



Goat anti Human $\alpha 1$ Antitrypsin polyclonal antibody (CABT-L500)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Specificity	This antibody is specific for $\alpha 1$ AT as demonstrated by immunoelectrophoresis and ELISA.
Target	$\alpha 1$ -Antitrypsin
Immunogen	Human $\alpha 1$ antitrypsin purified from plasma.
Isotype	IgG
Source/Host	Goat
Species Reactivity	Human
Purification	Affinity purified
Conjugate	Unconjugated
Applications	IEP, ELISA
Format	Liquid
Size	0.5 mg
Buffer	10 mM HEPES, pH 7.4, 150 mM NaCl, 50% (v/v) glycerol.
Preservative	None
Storage	Store between -10 and -20°C. Product will become viscous but will not freeze. Avoid storage in frost-free freezers. Keep vial tightly capped. Allow product to warm to room temperature and gently mix before use.

BACKGROUND

Introduction

Alpha 1Antitrypsin (α 1AT), also known as Alpha 1Proteinase inhibitor (α 1PI), is the most abundant protease inhibitor in blood and a member of the SERPIN family of proteinase inhibitors. Serum levels are typically 1.3 mg/ml (25 μ M) but α 1AT is an acute phase protein and concentrations can rise four-fold during inflammatory episodes or tissue injury. Low levels in circulation have been associated with pulmonary disease such as emphysema. α 1AT is a single chain molecule with a mass of 52,000 daltons that is produced primarily in the liver and to a lesser extent by blood monocytes and intestinal epithelium. Based on association rates, the primary target enzyme for α 1AT is believed to be neutrophil elastase, but α 1AT is a broad-spectrum inhibitor for many serine proteinases and the main role of α 1AT in vivo is likely that of a "backup" inhibitor and proteinase scavenger in fluids and tissues. Although the association rates of α 1AT with other enzymes are lower, the high concentration in plasma makes it an important inhibitor of activated Protein C, activated F.XI, thrombin and plasmin. Enzyme inhibition by α 1AT occurs through proteolytic cleavage between Met358 and Ser359, which induces a conformational change in α 1AT locking the enzyme into a stable, inactive 1:1 enzyme-inhibitor complex.

Keywords

Alpha-1 Antitrypsin; α 1-antitrypsin;A1AT;

GENE INFORMATION

Entrez Gene ID

[5265](#)

UniProt ID

[P01009](#)
