abcam

Product datasheet

Anti-alpha 1 Antitrypsin antibody [TMF1 4B5] ab116604

1 References

Overview

Product name	Anti-alpha 1 Antitrypsin antibody [TMF1 4B5]
Description	Mouse monoclonal [TMF1 4B5] to alpha 1 Antitrypsin
Host species	Mouse
Tested applications	**Suitable for:** ELISA, IP, RIA
Species reactivity	**Reacts with:** Mouse, Human
Immunogen	Purified Human alpha 1 Antitrypsin.
General notes	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 (up to 6 months). Store at -20°C long term.
Storage buffer	pH: 7.40 Preservative: 0.05% Sodium azide Constituents: 0.1% BSA, 99.85% PBS
Purity	Protein A purified
Clonality	Monoclonal
Clone number	TMF1 4B5
Isotype	IgG2a

Applications

The Abpromise guarantee	Our **Abpromise guarantee** covers the use of ab116604 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.
IP		Use at an assay dependent concentration.
RIA		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.

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- We investigate all quality concerns to ensure our products perform to the highest standards

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