

## ALDH7A1 Protein, Human (His)

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| Cat. No.:         | HY-P76140  |
| Synonyms:         | Alpha-amino adipic semialdehyde dehydrogenase; Alpha-AASA dehydrogenase; Antiquitin-1; P6c dehydrogenase; ATQ1 |
| Species:          | Human  |
| Source:           | E. coli  |
| Accession:        | P49419-2 (S2-Q511)   |
| Gene ID:          | 501  |
| Molecular Weight: | Approximately 56 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          | Lyophilized powder   |
| Formulation         | Lyophilized from a 0.2 µm filtered solution of 50 mM Tris, 500 mM NaCl, 20% Glycerol, pH 8.0. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.    |
| Endotoxin Level     | <1 EU/µg, determined by LAL method.  |
| Reconstitution      | It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O.  |
| Storage & Stability | Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage. |
| Shipping            | Room temperature in continental US; may vary elsewhere.  |

### DESCRIPTION

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| Background | ALDH7A1, a versatile enzyme, plays a crucial role in mediating essential protective effects within cells. It catalyzes the conversion of betaine aldehyde to betaine, serving as a vital cellular osmolyte and methyl donor. Notably, ALDH7A1 functions as a protective shield against oxidative stress by metabolizing various aldehydes derived from lipid peroxidation. Furthermore, the enzyme actively participates in lysine catabolism, contributing to broader metabolic processes. Through its multifaceted activities, ALDH7A1 emerges as a key player in cellular defense mechanisms and essential metabolic pathways. |
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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