

ALDH4A1 Protein, Human (sf9)

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| Cat. No.: | HY-P76138 |
| Synonyms: | Delta-1-pyrroline-5-carboxylate dehydrogenase; P5C dehydrogenase; ALDH4; P5CDH |
| Species: | Human |
| Source: | Sf9 insect cells |
| Accession: | P30038 (K25-Q563) |
| Gene ID: | 8659 |
| Molecular Weight: | Approximately 54 kDa. |

PROPERTIES

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| Biological Activity | The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet. |
| Appearance | Solution. |
| Formulation | Supplied as a 0.22 µm filtered solution of 20 mM Tris, 500 mM NaCl, 10% glycerol, pH 8.5. |
| Endotoxin Level | <1 EU/µg, determined by LAL method. |
| Reconstitution | N/A. |
| Storage & Stability | Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles. |
| Shipping | Shipping with dry ice. |

DESCRIPTION

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| Background | ALDH4A1, a pivotal enzyme, catalyzes the irreversible conversion of delta-1-pyrroline-5-carboxylate (P5C), derived from either proline or ornithine, into glutamate. This enzymatic transformation serves as a crucial step in the intricate pathway linking the urea and tricarboxylic acid cycles. The preferred substrate for ALDH4A1 is glutamic gamma-semialdehyde, while it also accepts other substrates such as succinic, glutaric, and adipic semialdehydes. The enzymatic activity of ALDH4A1 plays a central role in maintaining the metabolic balance between proline, ornithine, and glutamate, contributing to the efficient utilization of these amino acids within the interconnected cellular pathways. |
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Caution: Product has not been fully validated for medical applications. For research use only.

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