abcam

Product datasheet

Anti-alpha 1 Antitrypsin antibody [B9] ab9399

2 Abreviews 19 References 3 Images

Overview

Product name	Anti-alpha 1 Antitrypsin antibody [B9]
Description	Mouse monoclonal [B9] to alpha 1 Antitrypsin
Host species	Mouse
Tested applications	**Suitable for:** ELISA, WB, IHC-P
Species reactivity	**Reacts with:** Human
Immunogen	Full length protein corresponding to Human alpha 1 Antitrypsin. Database link: **P01009**
General notes	This product was changed from ascites to tissue culture supernatant on 28/11/2017. Lot numbers higher than GR286035-1, GR146648-9 and GR146648-10 will be from tissue culture supernatant. Please note that the dilutions may need to be adjusted accordingly. The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Preservative: 0.1% Sodium azide
Purity	Protein A purified
Clonality	Monoclonal
Clone number	B9
Myeloma	NS0/1
Isotype	IgG1

Light chain type	unknown

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab9399 in the following tested applications.

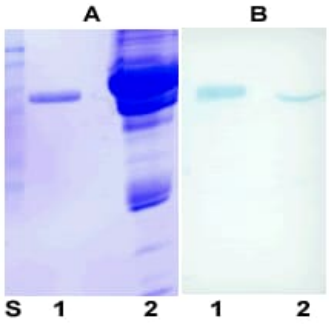
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ELISA		Use at an assay dependent concentration.
WB		Use at an assay dependent concentration.
IHC-P		Use at an assay dependent concentration.

Target

Function	Inhibitor of serine proteases. Its primary target is elastase, but it also has a moderate affinity for plasmin and thrombin. Irreversibly inhibits trypsin, chymotrypsin and plasminogen activator. The aberrant form inhibits insulin-induced NO synthesis in platelets, decreases coagulation time and has proteolytic activity against insulin and plasmin. Short peptide from AAT: reversible chymotrypsin inhibitor. It also inhibits elastase, but not trypsin. Its major physiological function is the protection of the lower respiratory tract against proteolytic destruction by human leukocyte elastase (HLE).
Tissue specificity	Ubiquitous. Expressed in leukocytes and plasma.
Involvement in disease	Alpha-1-antitrypsin deficiency
Sequence similarities	Belongs to the serpin family.
Domain	The reactive center loop (RCL) extends out from the body of the protein and directs binding to the target protease. The protease cleaves the serpin at the reactive site within the RCL, establishing a covalent linkage between the carboxyl group of the serpin reactive site and the serine hydroxyl of the protease. The resulting inactive serpin-protease complex is highly stable.
Post-translational modifications	N-glycosylated. Differential glycosylation produces a number of isoforms. N-linked glycan at Asn-107 is alternatively di-antennary, tri-antennary or tetra-antennary. The glycan at Asn-70 is di-antennary with trace amounts of tri-antennary. Glycan at Asn-271 is exclusively di-antennary. Structure of glycans at Asn-70 and Asn-271 is Hex5HexNAc4. The structure of the antennae is Neu5Ac(alpha1-6)Gal(beta1-4)GlcNAc attached to the core structure Man(alpha1-6)[Man(alpha1-3)]Man(beta1-4)GlcNAc(beta1-4)GlcNAc. Some antennae are fucosylated, which forms a Lewis-X determinant. Proteolytic processing may yield the truncated form that ranges from Asp-30 to Lys-418.
Cellular localization	Secreted. Endoplasmic reticulum. The S and Z allele are not secreted effectively and accumulate intracellularly in the endoplasmic reticulum and Secreted, extracellular space, extracellular matrix.

Images



Western blot - Anti-alpha 1 Antitrypsin antibody [B9] (ab9399)

Western blot of alpha 1 antitrypsin using ab9399 at a concentration of 0.5 µg/ml.
lane 2 - human plasma, 2 µl
lane S - standard proteins.
A - SDS-PAGE, Coomasie staining
B - Western blot with ab9399.

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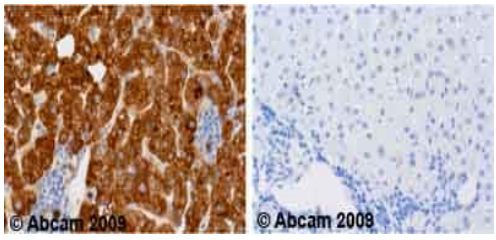

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-alpha 1 Antitrypsin antibody [B9] (ab9399)

Ab9399 staining human normal liver. Staining is localized to the cytoplasm.
Left panel: with primary antibody at 1 ug/ml. Right panel: isotype control.
Sections were stained using an automated system DAKO Autostainer Plus , at room temperature. Sections were rehydrated and antigen retrieved with the Dako 3-in-1 AR buffer, EDTA pH 9.0 in a DAKO PT Link. Slides were peroxidase blocked in 3% H_2O_2 in methanol for 10 minutes. They were then blocked with Dako Protein block for 10 minutes (containing casein 0.25% in PBS) then incubated with primary antibody for 20 minutes and detected with Dako Envision Flex amplification kit for 30 minutes. Colorimetric detection was completed with Diaminobenzidine for 5 minutes. Slides were counterstained with Haematoxylin and coverslipped under DePeX. Please note that for manual staining we recommend to optimize the primary antibody concentration and incubation time (overnight incubation), and amplification may be required.

Western blot - Anti-alpha 1 Antitrypsin antibody [B9] (ab9399)

Anti-alpha 1 Antitrypsin antibody [B9] (ab9399) at 1 µg/ml + Native human alpha 1 Antitrypsin protein (Active) (**ab91136**) at 0.1 µg

Secondary

Goat Anti-Mouse IgG H&L (HRP) preadsorbed (**ab97040**) at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Exposure time: 30 seconds

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