Goat Anti-Human Antithrombin (ATIII) Affinity-Purified IgG (0.5 mg)

Catalogue #: GAAT-AP
Lot #: SAMPLE
Expiry date: **/****
Store at -10 to -20°C.

For Research Use Only.
Not for use in diagnostic procedures.

Description of Antithrombin (ATIII)

Antithrombin, also known as Antithrombin III (ATIII), is a member of the SERPIN family of proteinase inhibitors and the primary inhibitor of thrombin in plasma. It is produced in the liver and circulates in plasma at ~200 µg/mL (~3.5 µM). Antithrombin inhibits a broad spectrum of serine proteases including thrombin, activated forms of factor X, factor IX, factor XII, as well as kallikrein, plasmin and urokinase. Enzyme inhibition by antithrombin occurs through proteolytic cleavage at Arg^{385}-Ser^{386} and subsequent rapid formation of a stable, inactive 1:1 enzyme-antithrombin complex. Heparin has a profound accelerating effect on the inhibitory activity of antithrombin towards some enzymes. For example, the rate of inhibition of thrombin and activated factor X is increased 1000-fold in the presence of optimal concentrations of heparin, whereas heparin has relatively little effect on the inhibition rate of activated factor XI, activated factor XII and kallikrein. Antithrombin is a single chain molecule with a molecular weight of 59 kDa. Interaction with thrombin results in an SDS-stable thrombin-antithrombin complex of 96 kDa[1-3].

References and Reviews

1. Damus PS, Rosenberg RD; Antithrombin – Heparin Cofactor; Methods in Enzymology 45, pp 653-669, 1976.
2. Harpel PC; Blood Proteolytic Enzyme Inhibitors: Their Role in Modulating Blood Coagulation and Fibrinolytic Enzyme Pathways; in Hemostasis and Thrombosis, eds. RW Colman, J Hirsh, VJ Marder and EW Salzman, pp. 738-747, J.B Lippincott Co., Philadelphia PA, USA, 1982.
3. Griffith MJ, Noyes CM, Church FC; Reactive Site Peptide Structural Similarity between Heparin Cofactor II and Antithrombin III: JBC: 260, pp 2218-2225, 1985.

Product Descriptions

Description:
Vial containing 0.250 ml of IgG purified by affinity-chromatography on immobilized ATIII. Total protein is 0.5 mg.

Format:
Affinity-purified IgG (APIgG), clear liquid.

Host Animal:
Goat

Immunogen:
Human antithrombin purified from plasma.

Concentration:
IgG concentration is 2 mg/mL, determined by absorbance using an extinction coefficient ($E^{1\%}_{280}$) of 13.4.

Buffer:
10 mM HEPES, pH 7.4, 0.15 M NaCl, 50% (v/v) glycerol.

Storage:
Store between -10 and -20°C. Product will become viscous but will not freeze. Avoid storage in frost-free freezers. Keep vial tightly capped. Allow product to warm to room temperature and gently mix before use.

Specificity:
This antibody is specific for antithrombin as demonstrated by immunoelectrophoresis and ELISA.

Applications:
Suitable as a source of enriched antibodies to antithrombin.

Neutralizing activity:
Not determined.

Related Products

GAAT-IG	Goat Anti-ATIII, whole IgG from antiserum
SAAT-IG	Sheep Anti-ATIII, whole IgG from antiserum
SAAT-AP	Sheep Anti-ATIII, affinity-purified IgG
SAAT-APHRP	Sheep Anti-ATIII, APIgG-peroxidase
ATIII-EIA	Paired antibody set for ELISA of ATIII, 5 x 96 wells
TAT-EIA	Paired antibody ELISA of Thrombin-ATIII complexes
AT-NU10	Paired antibody set for ATIII neutralization in plasma
ATIII-DP	Human plasma deficient in ATIII, immune depleted
ATHC-DP	Human ATIII & HCII def plasma, immune depleted

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