

Recombinant Human SERPINA1 protein, His-tagged

Cat. No. SERPINA1-854H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human SERPINA1 (Glu25-Lys418) protein was fused to His-tag at C-terminus and expressed in human 293 cells (HEK293).
Species	Human
Source	HEK293
ProteinLength	Glu25-Lys418
Description	Serpin A1 is also known as Alpha-1-antitrypsin (A1AT), serum trypsin inhibitor, alpha-1 proteinase inhibitor (A1PI), AAT, which belongs to the serpin family. Most serpins inactivate enzymes by binding to them covalently, requiring very high levels to perform their function. Like all serine protease inhibitors, A1AT has a characteristic secondary structure of beta sheets and alpha helices. Serpin A1/A1AT is inhibitor of serine proteases. Its primary target is elastase, but it also has a moderate affinity for plasmin and thrombin. Irreversibly inhibits trypsin, chymotrypsin and plasminogen activator. The aberrant form of SerpinA1 inhibits insulin-induced NO synthesis in platelets, decreases coagulation time and has proteolytic activity against insulin and plasmin. Serpin A1/A1AT protects tissues from enzymes of inflammatory cells, especially neutrophil elastase. Defects in SERPINA1 are the cause of alpha-1-antitrypsin deficiency (A1ATD).
Predicted N Terminal	Glu25
Form	Lyophilized from 0.22

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	µm filtered solution in PBS, pH7.4, 10% trehalose.
Molecular Mass	The protein has a calculated MW of 45.1 kDa. The protein migrates as 55-60 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.
Endotoxin	Less than 1.0 EU per µg by the LAL method.
Purity	>95% as determined by SDS-PAGE.
Storage	For long term storage, the product should be stored at lyophilized state at -20 centigrade or lower. Please avoid repeated freeze-thaw cycles. This product is stable after storage at: -20 to -70 centigrade for 12 months in lyophilized state; -70 centigrade for 3 months under sterile conditions after reconstitution.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 ug/ul. Centrifuge the vial at 4°C before opening to recover the entire contents.

GENE INFORMATION

Gene Name	SERPINA1
Official Symbol	SERPINA1
Synonyms	SERPINA1; serpin peptidase inhibitor, clade A (alpha-1 antiproteinase, antitrypsin), member 1; PI, serine (or cysteine) proteinase inhibitor, clade A (alpha 1 antiproteinase, antitrypsin), member 1; alpha-1-antitrypsin; A1A; A1AT; AAT; alpha 1 antitrypsin; alpha1AT; PI1; protease inhibitor 1 (anti elastase); serpin A1; alpha-1-antiproteinase; alpha-1-antitrypsin null; alpha-1 protease inhibitor; protease inhibitor 1 (anti-elastase), alpha-1-antitrypsin; serine (or cysteine) proteinase inhibitor, clade A,

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member 1; PI; PRO2275; MGC9222; MGC23330

Gene ID 5265

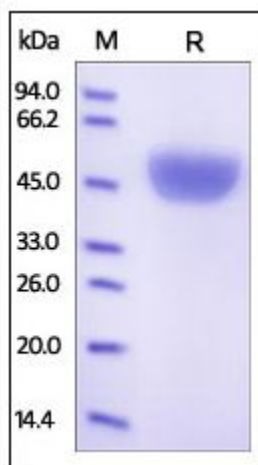
mRNA Refseq NM_000295

Protein Refseq NP_000286

MIM 107400

UniProt ID P01009

**SDS-PAGE of
SERPINA1-854H**



Human Serpin A1, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

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