



Recombinant Protein Technical Manual

Recombinant Human SerpinA1/A1AT Protein (His Tag)

RPES4489

Product Data:

Product SKU: RPES4489

Size: 10µg

Species: Human

Expression host: Human Cells

Uniprot: P01009

Protein Information:

Molecular Mass: 45.4 kDa

AP Molecular Mass: 54 kDa

Tag: C-6His

Bio-activity:

Purity: > 95 % as determined by reducing SDS-PAGE.

Endotoxin: < 1.0 EU per µg as determined by the LAL method.

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 a 0.2 µm filtered solution of 20mM TrisHCl, 150mM NaCl, 2mM CaCl₂, pH 7.5.

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

Application:

Synonyms: Alpha-Antitrypsin; Alpha Protease Inhibitor; Alpha-Antiproteinase; Serpin A1; SERPINA1; AAT; PI; A1A; A1AT; AAT; alpha1AT; MGC23330; MGC9222; PI1; PRO2275

Immunogen Information:

Sequence: Glu25-Lys418

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.