

Product datasheet

Anti-alpha 1 Antitrypsin antibody ab223263

1 Image

Overview

Product name	Anti-alpha 1 Antitrypsin antibody
Description	Goat polyclonal to alpha 1 Antitrypsin
Host species	Goat
Tested applications	Suitable for: WB
Species reactivity	Reacts with: Human Predicted to work with: Orangutan 
Immunogen	Synthetic peptide corresponding to Human alpha 1 Antitrypsin aa 33-45 (internal sequence) (Cysteine residue). The immunizing peptide represents the N terminus of the mature protein (NP_000286.3). Sequence: C-QKTDTSHHDDQHP Database link: P01009  Run BLAST with  Run BLAST with
Positive control	WB: Albumin-depleted human plasma.

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 long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.30 Preservative: 0.02% Sodium azide Constituents: 0.5% BSA, Tris buffered saline
Purity	Immunogen affinity purified
Purification notes	ab223263 was purified from goat serum by ammonium sulphate precipitation followed by antigen affinity chromatography using the immunizing peptide.
Clonality	Polyclonal
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab223263** 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		Use a concentration of 0.3 - 1 µg/ml. Detects a band of approximately 55 kDa (predicted molecular weight: 46 kDa).

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

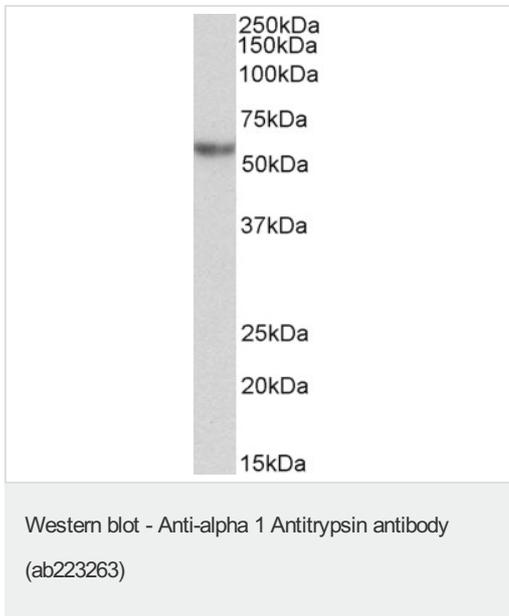
N-glycosylated. Differential glycosylation produces a number of isoforms. N-linked glycan at Asn-107 is alternatively di-antennary, tri-antennary or tetra-antennary. The glycan at Asn-70 is di-antennary with trace amounts of tri-antennary. Glycan at Asn-271 is exclusively di-antennary. Structure of glycans 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



Anti-alpha 1 Antitrypsin antibody (ab223263) at 0.3 µg/ml + Albumin-depleted human plasma (in RIPA buffer) at 35 µg

Developed using the ECL technique.

Predicted band size: 46 kDa

Observed band size: 55 kDa

[why is the actual band size different from the predicted?](#)

Primary incubation was 1 hour.

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