

Bioactive

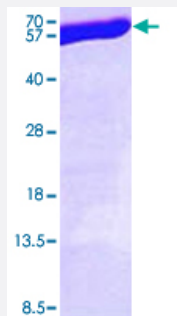
Full-Length

# ALDH3A1 (Human) Recombinant Protein

Catalog # P3496

Size 50 ug

## Applications



## Specification

### Product Description

Human ALDH3A1 (AAH04370, 1 a.a. - 453 a.a.) full-length recombinant protein with His tag expressed in *Escherichia coli*.

### Sequence

MGSSHHHHHHSSGLVPRGSHMSKISEAVKRARAAFSSGRTRPLQFRIQQLEALQRLIQEQEQELV  
GALAADLHKNEWNAYYEEVVYVLEEIEYMIQKLPEWAADEPVEKTPQTQQDELYHSEPLGVVLVI  
GTWNYPFNLTIQPMVGAIAAGNAVVLKPSELSENMASSLATIPQYLDKDLYPVINGGVPETTELLKE  
RFDHILYTGSTGVGKIIMTAAAKHLTPVTLELGGKSPCYVDKNCDLDVACRRIAWGKFMNSGQTCV  
APDYILCDPSIQNQMEKLKKSLEFYGEDAKKSRDYGRIISARHFQRMGLIEGQKVAYGGTGDA  
TRYIAPTILTDVDPQSPVMQEEIFGPVLPVLCVRSLEEAIQFINQREKPLALYMFSSNDKVIKKMAET  
SSGGVAANDVIVHITLHSLPFGGVGNSGMGSYHGKKSFFETFSHRRSCLVRPLMNDEGLKVRYP  
SPAKMTQH

### Host

*Escherichia coli*

### Theoretical MW (kDa)

52.5

### Form

Liquid

### Preparation Method

*Escherichia coli* expression system

### Purification

Conventional Chromatography

### Concentration

0.5 mg/mL

|                                |                                                                                                                                                                                                                                                           |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Purity</b>                  | > 95% by SDS-PAGE                                                                                                                                                                                                                                         |
| <b>Activity</b>                | Specific activity is < 1 units/mL and was obtained by measuring the increase of NADP in absorbance at 340 nm resulting from the reduction of NAD. One unit will oxidize 1.0 umole of acetaldehyde to a cetic acid per minute at pH 8.0 at 25°C in the pre |
| <b>Quality Control Testing</b> | Loading 3 ug protein in 15% SDS-PAGE                                                                                                                                                                                                                      |
| <b>Storage Buffer</b>          | In 20 mM Tris-HCl buffer, 0.1 M NaCl, pH 8.0 (10% glycerol).                                                                                                                                                                                              |
| <b>Storage Instruction</b>     | Store at 2°C to 8°C for 1 week. For long term storage, aliquot and store at -20°C to -80°C. Aliquot to avoid repeated freezing and thawing.                                                                                                               |

## Applications

- Functional Study
- SDS-PAGE

## Gene Info — ALDH3A1

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Entrez GeneID</b>      | <a href="#">218</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Protein Accession#</b> | <a href="#">AAH04370</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Gene Name</b>          | ALDH3A1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Gene Alias</b>         | ALDH3, ALDHIII, MGC10406                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Gene Description</b>   | aldehyde dehydrogenase 3 family, memberA1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Omim ID</b>            | <a href="#">100660</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Gene Ontology</b>      | <a href="#">Hyperlink</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Gene Summary</b>       | Aldehyde dehydrogenases oxidize various aldehydes to the corresponding acids. They are involved in the detoxification of alcohol-derived acetaldehyde and in the metabolism of corticosteroids, biogenic amines, neurotransmitters, and lipid peroxidation. The enzyme encoded by this gene forms a cytoplasmic homodimer that preferentially oxidizes aromatic and medium-chain (6 carbons or more) saturated and unsaturated aldehyde substrates. It is thought to promote resistance to UV and 4-hydroxy-2-nonenal-induced oxidative damage in the cornea. The gene is located within the Smith-Magenis syndrome region on chromosome 17. Multiple alternatively spliced variants, encoding the same protein, have been identified. [provided by RefSeq] |
| <b>Other Designations</b> | aldehyde dehydrogenase 3A1 aldehyde dehydrogenase isozyme 3 aldehyde dehydrogenase type III aldehyde dehydrogenase, dimeric NADP-prefering stomach aldehyde dehydrogenase                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

## Pathway

- [Drug metabolism - cytochrome P450](#)
- [Glycolysis / Gluconeogenesis](#)
- [Histidine metabolism](#)
- [Metabolic pathways](#)
- [Metabolism of xenobiotics by cytochrome P450](#)
- [Phenylalanine metabolism](#)
- [Tyrosine metabolism](#)

## Disease

- [Attention Deficit Disorder with Hyperactivity](#)
- [Autistic Disorder](#)
- [Brain Neoplasms](#)
- [Breast cancer](#)
- [Breast Neoplasms](#)
- [Carcinoma](#)
- [Drug Toxicity](#)
- [Genetic Predisposition to Disease](#)
- [Kidney Failure](#)
- [NARP](#)
- [Neoplasms](#)
- [Ovarian cancer](#)
- [Ovarian Neoplasms](#)
- [Schizophrenia](#)
- [Tobacco Use Disorder](#)