

ALDH18A1 Antibody (Center) Blocking Peptide
Synthetic peptide
Catalog # BP8938c**Specification**

ALDH18A1 Antibody (Center) Blocking Peptide - Product InformationPrimary Accession [P54886](#)**ALDH18A1 Antibody (Center) Blocking Peptide - 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

The synthetic peptide sequence used to generate the antibody [AP8938c](/products/AP8938c) was selected from the Center region of human ALDH18A1. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

ALDH18A1 Antibody (Center) Blocking Peptide - 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) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

ALDH18A1 Antibody (Center) Blocking Peptide - Images

ALDH18A1 Antibody (Center) Blocking Peptide - 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) Blocking Peptide - 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)