

## Recombinant Human Aldehyde Dehydrogenase 4 Family, Member A1, GST-tagged

**Cat. No.** ALDH4A1-499H    **Lot. No.** (See product label)

### SPECIFICATION

<b>Product Overview</b>	Recombinant Human ALDH4A1 protein was expressed as GST-tagged fusion proteins by E. coli and purified by GSH-sepharose. The purified ALDH4A1 was resolved in 1M PBS (58mM Na <sub>2</sub> HPO <sub>4</sub> , 17mM NaH <sub>2</sub> PO <sub>4</sub> , 68mM NaCl, pH8) added with 100mM GSH and 1% Triton X-100, 15% glycerol.
<b>Species</b>	Human
<b>Source</b>	E.coli
<b>Description</b>	Delta-1-pyrroline-5-carboxylate dehydrogenase, mitochondrial is an enzyme that in humans is encoded by the ALDH4A1 gene. This protein belongs to the aldehyde dehydrogenase family of proteins. This enzyme is a mitochondrial matrix NAD-dependent dehydrogenase that 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. Two transcript variants encoding the same protein have been identified for this gene.
<b>Antigen Peptide</b>	C-term-351aa
<b>Full Length</b>	False
<b>Buffer</b>	1M PBS (58mM Na <sub>2</sub> HPO <sub>4</sub> , 17mM NaH <sub>2</sub> PO <sub>4</sub> , 68mM NaCl, pH8) added with 100mM GSH and 1% Triton X-100, 15% glycerol.

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**Storage** The protein is stored in PBS at -20°C. Repeated freeze-thaw cycles should be avoided.

## GENE INFORMATION

**Gene Name** ALDH4A1 aldehyde dehydrogenase 4 family, member A1 [ Homo sapiens ]

**Official Symbol** ALDH4A1

**Synonyms** ALDH4A1; aldehyde dehydrogenase4 family, member A1; P5CD; ALDH4; P5CDh; DKFZp779M035; delta-1-pyrroline-5-carboxylate dehydrogenase, mitochondrial; P5C dehydrogenase; OTTHUMP00000002544; OTTHUMP00000002545; OTTHUMP00000002546; aldehyde dehydrogenase family 4 member A1; mitochondrial delta-1-pyrroline-5-carboxylate dehydrogenase; P5C; P5CDH; EC1.5.1.12

**Gene ID** 8659

**mRNA Refseq** NM\_001161504

**Protein Refseq** NP\_001154976

**MIM** 606811

**UniProt ID** P30038

**Chromosome Location** 1p36

**Pathway** 4-hydroxyproline degradation I; Alanine, aspartate and glutamate metabolism; Alanine and proline metabolism; Metabolic pathways; metabolism; metabolism of amino acids and derivatives; proline catabolism; arginine degradation I (arginase pathway); proline

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degradation

**Function**

1-pyrroline-5-carboxylate dehydrogenase activity; aldehydedehydrogenase (NAD) activity; electron carrier activity; oxidoreductaseactivity

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