

## Product datasheet

# Anti-alpha 1 Antitrypsin antibody [EPSISR16] ab133642

Recombinant RabMAb

[3 References](#) [3 Images](#)

### Overview

<b>Product name</b>	Anti-alpha 1 Antitrypsin antibody [EPSISR16]
<b>Description</b>	Rabbit monoclonal [EPSISR16] to alpha 1 Antitrypsin
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> WB, IP <b>Unsuitable for:</b> IHC-P
<b>Species reactivity</b>	<b>Reacts with:</b> Human
<b>Immunogen</b>	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
<b>Positive control</b>	WB: Human platelet, fetal kidney and plasma lysates. IP: Human plasma lysate.
<b>General notes</b>	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> <li>- High batch-to-batch consistency and reproducibility</li> <li>- Improved sensitivity and specificity</li> <li>- Long-term security of supply</li> <li>- Animal-free production</li> </ul> <p>For more information <a href="#">see here</a>.</p> <p>Our RabMAb<sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb<sup>®</sup> patents</a>.</p>

### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
<b>Storage buffer</b>	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 9% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA, 50% Tissue culture supernatant
<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	EPSISR16
<b>Isotype</b>	IgG

## Applications

**The Abpromise guarantee** Our [Abpromise guarantee](#) covers the use of ab133642 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

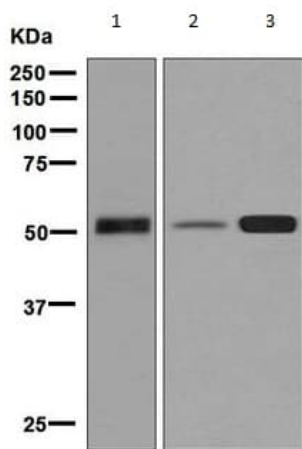
Application	Abreviews	Notes
WB		1/1000 - 1/10000. Predicted molecular weight: 46 kDa.
IP		1/10 - 1/100.

**Application notes** Is unsuitable for IHC-P.

## Target

<b>Function</b>	<p>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.</p> <p>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).</p>
<b>Tissue specificity</b>	Ubiquitous. Expressed in leukocytes and plasma.
<b>Involvement in disease</b>	Alpha-1-antitrypsin deficiency
<b>Sequence similarities</b>	Belongs to the serpin family.
<b>Domain</b>	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.
<b>Post-translational modifications</b>	<p>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.</p> <p>Proteolytic processing may yield the truncated form that ranges from Asp-30 to Lys-418.</p>
<b>Cellular localization</b>	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 [EPSISR16] (ab133642)

**All lanes :** Anti-alpha 1 Antitrypsin antibody [EPSISR16] (ab133642) at 1/1000 dilution

**Lane 1 :** Human platelet lysate

**Lane 2 :** Fetal kidney lysate

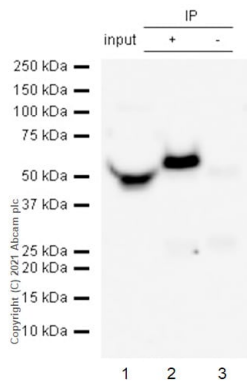
**Lane 3 :** Human plasma lysate

Lysates/proteins at 10 µg per lane.

### Secondary

**All lanes :** HRP labelled goat anti-rabbit at 1/2000 dilution

**Predicted band size:** 46 kDa



Immunoprecipitation - Anti-alpha 1 Antitrypsin antibody [EPSISR16] (ab133642)

alpha 1 Antitrypsin was immunoprecipitated from 0.35 mg Human plasma 10 µg with 133642 at 1/50 dilution (2µg). VeriBlot for IP Detection Reagent (HRP)(ab131366) was used at 1/5000 dilution.

**Lane 1:** Human plasma 10 µg

**Lane 2:** ab133642 IP in Human plasma

**Lane 3:** Rabbit monoclonal IgG (ab172730) instead of ab133642 in Human plasma

Blocking and dilution buffer and concentration: 5% NFDm/TBST.

### Why choose a recombinant antibody?



**Research with confidence**  
Consistent and reproducible results



**Long-term and scalable supply**  
Recombinant technology



**Success from the first experiment**  
Confirmed specificity



**Ethical standards compliant**  
Animal-free production

Anti-alpha 1 Antitrypsin antibody [EPSISR16]  
(ab133642)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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