



Product Datasheet

Product Name	Alpha 1 Antitrypsin Human Recombinant
Cata No	CB501444
Source	<i>Escherichia Coli.</i>
Synonyms	Alpha-1-antitrypsin, Alpha-1 protease inhibitor, Alpha-1-antiproteinase, SERPINA1, A1AT, PI, A1A, AAT, PI1, MGC9222, PRO2275, MGC23330.

Description

A1AT 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 A1AT 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.

A1AT 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 A1AT and SLC11A1 genes change the balance between elastase produced by leukocytes during phagocytosis.

A1AT 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 A1AT protein is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile Filtered colorless solution.

Purity

Greater than 90% as determined by SDS-PAGE.

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.

Sequence

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