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ALDH4A1 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7875c

Specification

ALDH4A1 Antibody (Center) - Product Information

Application	**WB, IHC-P,E**
Primary Accession	P30038
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**61719**
Antigen Region	**288-314**

ALDH4A1 Antibody (Center) - Additional Information

Gene ID 8659

Other Names
Delta-1-pyrroline-5-carboxylate dehydrogenase, mitochondrial, P5C dehydrogenase, Aldehyde dehydrogenase family 4 member A1, L-glutamate gamma-semialdehyde dehydrogenase, ALDH4A1, ALDH4, P5CDH

Target/Specificity
This ALDH4A1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 288-314 amino acids from the Central region of human ALDH4A1.

Dilution
WB~~1:1000
IHC-P~~1:50~100

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
ALDH4A1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

ALDH4A1 Antibody (Center) - Protein Information

Name ALDH4A1

Synonyms ALDH4, P5CDH

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.

Cellular Location
Mitochondrion matrix.

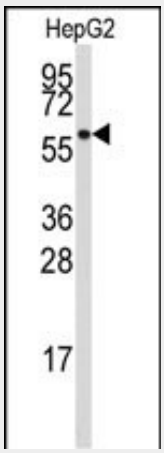
Tissue Location
Highest expression is found in liver followed by skeletal muscle, kidney, heart, brain, placenta, lung and pancreas

ALDH4A1 Antibody (Center) - Protocols

Provided below are standard protocols that you may find useful for product applications.

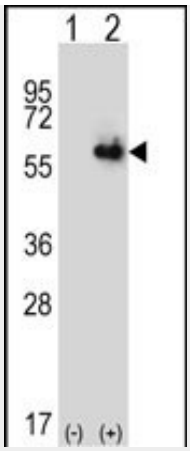
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

ALDH4A1 Antibody (Center) - Images

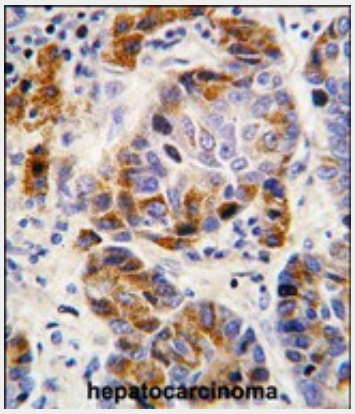


Western blot analysis of anti-ALDH4A1 Antibody (Center) (Cat.#AP7875c) in HepG2 cell line lysates (35ug/lane). ALDH4A1(arrow) was detected using the purified Pab.

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Western blot analysis of ALDH4A1 (arrow) using rabbit polyclonal ALDH4A1 Antibody (Center) (Cat.#AP7875c). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the ALDH4A1 gene.



Formalin-fixed and paraffin-embedded human hepatocarcinoma tissue reacted with ALDH4A1 antibody (Center), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

ALDH4A1 Antibody (Center) - Background

ALDH4A1 belongs to the aldehyde dehydrogenase family of proteins. This enzyme is a mitochondrial matrix NAD-dependent dehydrogenase which catalyzes the second step of the proline degradation pathway, converting pyrroline-5-carboxylate to glutamate. Deficiency of this enzyme is associated with type II hyperprolinemia, an autosomal recessive disorder characterized by accumulation of delta-1-pyrroline-5-carboxylate (P5C) and proline.

ALDH4A1 Antibody (Center) - References

Yoon,K.A., J. Hum. Genet. 49 (3), 134-140 (2004)
Geraghty,M.T., Hum. Mol. Genet. 7 (9), 1411-1415 (1998)