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Polyclonal Antibody to Alpha-1-antitrypsin - Serum

Alternate names: AAT, Alpha-1 protease inhibitor, Alpha-1-antiproteinase, SERPINA1

Catalog No.: TA319139

Quantity: 2 ml

Concentration: 90.0 mg/ml (prior to lyophil. by refractometry)

Background: Alpha-1 Antitrypsin is a plasma protein synthesised in the liver. It consists of a single polypeptide chain and has a molecular weight of 52 kDa. A serine protease inhibitor, its primary function is the protection of lung tissue from the action of neutrophil elastase.

Uniprot ID: P01009

NCBI: 9606

GeneID: 5265

Host: Goat

Immunogen: Native Protein Alpha 1-Anti-Trypsin from Human Plasma.

Format: **State:** Lyophilized Serum prepared from monospecific antiserum by a Delipidation and Defibrination
Buffer System: 0.02M Potassium Phosphate, 0.15M Sodium Chloride, pH 7.2
Preservatives: 0.01% Sodium Azide
Stabilizers: None
Reconstitution: Restore with 2.0 ml of deionized water or equivalent.

Applications: Suitable for Immunoblotting (western or dot blot), ELISA, immunoprecipitation and most immunological methods requiring high titer and specificity.
This product has been assayed against 1.0 µg of Alpha 1-Anti-Trypsin [Human Plasma] in a standard Sandwich ELISA using Peroxidase conjugated Affinity Purified anti-Goat IgG [H&L] (Rabbit) and (ABTS (2,2'-azino-bis-[3-ethylbenthiazoline-6-sulfonic acid]) as a substrate for 30 minutes at room temperature.
Recommended Dilutions:
ELISA: 1/20,000-1/100,000.
Western Blot: 1/2,000-1/10,000.
Immunohistochemistry: 1/500-1/2,500.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity: Assay by immunoelectrophoresis resulted in a single precipitin arc against purified and partially purified a1-Anti-Trypsin [Human Plasma].
Cross reactivity against Alpha 1-Anti-Trypsin from other sources is unknown.

Storage:

Store lyophilized at 2-8°C for 6 months or at -20°C long term.
After reconstitution store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C long term.
Avoid repeated freezing and thawing.
Shelf life: one year from despatch.

Product Citations:

Purchased from Acris:
Purified antibody is cited in:
1. Schachner T, Golderer G, Sarg B, Lindner HH, Bonaros N, Mikuz G, et al. The amounts of alpha 1 antitrypsin protein are reduced in the vascular wall of the acutely dissected human ascending aorta. Eur J Cardiothorac Surg. 2010 Mar;37(3):684-90. doi: 10.1016/j.ejcts.2009.07.025. Epub 2009 Aug 25. PubMed PMID: 19709897.

Pictures:

Goat-anti-Alpha-1-Anti-Trypsin (TA319139, red), Rabbit anti-Transferrin , and Mouse-a-GST were used in a multiplex system to detect target proteins under reducing (R) conditions (+4% BME) in albumin depleted human serum with 320 ng of added GST. Membrane was probed with three primary antibodies at 1:1000 dilution. Detection shown was using DyLight549 Donkey anti-Rabbit IgG, DyLight 488 Donkey anti-Mouse IgG , and DyLight 649 Donkey anti-Goat IgG.

Goat anti Alpha-1anti-Trypsin antibody was used to detect Alpha-1anti-Trypsin under reducing (R) conditions. Reduced sample of purified target protein contained 4% BME and were boiled for 5 minutes. Samples of ~1ug of protein per lane were run by SDS-PAGE. Protein was transferred to nitrocellulose and probed with 1:3000 dilution of primary antibody. Detection shown was using Dylight 488 conjugated Donkey anti goat 1:10K in TBS/MB-070 1 hr RT).

Primary and Dylight conjugated secondary antibodies were used to detect: Human transferrin ; Alpha 1 anti trypsin and Human IgG in a multiplex fluorescent WB of human serum. Each primary antibody was diluted to 1:1000 in IRdye blocking buffer (MB-070) and incubated for 2 hrs at RT. Blot was 3X in TTBS, 1X in TBS and probed with secondary antibodies diluted 1:10000) in IRdye blocking buffer and incubated ~ 1hr at 4 degrees.