

## Recombinant Human ALDH18A1 Protein, GST-tagged

**Cat. No.** ALDH18A1-436H    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
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| <b>Product Overview</b> | Human ALDH18A1 partial ORF ( NP_002851, 696 a.a. - 795 a.a.) recombinant protein with GST-tag at N-terminal.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Source</b>           | Wheat Germ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Description</b>      | This gene 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. Mutations in this gene lead to hyperammonemia, hypoorithinemia, hypocitrullinemia, hypoargininemia and hypoproline and may be associated with neurodegeneration, cataracts and connective tissue diseases. Alternatively spliced transcript variants, encoding different isoforms, have been described for this gene. [provided by RefSeq, Jul 2008] |
| <b>Molecular Mass</b>   | 36.74 kDa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>AA Sequence</b>      | TDVIVTEDENTAEFFLQHVDSACVFWNASTRFSDGYRFGGLGAEVGISTSRIHARGPV<br>GLEGLLTTKWLLRGKDHVVSDFSEHGSLKYLHENLPIQRNTN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Applications</b>     | Enzyme-linked Immunoabsorbent Assay; Western Blot (Recombinant protein);<br>Antibody Production; Protein Array                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

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|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Notes</b>                                | Best use within three months from the date of receipt of this protein.                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Storage</b>                              | Store at -80 centigrade. Aliquot to avoid repeated freezing and thawing.                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Storage Buffer</b>                       | 50 mM Tris-HCl, 10 mM reduced Glutathione, pH=8.0 in the elution buffer.                                                                                                                                                                                                                                                                                                                                                                         |
| <b>GENE INFORMATION</b>                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Gene Name</b>                            | ALDH18A1 aldehyde dehydrogenase 18 family, member A1 [ Homo sapiens ]                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Official Symbol</b>                      | ALDH18A1                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Synonyms</b>                             | ALDH18A1; aldehyde dehydrogenase 18 family, member A1; GSAS, PYCS, pyrroline 5 carboxylate synthetase (glutamate gamma semialdehyde synthetase); delta-1-pyrroline-5-carboxylate synthase; P5CS; delta1-pyrroline-5-carboxylate synthetase; aldehyde dehydrogenase family 18 member A1; delta-1-pyrroline-5-carboxylate synthetase; pyrroline-5-carboxylate synthetase (glutamate gamma-semialdehyde synthetase); GSAS; PYCS; ARCL3A; MGC117316; |
| <b>Gene ID</b>                              | 5832                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>mRNA Refseq</b>                          | NM_001017423                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Protein Refseq</b>                       | NP_001017423                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>MIM</b>                                  | 138250                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>UniProt ID</b>                           | P54886                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 12.5% SDS-PAGE Stained with Coomassie Blue. |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

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