



Recombinant Protein Technical Manual

Recombinant Human ALDH7A1/ATQ1 Protein (His Tag)

RPES0674

Product Data:

Product SKU: RPES0674

Size: 20µg

Species: Human

Expression host: E. coli

Uniprot: P49419-2

Protein Information:

Molecular Mass: 56 kDa

AP Molecular Mass: 56 kDa

Tag: N-His

Bio-activity:

Purity: > 93 % as determined by reducing SDS-PAGE.

Endotoxin: Please contact us for more information.

Storage: 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

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

Application:

Synonyms: ATQ1;EPD;PDE

Immunogen Information:

Sequence: Ser 2-Gln 511

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⁺-dependent oxidative conversion of amino adipate semialdehyde (AASA) to its corresponding carboxylic acid, α -amino adipic acid. Deleterious mutations in human ALDH7A1 are responsible for pyridoxine-dependent and folinic acid-responsive seizures. ALDH7A1 is a novel aldehyde dehydrogenase expressed in multiple subcellular compartments that protects against hyperosmotic stress by generating osmolytes and metabolizing toxic aldehydes.