Recombinant Human SerpinA1/A1AT Protein (His Tag)

Catalog Number:PKSH033030

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

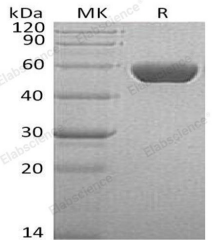
Description

Synonyms	Alpha-1-Antitrypsin;Alpha-1 Protease Inhibitor;Alpha-1-Antiproteinase;Serpin A1; SERPINA1;AAT;PI;A1A;A1AT;AAT;alpha1AT;MGC23330;MGC9222;PI1;PRO2275
Species	Human
Expression Host	HEK293 Cells
Sequence	Glu25-Lys418
Accession	AAH11991.1
Calculated Molecular Weight	45.4 kDa
Observed molecular weight	50-65 kDa
Tag	C-His

Properties

Purity	> 95 % as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per μg of the protein as determined by the LAL method.
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 a 0.2 μm filtered solution of 20mM Tris-HCl, 150mM NaCl, 2mM $CaCl_2$, pH 7.5. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer in
Reconstitution	Please refer to the printed manual for detailed information.

Data



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Background

Serpin A1 is a prototype member of the Serpin superfamily of the serine protease inhibitors. As one of the most abundant proteinase inhibitors in the circulation, it is synthesized in hepatocytes, and to a lesser extent, in macrophages as well as intestinal epithelial cell lines and secreted as the abundant proteinase inhibitor in the circulation whose targets include elastase, plasmin, thrombin, trypsin, chymotrypsin, and plasminogen activator. Point mutations in the native SerpinA1 variants result in Serpin A1 deficiency, and consequently lead to several clinical complications such as pulmonary

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emphysema, juvenile hepatitis, cirrhosis, and hepatocellular carcinoma. For example, the Z variants (Glu342 to Lys) forms intracellular inclusion bodies, is not secreted, and leads to a severe SerpinA1 deficiency. Accordingly, Serpin A1 deficiency in circulation is associated with emphysema or liver disease.

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