

**ALDH18A1 Antibody (Center)**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP8938c****Specification**

---

**ALDH18A1 Antibody (Center) - Product Information**

Application	FC, IHC-P, WB,E
Primary Accession	<a href="#">P54886</a>
Other Accession	<a href="#">O9Z110</a>
Reactivity	Human
Predicted	Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	87302
Antigen Region	176-205

**ALDH18A1 Antibody (Center) - Additional Information****Gene ID** 5832**Other Names**

Delta-1-pyrroline-5-carboxylate synthase, P5CS, Aldehyde dehydrogenase family 18 member A1, Glutamate 5-kinase, GK, Gamma-glutamyl kinase, Gamma-glutamyl phosphate reductase, GPR, Glutamate-5-semialdehyde dehydrogenase, Glutamyl-gamma-semialdehyde dehydrogenase, ALDH18A1, GSAS, P5CS, PYCS

**Target/Specificity**

This ALDH18A1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 176-205 amino acids from the Central region of human ALDH18A1.

**Dilution**

FC~~1:10~50

IHC-P~~1:50~100

WB~~1:1000

E~~Use at an assay dependent concentration.

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

**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**

ALDH18A1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

## ALDH18A1 Antibody (Center) - Protein Information

**Name** ALDH18A1

**Synonyms** GSAS, P5CS, PYCS

**Function** Bifunctional enzyme that converts glutamate to glutamate 5- semialdehyde, an intermediate in the biosynthesis of proline, ornithine and arginine.

### Cellular Location

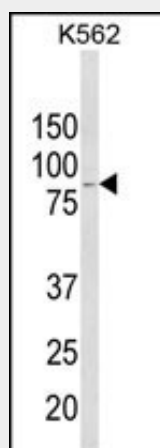
Mitochondrion. Mitochondrion matrix. Note=Exhibits puncta-like structures inside mitochondria under nutrient stress (PubMed:32770108). When cellular dependence on oxidative phosphorylation increases, forms filaments, which may increase its activity, and is sequestered in a subset of atypical mitochondria that lack cristae and ATP synthase (PubMed:39506109).

## ALDH18A1 Antibody (Center) - Protocols

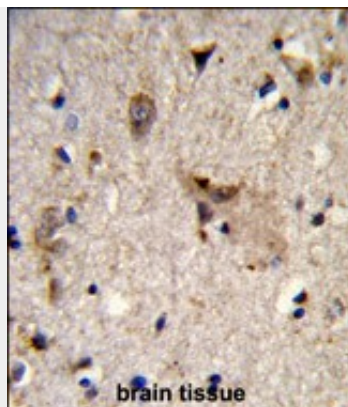
Provided below are standard protocols that you may find useful for product applications.

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

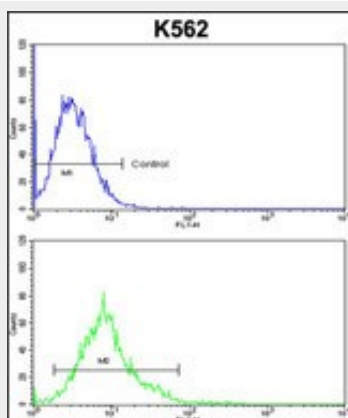
## ALDH18A1 Antibody (Center) - Images



Western blot analysis of ALDH18A1 Antibody (Center) (Cat. #AP8938c) in K562 cell line lysates (35ug/lane). ALDH18A1 (arrow) was detected using the purified Pab.



Formalin-fixed and paraffin-embedded human brain tissue reacted with ALDH18A1 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.



ALDH18A1 Antibody (Center) (Cat. #AP8938c) flow cytometric analysis of k562 cells (bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

### **ALDH18A1 Antibody (Center) - Background**

ALDH18A1 is a member of the aldehyde dehydrogenase family and encodes a bifunctional ATP- and NADPH-dependent mitochondrial enzyme with both gamma-glutamyl kinase and gamma-glutamyl phosphate reductase activities. The encoded protein catalyzes the reduction of glutamate to delta1-pyrroline-5-carboxylate, a critical step in the de novo biosynthesis of proline, ornithine and arginine.

### **ALDH18A1 Antibody (Center) - References**

Hu, C.A., et.al., Amino Acids 35 (4), 665-672 (2008)  
Bicknell, L.S., et.al., Eur. J. Hum. Genet. 16 (10), 1176-1186 (2008)