ELK Biotechnology

Recombinant Human Serpin A1 (C-6His)

Catalog #	EPT244
Expression Host	Human Cells
DESCRIPTION	Recombinant Human Serine Protease Inhibitor-clade A1 is produced by our Mammalian expression system and the target gene encoding Glu25-Lys418 is expressed with a 6His tag at the C-terminus.
Accession	AAH11991.1
Synonyms	Alpha-1-Antitrypsin; Alpha-1 Protease Inhibitor; Alpha-1-Antiproteinase; Serpin A1; SERPINA1; AAT; PI
Mol Mass	45.35 KDa
AP Mol Mass	50-65 KDa, reducing conditions
Purity	Greater than 95% as determined by reducing SDS-PAGE.
Endotoxin	Less than 0.1 ng/μg (1 EU/μg) as determined by LAL test.
FORMULATION	Lyophilized from a 0.2 μm filtered solution of 20mM Tris-HCl, 150mM NaCl, 2mM CaCl₂, pH

7.5.

RECONSTITUTION

Always centrifuge tubes before opening.Do not mix by vortex or pipetting.

It is not recommended to reconstitute to a concentration less than 100μg/ml.

Dissolve the lyophilized protein in distilled water.

Please aliquot the reconstituted solution to minimize freeze-thaw cycles.

SHIPPING

The product is shipped at ambient temperature.

Upon receipt, store it immediately at the temperature listed below.

STORAGE

Lyophilized protein should be stored at < -20 ° C, though stable at room temperature for 3 weeks.

Reconstituted protein solution can be stored at 4-7°C for 2-7 days.

Aliquots of reconstituted samples are stable at < -20° C for 3 months.

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 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.

SDS-PAGE