

Recombinant Human SERPINA1

Cat. No. SERPINA1-518H **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Recombinant Antitrypsin protein was expressed in *E. coli* and purified by using conventional chromatography techniques. MW = 44.4 kDa (395 aa).

Species

Human

Source

E. coli

Description

Alpha 1 proteinase inhibitor (Antitrypsin) has a characteristic **secondary structure** of beta sheets and alpha helices. That is a serum glycoprotein synthesized in the liver. It acts as an elastase inhibitor, primarily inhibiting neutrophil elastase, chymotrypsin, collagenase, leucocytic proteases, plasmin, and thrombin, which may be released during inflammatory reactions in the lung. Also Increase in Antitrypsin occurs as an acute phase response to tissue necrosis and inflammation. Serum level of Antitrypsin is elevated in rheumatoid arthritis, bacterial infections, vasculitis, and carcinomatosis.

Amino Acid Sequence

MEDPQGDAAQ KTDTSHHDDQD HPTFNKITPN LAEFAFSLYR QLAHQSNSTN
 IFFSPVSIAT AFAMLSLGTK ADTHDEILEG LNFNLTEIPE AQIHEGFQEL
 LRTLNPDSQ LQLTTGNGLF LSEGLKLVDK FLEDVKKLYH SEAFTVNFQD
 TEEAKKQIND YVEKGTQGKI VDLVKELDRD TVFALVNYIF FKGKWERPFE
 VKDTEEDFH VDQVTTVKVP MMKRLGMFNI QHCKKLSSWV LLMKYLG NAT
 AIFFLPDEGK LQHLENELTH DIITKFLNE DRRSASLHLP KLSITGTYDL
 KSVLGQLGIT KVFSNGADLS GVTEEAPLKL SKAVHKAVLT IDEKGTEAAG
 AMFLEAIPMS IPPEVKFNKP FVFLMIDQNT KSPLFMGKVV NPTQK.

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Form	Liquid. In 20 mM Tris-HCl buffer (pH 7.5) containing 1 mM DTT, 2 mM EDTA, 10% glycerol.
Purity	> 90% by SDS – PAGE.
Concentration	1 mg/ml (determined by Bradford assay).
Storage	Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles.

GENE INFORMATION

Gene Name	SERPINA1 serpin peptidase inhibitor, clade A (alpha-1 antiproteinase, antitrypsin), member 1 [Homo sapiens]
Synonyms	SERPINA1; serpin peptidase inhibitor, clade A (alpha-1 antiproteinase, antitrypsin), member 1; PI; A1A; AAT; PI1; A1AT; MGC9222; PRO2275; MGC23330; serine proteinase inhibitor, clade A, member 1; OTTHUMP00000197150; protease inhibitor 1 (anti-elastase), alpha-1-antitrypsin serine (or cysteine) proteinase inhibitor, clade A, member 1
Gene ID	5265
mRNA Refseq	NM_000295
Protein Refseq	NP_000286
MIM	107400
UniProt ID	P01009

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**Chromosome
Location**

14q32.1

Pathway

Complement and coagulation cascades; Hemostasis

Function

peptidase activity; peptidase inhibitor activity; protease binding; protein binding;
serine-type endopeptidase inhibitor activity

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