

## Product datasheet for **TP726816**

### Human Recombinant Protein

#### Product data:

<b>Product Type:</b>	Recombinant Proteins
<b>Description:</b>	Recombinant Human Serpin A1/alpha-1-Antitrypsin (C-6His)
<b>Species:</b>	Human
<b>Expression cDNA Clone or AA Sequence:</b>	Glu25-Lys418
<b>Tag:</b>	C-His
<b>Buffer:</b>	Lyophilized from a 0.2 um filtered solution of 20mM Tris-HCl, 150mM NaCl, 2mM CaCl <sub>2</sub> , pH 7.5.
<b>Note:</b>	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.
<b>Storage:</b>	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.
<b>Stability:</b>	12 months from date of despatch
<b>Synonyms:</b>	Alpha-1-Antitrypsin; Alpha-1 Protease Inhibitor; Alpha-1-Antiproteinase; Serpin A1; SERPINA1; AAT; PI
<b>Summary:</b>	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.



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