

Synonym

SerpinA1,PI,A1A,AAT,PI1,A1AT,MGC9222,PRO2275,MGC23330,alpha1AT,S
PAAT

Source

Human Serpin A1, His Tag(SE1-H5226) is expressed from human 293 cells (HEK293). It contains AA Glu 25 - Lys 418 (Accession # [AAH11991](#)).
Predicted N-terminus: Glu 25

Molecular Characterization

Serpin A1(Glu 25 - Lys 418) AAH11991	Poly-his
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This protein carries a polyhistidine tag at the C-terminus

The protein has a calculated MW of 45.4 kDa. The protein migrates as 50-60 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) 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.

Formulation

Lyophilized from 0.22 µm filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

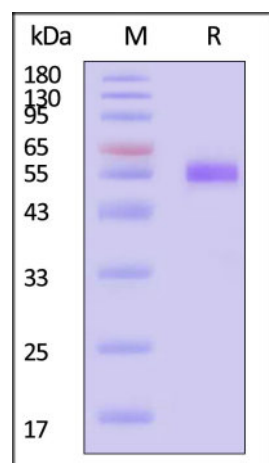
Storage

For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE

Human Serpin A1, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95% (With [Star Ribbon Pre-stained Protein Marker](#)).

Background

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 SERP11 are the cause of alpha-1-antitrypsin deficiency (A1ATD).

Clinical and Translational Updates

Please contact us via TechSupport@acrobiosystems.com if you have any question on this product.