abcam

ab19170

FITC Anti-alpha 1 Antitrypsin antibody

Anti-alpha 1 Antitrypsin antibody conjugated to FITC is a goat polyclonal antibody suitable for ELISA, flow cytometry, ICC, ICC/IF, and reacts with human samples.

Key facts

Isotype	IgG
Host species	Goat
Conjugation	FITC
Excitation/Emission	Ex: 495nm, Em: 519nm
Storage buffer	pH: 6.8 - 7.4 Preservative: 0.1% Sodium azide Constituents: PBS, 0.2% BSA
Form	Liquid
Clonality	Polyclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Purification technique	Affinity purification Immunogen
Specificity	By immunoelectrophoresis and ELISA this antibody reacts specifically with alpha 1 antitrypsin. This antibody may cross react with alpha 1 antitrypsin light chain from other species.
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	ab19170 was isolated by affinity chromatography using antigen coupled to agarose beads and conjugated to fluorescein isothiocyanate (FITC).

Reactivity data

ICC

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

ELISA

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

ICC/IF

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information SERPINA1

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).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Alpha 1 Antitrypsin also known as A1AT or alpha-1 proteinase inhibitor is a serine protease inhibitor with a molecular mass of about 52 kDa. This protein mainly expresses in the liver and found in high concentrations in the blood plasma. A1AT protects tissues from enzymes of inflammatory cells especially neutrophil elastase. Its expression level is regulated by the liver making it a significant player in maintaining tissue integrity.
Biological function summary	A1AT regulates protease activity by forming complexes with target enzymes. It specifically inhibits neutrophil elastase a powerful enzyme capable of degrading elastin an important component of connective tissues. A1AT prevents excessive tissue damage during inflammation by maintaining a balance in protease activity within connective tissues across various organs.
Pathways	Alpha 1 Antitrypsin functions within the proteolytic pathways involved in inflammatory response and tissue remodeling. A1AT is closely related to neutrophil elastase in these processes. It interacts with other protease inhibitors like alpha 2-macroglobulin reinforcing its protective role against enzymatic activity that can lead to tissue destruction under pathophysiological conditions.
Associated diseases and disorders	Alpha 1 Antitrypsin deficiency is a genetic condition that can cause chronic obstructive pulmonary disease (COPD) and liver cirrhosis. Deficient A1AT levels result in unregulated elastase activity leading to lung tissue damage and impaired liver function. Other proteins such as MMP-9 collaborate with elastase in exacerbating tissue damage illustrating how insufficient A1AT can significantly contribute to disease development.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

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In the unlikely event of one of our products not working as expected, you are covered by our product promise.

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