
Product Data Sheet

Product Name: SERPINA1 Human
 Cat. No.: GP24529
 Batch No.: 1

Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	Alpha-1-antitrypsin; Alpha-1 protease inhibitor; Alpha-1-antiproteinase; SERPINA1; A1AT; PI; A1A; AAT; PI1; MGC9222; PRO2275; MGC23330.		
Amino Acid Sequence	MEDPQGDAAQ KTDTSHHQD HPTFNKITPN LAEFAFSLYR QLAHQSNSTN IFFSPVSIAT AFAMLSLGTK ADTHDEILEG LNFNLTEIPE AQIHEGFQEL LRTLNPDSQ LQLTTGNGLF LSEGLKLVDK FLEDVKKLYH SEAFTVNFQD TEEAKKQIND YVEKGTQGKI VDLVKELDRD TVFALVNYIF FKGKWERPFE VKDTEEDFDH VDQVTTVKVP MMKRLGMFNI QHCKKLSSWV LLMKYLGAT AIFFLPDEGK LQHLENELTH DIITKFLNE DRRSASLHLP KLSITGTYDL KSVLQGLGIT KVFSNGADLS GVTEEAPLKL SKAVHKAVLT IDEKGTEAAG AMFLEAIPMS IPPEVKFNKP FVFLMIDQNT KSPLFMGKVV NPTQK.		
Formulation	The protein solution contains 20mM Tris-HCl pH-7.5, 1mM DTT, 10% glycerol, and 2mM EDTA.		

Introduction

SERPINA1 is secreted and is a serine protease inhibitor which its targets include elastase, plasmin, collagenase, thrombin, leucocytic proteases, trypsin, chymotrypsin, and plasminogen activator. Defects in SERPINA1 gene can cause emphysema or liver disease. Antral SERPINA1 expression is particularly induced by H. pylori infection. Lung and prostate cancers have shown a significant increase in SERPINA1 serum levels compared with healthy controls though breast cancers did not show a significant change. SERPINA1 is an endogenous inhibitor of serine proteases and inhibits the catalytic domain of human recombinant matriptase in vitro. Rise in SERPINA1 occurs as an acute phase response to tissue necrosis and inflammation. Mutations in SERPINA1 and SLC11A1 genes change the balance between elastase produced by leukocytes during phagocytosis.

Caution: Product has not been fully validated for medical applications. For research use only.

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Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

Background

SERPINA1 Human Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain containing 395 amino acids (25-418) and having a molecular mass of 44.4 kDa. The SERPINA1 protein is purified by proprietary chromatographic techniques.

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