


Product datasheet

Anti-ALDH4A1/P5CDH antibody [EPR14287] α b185208

Recombinant RabMAb

[5 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: Flow Cyt (Intra), WB, IHC-P, ICC/IF
Species reactivity	Reacts with: Mouse, Human Predicted to work with: Rat 
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	Human fetal hear and HepG2 lysate; Human liver and Mouse skeletal muscle tissue;. HeLa and HepG2 cells.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p>

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

Applications

The Abpromise guarantee

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
Flow Cyt (Intra)		1/160. ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
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.
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.

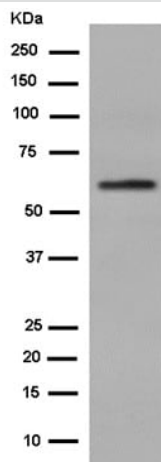
Sequence similarities

Belongs to the aldehyde dehydrogenase family.

Cellular localization

Mitochondrion matrix.

Images



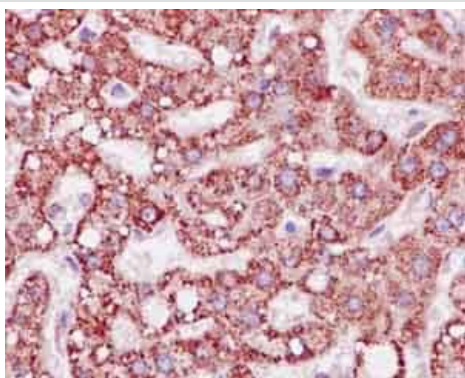
Western blot - Anti-ALDH4A1/P5CDH antibody [EPR14287] (ab185208)

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

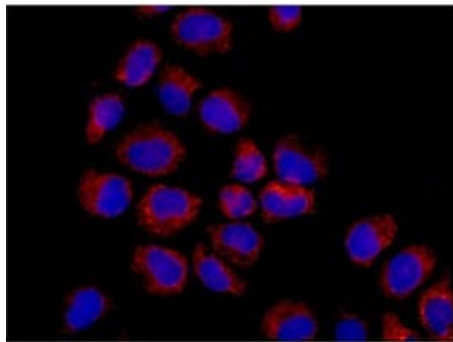
Predicted band size: 62 kDa



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

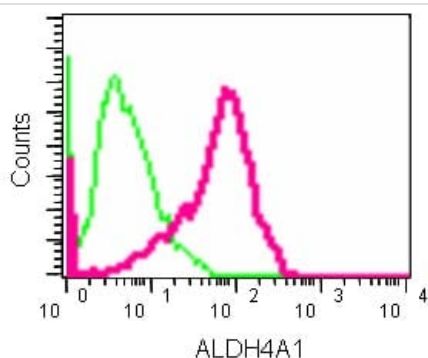
Immunohistochemical analysis of paraffin-embedded Human liver tissue labeling ALDH4A1/P5CDH with ab185208 at 1/250 dilution. Counter stain Hematoxylin.

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



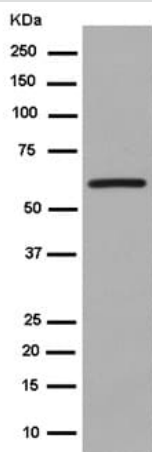
Immunocytochemistry/ Immunofluorescence - Anti-ALDH4A1/P5CDH antibody [EPR14287] (ab185208)

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



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

Intracellular 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.



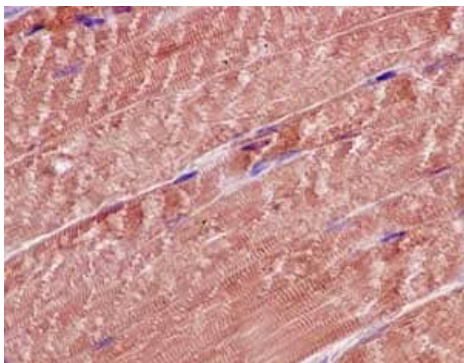
Western blot - Anti-ALDH4A1/P5CDH antibody [EPR14287] (ab185208)

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

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?



Research with confidence
Consistent and reproducible results



Long-term and scalable supply
Recombinant technology



Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

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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