

SERPINA1 /A1AT, Human CellExp™, human recombinant

CATALOG #:	7235-10	10 µg
ALTERNATE NAMES:	Serpina1, PI, A1A, AAT, PI1, A1AT, MGC9222, PRO2275, MGC23330, alpha1AT, SPAAT	
SOURCE:	HEK 293 cells (Glu 25 - Lys 418)	
PURITY:	≥ 95% by SDS-PAGE gel	
MOL. WEIGHT:	The protein is fused with 6xHis tag at the C-terminus, has a calculated MW of 45.1 kDa. The predicted N-terminus is Glu 25. DTT-reduced Protein migrates as 55-60 kDa due to glycosylation.	
ENDOTOXIN LEVEL:	<1 EU/µg by LAL method	
FORM:	Lyophilized	

FORMULATION: Lyophilized from 0.22 µm filtered solution in PBS. Generally 5-8% Mannitol or trehalose is added as a protectant before lyophilization.

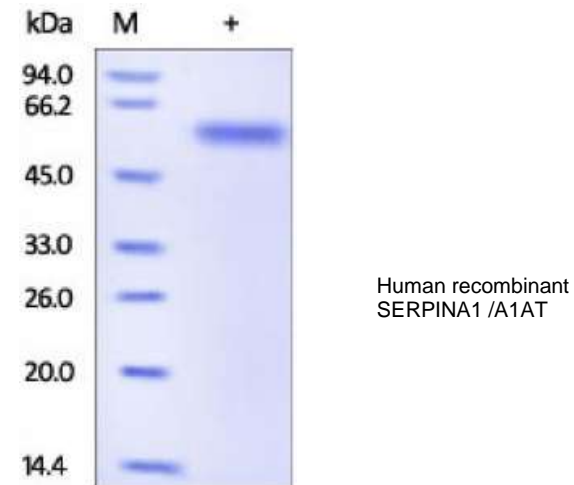
STORAGE CONDITIONS: Store at -20°C. After reconstitution, aliquot and store at -20°C and use within 3 months. Avoid repeated freezing and thawing cycles.

RECONSTITUTION: Centrifuge the vial prior to opening. Reconstitute in sterile PBS, pH 7.4 to a concentration of 50 µg/ml. Do not vortex. This solution can be stored at 2-8°C for up to 1 month. For extended storage, it is recommended to store at -20°C.

DESCRIPTION: Serpin A1 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).

BIOLOGICAL ACTIVITY: Measured by its ability to inhibit trypsin cleavage of a fluorogenic peptide substrate, Mca-RPKPVE-Nval-WRK(Dnp)-NH₂ in 100µl reaction mixture containing 1.25 ng trypsin (Sigma, Catalog #T1426), 10 µM substrate, 50 mM Tris, 10 mM CaCl₂, 0.15 M NaCl, pH 7.5. The IC₅₀ value is approximately <4.5 nM.



RELATED PRODUCTS:

- Serpin E1/PAI-1, human recombinant, (Cat. No. 4731-10, -100, -1000)
- Serpin A6 Antibody (Cat. No. 3906-100)
- Serpin A6 Blocking Peptide (Cat. No. 3906BP-100)
- Neuroserpin, human recombinant, (Cat. No. 7181-10, -50)

FOR RESEARCH USE ONLY! Not to be used in humans.