abcam

Product datasheet

Anti-ALDH4A1/P5CDH antibody [EPR14287] - BSA and Azide free ab250807

Recombinant RabMAb

7 Images

Overview

Product name	Anti-ALDH4A1/P5CDH antibody [EPR14287] - BSA and Azide free
Description	Rabbit monoclonal [EPR14287] to ALDH4A1/P5CDH - BSA and Azide free
Host species	Rabbit
Tested applications	**Suitable for:** IHC-P, Flow Cyt (Intra), ICC/IF, WB
Species reactivity	**Reacts with:** Mouse, Human **Predicted to work with:** Rat
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
General notes	ab250807 is the carrier-free version of **ab185208**. 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	EPR14287
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab250807 in the following tested applications.

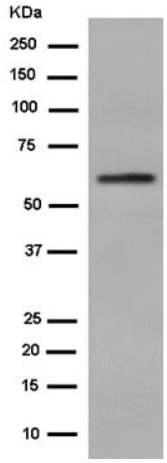
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
Flow Cyt (Intra)		Use at an assay dependent concentration.
ICC/IF		Use at an assay dependent concentration.
WB		Use at an assay dependent concentration. Detects a band of approximately 62 kDa (predicted molecular weight: 62 kDa).

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] - BSA and Azide free (ab250807)

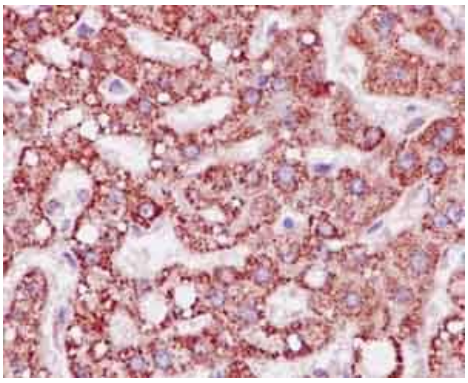
Anti-ALDH4A1/P5CDH antibody [EPR14287] (**ab185208**) at 1/1000 dilution + Human fetal heart at 20 µg

Secondary

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

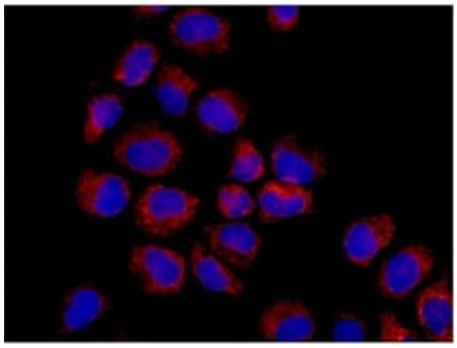
Predicted band size: 62 kDa

This data was developed using **ab185208**, the same antibody clone in a different buffer formulation.



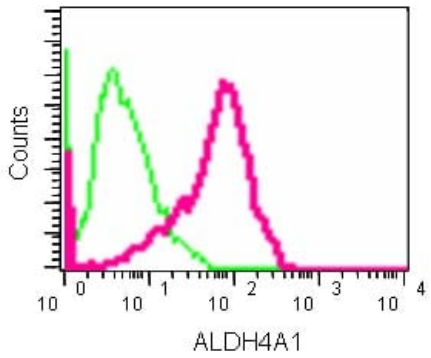
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ALDH4A1/P5CDH antibody [EPR14287] - BSA and Azide free (ab250807)

This data was developed using **ab185208**, the same antibody clone in a different buffer formulation.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] - BSA and Azide free (ab250807)

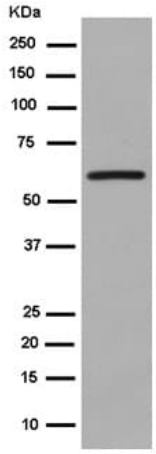
This data was developed using **ab185208**, the same antibody clone in a different buffer formulation.Immunofluorescent analysis of -20? acetone fixed HeLa cells labeling ALDH4A1/P5CDH with **ab185208** at 1/250 dilution (red). Secondary antibody: Goat anti rabbit IgG (Alexa Fluor®555) at a 1/200 dilution. Counterstained with Dapi (blue).



Flow Cytometry (Intracellular) - Anti-ALDH4A1/P5CDH antibody [EPR14287] - BSA and Azide free (ab250807)

This data was developed using **ab185208**, the same antibody clone in a different buffer formulation.

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.



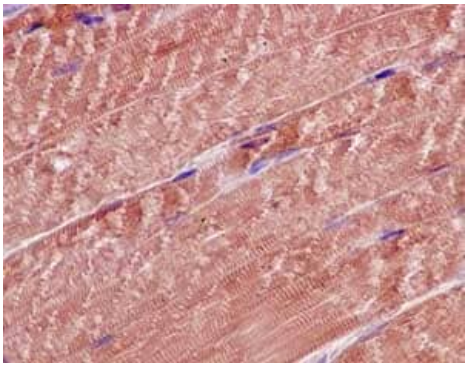
Western blot - Anti-ALDH4A1/P5CDH antibody [EPR14287] - BSA and Azide free (ab250807)

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

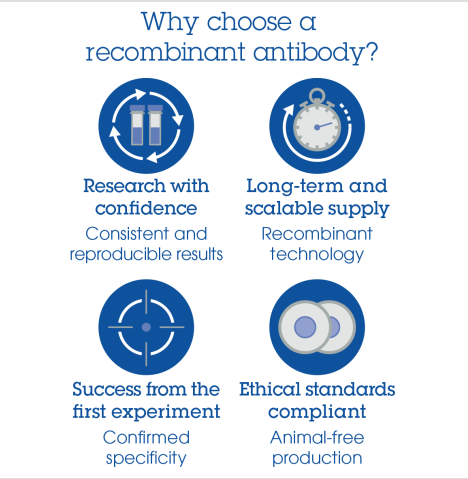
Predicted band size: 62 kDa

This data was developed using **ab185208**, the same antibody clone in a different buffer formulation.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ALDH4A1/P5CDH antibody [EPR14287] - BSA and Azide free (ab250807)

This data was developed using **ab185208**, the same antibody clone in a different buffer formulation.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.



Anti-ALDH4A1/P5CDH antibody [EPR14287] - BSA and Azide free (ab250807)

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