

Product datasheet

Anti-ALDH4A1/P5CDH antibody [EPR14287] ab185208

Recombinant **RabMAb**

[1 References](#) [7 Images](#)

Overview

Product name	Anti-ALDH4A1/P5CDH antibody [EPR14287]
Description	Rabbit monoclonal [EPR14287] to ALDH4A1/P5CDH
Host species	Rabbit
Tested applications	Suitable for: WB, IHC-P, Flow Cyt, ICC/IF
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Synthetic peptide within Human ALDH4A1/P5CDH aa 50-150. The exact sequence is proprietary. Database link: P30038
Positive control	Human fetal hear and HepG2 lysate; Human liver and Mouse skeletal muscle tissue;. HeLa and HepG2 cells.

General notes

This product was previously labelled as ALDH4A1

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](#).

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 & 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 & species that this product is Abpromise guaranteed for.

We are also updating the applications & species that this product has been “predicted to work with,” however this information is not covered by our Abpromise guarantee.

Applications & 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 ahead of purchase. Recommended alternatives for this product can be found below, as well as 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 long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Preservative: 0.1% Sodium azide Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR14287
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab185208** 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		1/1000 - 1/10000. Detects a band of approximately 62 kDa (predicted molecular weight: 62 kDa).
IHC-P		1/100 - 1/250. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
Flow Cyt		1/160. ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
ICC/IF		1/250.

Target

Function Irreversible conversion of delta-1-pyrroline-5-carboxylate (P5C), derived either from proline or ornithine, to glutamate. This is a necessary step in the pathway interconnecting the urea and

tricarboxylic acid cycles. The preferred substrate is glutamic gamma-semialdehyde, other substrates include succinic, glutaric and adipic semialdehydes.

Tissue specificity

Highest expression is found in liver followed by skeletal muscle, kidney, heart, brain, placenta, lung and pancreas.

Pathway

Amino-acid degradation; L-proline degradation into L-glutamate; L-glutamate from L-proline: step 2/2.

Involvement in disease

Defects in ALDH4A1 are the cause of hyperprolinemia type 2 (HP-2) [MIM:239510]. HP-2 is characterized by the accumulation of delta-1-pyrroline-5-carboxylate (P5C) and proline. The disorder may be causally related to neurologic manifestations, including seizures and mental retardation.

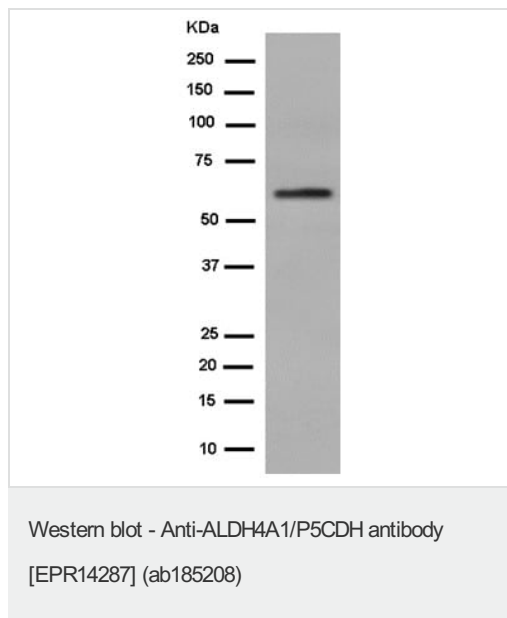
Sequence similarities

Belongs to the aldehyde dehydrogenase family.

Cellular localization

Mitochondrion matrix.

Images

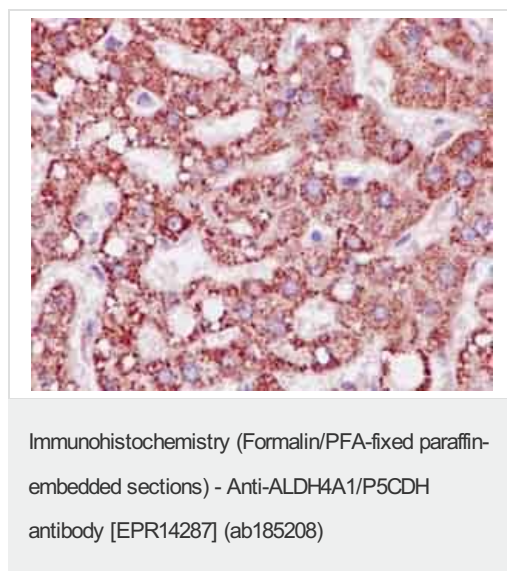


Anti-ALDH4A1/P5CDH antibody [EPR14287] (ab185208) at 1/1000 dilution + Human fetal heart at 20 µg

Secondary

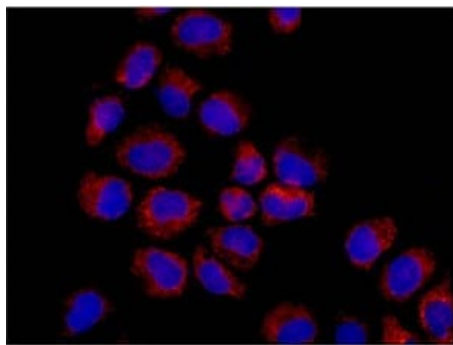
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 62 kDa



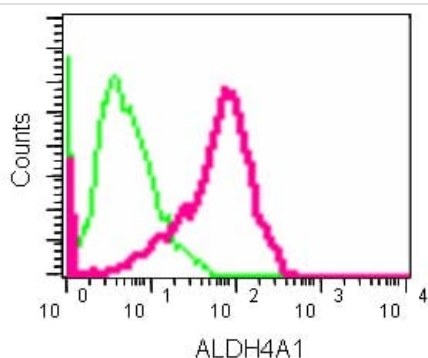
Immunohistochemical analysis of paraffin-embedded Human liver tissue labeling ALDH4A1/P5CDH with ab185208 at 1/250 dilution. Counter stain Hematoxylin.

Perform heat mediated antigen retrieval with EDTA buffer pH 9 before commencing with IHC staining protocol.



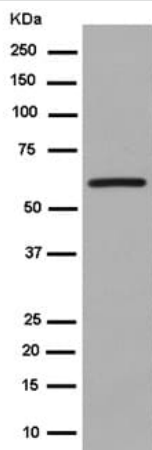
Immunocytochemistry/ Immunofluorescence - Anti-ALDH4A1/P5CDH antibody [EPR14287] (ab185208)

Immunofluorescent analysis of -20 min acetone fixed HeLa cells labeling ALDH4A1/P5CDH with ab185208 at 1/250 dilution (red). Secondary antibody: Goat anti rabbit IgG (Alexa Fluor®555) at a 1/200 dilution. Counterstained with Dapi (blue).



Flow Cytometry - Anti-ALDH4A1/P5CDH antibody [EPR14287] (ab185208)

Flow cytometric analysis of 2% paraformaldehyde fixed HepG2 cells labeling ALDH4A1/P5CDH with ab185208 at 1/160 dilution (red), or a rabbit IgG isotype control (green), followed by secondary goat anti rabbit IgG (FITC) at 1/150 dilution.



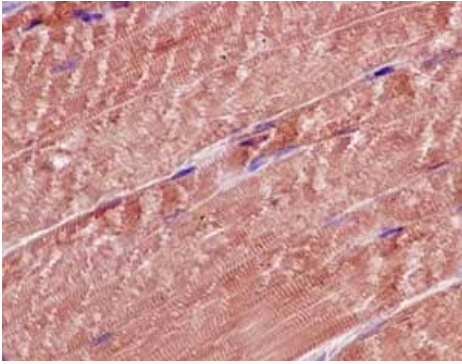
Western blot - Anti-ALDH4A1/P5CDH antibody [EPR14287] (ab185208)

Anti-ALDH4A1/P5CDH antibody [EPR14287] (ab185208) at 1/5000 dilution + HepG2 cell lysate at 20 µg

Secondary

Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 62 kDa



Immunohistochemical analysis of paraffin-embedded Mouse skeletal muscle tissue labeling ALDH4A1/P5CDH with ab185208 at 1/250 dilution. Counter stain Hematoxylin.

Perform heat mediated antigen retrieval with EDTA buffer pH 9 before commencing with IHC staining protocol.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ALDH4A1/P5CDH antibody [EPR14287] (ab185208)

Why choose a recombinant antibody?



Anti-ALDH4A1/P5CDH antibody [EPR14287] (ab185208)

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

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