

### Full-Length

## ALDH4A1 (Human) Recombinant Protein (P01)

Catalog # H00008659-P01

Size 25 ug, 10 ug

## Applications



## Specification

|                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Description           | Human ALDH4A1 full-length ORF ( AAH07581, 1 a.a. - 563 a.a.) recombinant protein with GST-tag at N-terminal.                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Sequence                      | MLLPAPALRRALLSRPWTGAGLRWKHTSSLKVANEPVLAFTQGSPERDALQKALKDLKGRMEALPCVVGDEEVWTSVDVQYQVSPFNHGHKVAKFCYADKSLLNKAIEAALAARKEWDLKPIADRAQIFLKAADMLSGPRRAEILAKTMVGQGKTVIQAEIDAAAELIDFFRFNAKYAVELEGQQPISVPPSTNSTVYRGLEGFVAAISPFNFTAIGGNLAGAPALMGNVVLWKPSDTAMLASYAVYRILREAGLPPNIIQFVPADGPLFGDVTSSSEHLCGINFTGSVPTFKHLWKQVAQNLDRLFHTFPRLAGECGGKNFHFVHRSDVESVVSGLRSAFEYGGQKCSACSRLYPHSLWPQIKGRLL EEHSRIKVGDP AEDFGTFFSAVIDAKSFARIKKWLEHARSSPSLTILAGGKCDDSVGYFVEPCIVESKDPQEPIMKEEIFGPVLSVYVYPDDKYKETLQLIDSTTSYGLTGAVFSQDKDVVQEATKVL RNAAGNFYINDKSTGSV GQQPFGGARASGTNDKPGGPHYLRWTSPQVIKETHKPLGDWSYAYMQ |
| Host                          | Wheat Germ (in vitro)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Theoretical MW (kDa)          | 87.67                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Interspecies Antigen Sequence | Mouse (92); Rat (91)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Preparation Method            | <a href="#">in vitro wheat germ expression system</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Purification                  | Glutathione Sepharose 4 Fast Flow                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

|                         |                                                                          |
|-------------------------|--------------------------------------------------------------------------|
| Quality Control Testing | 12.5% SDS-PAGE Stained with Coomassie Blue.                              |
| Storage Buffer          | 50 mM Tris-HCl, 10 mM reduced Glutathione, pH=8.0 in the elution buffer. |
| Storage Instruction     | Store at -80°C. Aliquot to avoid repeated freezing and thawing.          |
| Note                    | Best use within three months from the date of receipt of this protein.   |

## Applications

- Enzyme-linked Immunoabsorbent Assay
- Western Blot (Recombinant protein)
- Antibody Production
- Protein Array

## Gene Info — ALDH4A1

|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Entrez GeneID       | <a href="#">8659</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| GeneBank Accession# | <a href="#">BC007581</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Protein Accession#  | <a href="#">AAH07581</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Gene Name           | ALDH4A1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Gene Alias          | ALDH4, P5CD, P5CDh, P5CDhL, P5CDhS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Gene Description    | aldehyde dehydrogenase 4 family, member A1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Omim ID             | <a href="#">239510 606811</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Gene Ontology       | <a href="#">Hyperlink</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Gene Summary        | This protein 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. Alternatively spliced transcript variants encoding different isoforms have been identified for this gene. [provided by RefSeq] |
| Other Designations  | OTTHUMP00000002544 OTTHUMP00000002545 P5C dehydrogenase aldehyde dehydrogenase 4A1 mitochondrial delta-1-pyrroline 5-carboxylate dehydrogenase                                                                                                                                                                                                                                                                                                                                                                                                                                         |

## Pathway

- [Alanine](#)
- [Arginine and proline metabolism](#)
- [Metabolic pathways](#)

## Disease

- [Adenocarcinoma](#)
- [Esophageal Neoplasms](#)
- [Hearing Loss](#)