

**ALDH4A1 Antibody (Center)**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP7875c**

**Specification**

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**ALDH4A1 Antibody (Center) - Product Information**

Application	<b>WB, IHC-P,E</b>
Primary Accession	<a href="#">P30038</a>
Reactivity	<b>Human</b>
Host	<b>Rabbit</b>
Clonality	<b>Polyclonal</b>
Isotype	<b>Rabbit IgG</b>
Calculated MW	<b>61719</b>
Antigen Region	<b>288-314</b>

**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

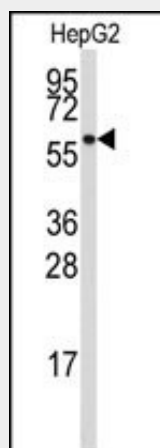
Highest expression is found in liver followed by skeletal muscle, kidney, heart, brain, placenta, lung and pancreas

### ALDH4A1 Antibody (Center) - Protocols

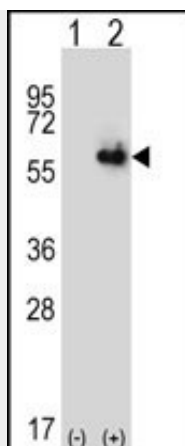
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

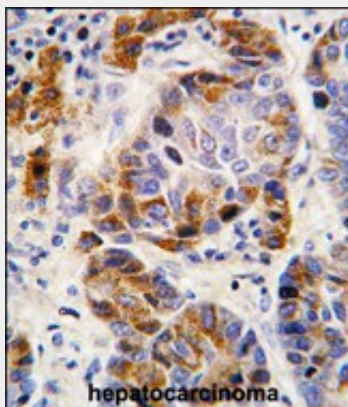
### ALDH4A1 Antibody (Center) - Images



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.



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)