shown to specifically react with P4HB (Protein disulfide-isomerase) in wild-type HeLa cells as signal was lost in P4HB knockout cells. Wild-type and P4HB knockout samples were subjected to SDS-PAGE. The membrane was blocked with 3% milk. **ab137119** and **ab9484** (Mouse anti-GAPDH loading control) were incubated overnight at 4°C at 1 µg/ml and 1/20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed **ab216773** and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed **ab216776** secondary antibodies at 1/20000 dilution for 1 hour at room temperature before imaging.



Western blot - Anti-P4HB antibody [EPR9498] - BSA and Azide free (ab248832)

All lanes : Anti-P4HB antibody [EPR9498] (**ab137119**) at 1/1000 dilution

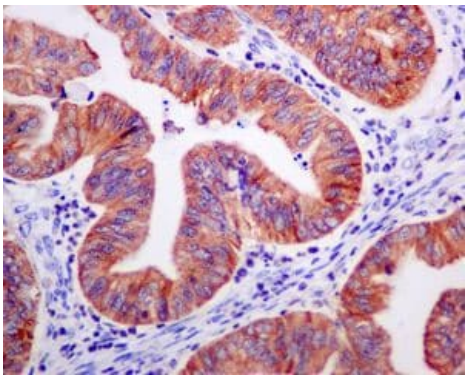
Lane 1 : HeLa cell lysate
Lane 2 : HepG2 cell lysate
Lane 3 : A431 cell lysate
Lane 4 : MCF7 cell lysate

Lysates/proteins at 10 µg per lane.

Secondary
All lanes : HRP labelled goat anti-rabbit at 1/2000 dilution

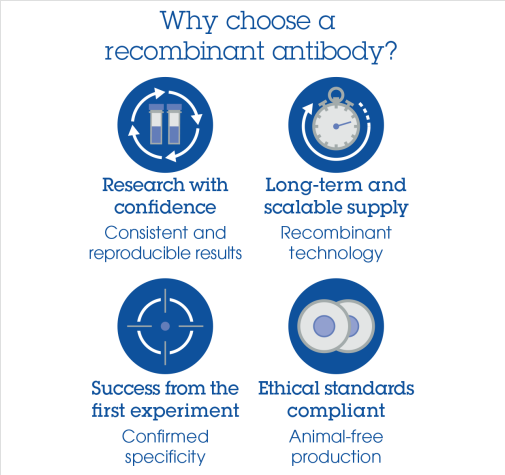
Predicted band size: 57 kDa
Observed band size: 57 kDa

This data was developed using **ab137119**, the same antibody clone in a different buffer formulation.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-P4HB antibody [EPR9498] - BSA and Azide free (ab248832)

This data was developed using **ab137119**, the same antibody clone in a different buffer formulation.Immunohistochemical analysis of paraffin embedded Human colon adenocarcinoma tissue labelling P4HB with **ab137119** antibody at a dilution of 1/50. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



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