



RayBiotech, Inc.

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Certificate of Analysis and Data Sheet

Recombinant Human alpha-1-Antitrypsin

Catalog No.
228-10005

Source:
Escherichia Coli

Synonyms

Alpha-1-antitrypsin, Alpha-1 protease inhibitor, Alpha-1-antiproteinase, SERPINA1, A1AT, PI, A1A, AAT, PI1, MGC9222, PRO2275, MGC23330.

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.

Description

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.

Physical Appearance

Sterile Filtered colorless solution.

Formulation

The protein solution contains 20mM Tris-HCl pH-7.5, 1mM DTT, 10% glycerol, and 2mM EDTA.

Stability

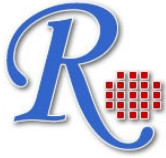
SERPINA1 although stable 4°C for 4 weeks, should be stored desiccated below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

Please prevent freeze-thaw cycles.

Purity

Greater than 90% as determined by SDS-PAGE.

**The products are furnished for LABORATORY RESEARCH USE ONLY.
Not for diagnostic or therapeutic use.**



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Amino Acid Sequence

MEDPQGDAAQ KTDTSHHQD HPTFNKITPN LAEFAFSLYR QLAHQSNSTN
IFFSPVSIAT AFAMLSLGTK ADTHDEILEG LNFNLTEIPE AQIHEGFQEL
LRTLNQPSQ LQLTTGNGLF LSEGLKLVDK FLEDVKKLYH SEAFVNFQD
TEEAKKQIND YVEKGTQGI VDLVKELDRD TVFALVNYIF FKGKWERPFE
VKDTEEDFH VDQVTTVKVP MMKRLGMFNI QHCKKLSSWV LLMKYLGNAT
AIFFLPDEGK LQHLENELTH DIITKFLNE DRRSASLHLP KLSITGTYDL
KSVLGQLGIT KVFSNGADLS GVTEEAPLKL SKAVHKAVLT IDEKGTEAAG
AMFLEAIPMS IPPEVKFNKP FVFLMIDQNT KSPLFMGKVV NPTQK.

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