



Rabbit Anti-Human Carbamylated Alpha-1 Antitrypsin/SERPINA1 polyclonal antibody (CABT-L4576)

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

PRODUCT INFORMATION

Product Overview	This Pab can be used for Western blot applications. This antibody recognizes carbamylated alpha-1 antitrypsin at 47 kDa from human samples.
Specificity	This antibody recognizes carbamylated alpha-1 antitrypsin at 47 kDa from human samples.
Immunogen	Synthetic peptide surrounding homocitrulline 359 (335 of the mature enzyme) of human alpha-1 antitrypsin
Isotype	IgG
Source/Host	Rabbit
Species Reactivity	Human
Purification	Affinity purified
Conjugate	Unconjugated
Applications	WB
Format	Liquid
Concentration	Lot specific
Size	500 µl
Buffer	PBS, pH 7.2, with 50% glycerol and 0.02% sodium azide
Preservative	0.02% sodium azide

Storage	Store -20°C for long term.
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Ship	Wet ice
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BACKGROUND

Introduction

Alpha-1 antitrypsin is a serine protease inhibitor and member of the serpin superfamily. It has a five-stranded A β -sheet and a mobile reactive center loop that acts as a pseudosubstrate for various proteases. Alpha-1 antitrypsin binds to a protease, undergoes proteolytic cleavage, and forms a covalent linkage between a carboxyl group in the reactive loop and the serine hydroxyl of the protease active site, effectively inactivating the enzyme which is then cleared from circulation. The primary targets of alpha-1 antitrypsin are neutrophil elastase and proteinase 3, however, it also inhibits trypsin, kallikreins 7 and 14, and matriptase. Alpha-1 antitrypsin protects the lower respiratory tract from proteolytic destruction via inhibition of neutrophil elastase and reduced serum levels of alpha-1 antitrypsin have been linked to early-onset liver disease and emphysema. Alpha-1 antitrypsin is an acute-phase protein that reduces production of inflammatory cytokines, inhibits apoptosis, blocks leukocyte degranulation and migration, as well as suppresses NF- κ B nuclear translocation in monocytes. It delays disease onset in mouse models of inflammatory disease, including collagen-induced arthritis and experimental autoimmune encephalomyelitis (EAE). Alpha-1 antitrypsin is subject to post-translational modifications such as glycosylation and carbamylation in vivo. Carbamylated alpha-1 antitrypsin has been found in synovial fluid samples from rheumatoid arthritis patients and is predicted to act as an autoantigen.

Keywords	Carbamylated A1AT;Carbamylated AAT;Alpha-1 Antitrypsin (Homocitrulline 359);Carbamylated α 1-Antitrypsin
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GENE INFORMATION

UniProt ID	P01009
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