



# 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

<b>Specificity</b>	This antibody is specific for $\alpha$ 1 AT as demonstrated by immunoelectrophoresis and ELISA.
<b>Target</b>	$\alpha$ 1-Antitrypsin
<b>Immunogen</b>	Human $\alpha$ 1 antitrypsin purified from plasma.
<b>Isotype</b>	IgG
<b>Source/Host</b>	Goat
<b>Species Reactivity</b>	Human
<b>Purification</b>	Affinity purified
<b>Conjugate</b>	Unconjugated
<b>Applications</b>	IEP, ELISA
<b>Format</b>	Liquid
<b>Size</b>	0.5 mg
<b>Buffer</b>	10 mM HEPES, pH 7.4, 150 mM NaCl, 50% (v/v) glycerol.
<b>Preservative</b>	None
<b>Storage</b>	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 ( $\alpha$ 1AT), also known as Alpha 1Proteinase inhibitor ( $\alpha$ 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  $\mu$ M) but  $\alpha$ 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.  $\alpha$ 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  $\alpha$ 1AT is believed to be neutrophil elastase, but  $\alpha$ 1AT is a broad-spectrum inhibitor for many serine proteinases and the main role of  $\alpha$ 1AT in vivo is likely that of a "backup" inhibitor and proteinase scavenger in fluids and tissues. Although the association rates of  $\alpha$ 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  $\alpha$ 1AT occurs through proteolytic cleavage between Met358 and Ser359, which induces a conformational change in  $\alpha$ 1AT locking the enzyme into a stable, inactive 1:1 enzyme-inhibitor complex.

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## Keywords

Alpha-1 Antitrypsin; $\alpha$ 1-antitrypsin;A1AT;

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# GENE INFORMATION

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## Entrez Gene ID

[5265](#)

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## UniProt ID

[P01009](#)

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