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## Datasheet for ABIN7194202

### ALDH4A1 Protein

#### Overview

|               |                                   |
|---------------|-----------------------------------|
| Quantity:     | 100 µg                            |
| Target:       | ALDH4A1                           |
| Origin:       | Human                             |
| Source:       | Baculovirus infected Insect Cells |
| Protein Type: | Recombinant                       |

#### Product Details

|                  |  |
|------------------|--|
| Purpose:         | Recombinant Human ALDH4A1 Protein  |
| Sequence:        | Lys 25-Gln 563   |
| Characteristics: | A DNA sequence encoding the human ALDH4A1 (AAH07581.1) (Lys 25-Gln 563) was expressed and purified with two additional amino acids (Gly & Pro ) at the N-terminus. |
| Purity:          | > 95 % as determined by reducing SDS-PAGE.   |
| Endotoxin Level: | < 1.0 EU per µg as determined by the LAL method.   |

#### Target Details

|                   |   |
|-------------------|---|
| Target:           | ALDH4A1   |
| Alternative Name: | ALDH4A1 ( <a href="#">ALDH4A1 Products</a> )  |
| Background:       | Background: ALDH4A1 is a member of the aldehyde dehydrogenase family. Aldehyde dehydrogenase enzymes function in the metabolism of many molecules including certain fats (cholesterol and other fatty acids) and protein building blocks (amino acids). Additional aldehyde dehydrogenase enzymes detoxify external substances, such as alcohol and |

## Target Details

pollutants, and internal substances, such as toxins that are formed within cells. ALDH4A1 is expressed abundantly in liver followed by skeletal muscle, kidney, heart, brain, placenta, lung and pancreas. It is a mitochondrial matrix NAD-dependent dehydrogenase which catalyzes the second step of the proline degradation pathway, converting pyrroline-5-carboxylate to glutamate. Defects in ALDH4A1 are the cause of hyperprolinemia type 2 (HP-2). HP-2 is characterized by the accumulation of delta-1-pyrroline-5-carboxylate (P5C) and proline. The disorder may be causally related to neurologic manifestations, including seizures and mental retardation.

Synonym: ALDH4,P5CD,P5CDh

Molecular Weight: 59.2 kDa

Pathways: [Monocarboxylic Acid Catabolic Process](#)

## Application Details

Restrictions: For Research Use only

## Handling

Format: Lyophilized

Reconstitution: Please refer to the printed manual for detailed information.

Buffer: Lyophilized from sterile 20 mM Tris, 500 mM NaCl, 10 % glycerol, pH 8.5

Storage: 4 °C,-20 °C,-80 °C

Storage Comment: Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.