

# Recombinant Human ALDH7A1/ATQ1 Protein (His Tag)



Catalog Number:PKSH031063

**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

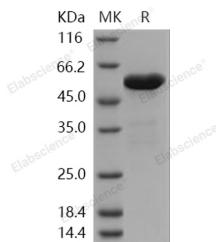
## Description

Synonyms	ATQ1;EPD;PDE
Species	Human
Expression Host	E.coli
Sequence	Ser 2-Gln 511
Accession	P49419-2
Calculated Molecular Weight	56.0 kDa
Observed molecular weight	56 kDa
Tag	N-His

## Properties

Purity	> 93 % as determined by reducing SDS-PAGE.
Endotoxin	Please contact us for more information.
Storage	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.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile 50mM Tris, 500mM NaCl, 20% glycerol, pH 8.0 Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

## Data



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## Background

ALDH7A1 (Aldehyde dehydrogenase 7 family, member A1) is a member of subfamily 7 in the aldehyde dehydrogenase family. These enzymes are thought to play a major role in the detoxification of aldehydes generated by alcohol metabolism and lipid peroxidation. Mammalian ALDH7A1 is homologous to plant ALDH7B1 which protects against various forms of stress such as increased salinity, dehydration and treatment with oxidants or pesticides. In mammals, ALDH7A1 is known to play a primary role during lysine catabolism through the NAD<sup>+</sup>-dependent oxidative conversion of amino adipate semialdehyde (AASA) to its corresponding carboxylic acid,  $\alpha$ -amino adipic acid. Deleterious mutations in human ALDH7A1 are responsible for pyridoxine-dependent and folic acid-responsive seizures. ALDH7A1 is a novel aldehyde dehydrogenase expressed in multiple subcellular compartments that protects against hyperosmotic stress by

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generating osmolytes and metabolizing toxic aldehydes.

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