

Product Specification Sheet

Antithrombin III, Human Plasma

Cat. # ATH35-N-100

Purified Antithrombin III, Human Plasma

SIZE: 100 ug

Antithrombin (AT) is a small protein molecule that inactivates several enzymes of the coagulation system. It is a glycoprotein produced by the liver and consists of 432 amino acids. It contains three disulfide bonds and a total of four possible glycosylation sites. α -Antithrombin is the dominant form of antithrombin found in blood plasma and has an oligosaccharide occupying each of its four glycosylation sites. A single glycosylation site remains consistently un-occupied in the minor form of antithrombin, β -antithrombin.

Antithrombin is also termed Antithrombin III (AT III). The designations Antithrombin I through to Antithrombin IV originate in early studies. Antithrombin I (AT I) refers to the absorption of thrombin onto fibrin after thrombin has activated fibrinogen. Antithrombin II (AT II) refers to a cofactor in plasma, which together with heparin interferes with the interaction of thrombin and fibrinogen. Antithrombin III (AT III) refers to a substance in plasma that inactivates thrombin. Antithrombin IV (AT IV) refers to an antithrombin that becomes activated during and shortly after blood coagulation. Only AT III and possibly AT I are medically significant. AT III is generally referred to solely as "Antithrombin". Antithrombin III is found in normal serum ~ 0.15 mg/ml. Found at higher levels in plasma than in serum because of complexing with thrombin during coagulation. Its potency is strongly enhanced by heparin. Clinically, reduced levels are indicative of hypercoagulability.

Source of Antigen, Antibodies, and positive controls

Human Antithrombin III was purified from plasma (>95%, ~58 Kda). It is supplied lyophilized in a buffer (50 mM Tris-Cl, pH 8.0, 150 mM NaCl). Reconstitute powder in 100 ul water to prepare 100 ug/ml stock and store frozen at -20oC in suitable aliquots. Do not freeze and thaw.

All human derived material has been tested negative for HIV, HCV, and HbSAg. Nevertheless, all precautions should be taken and samples be treated as potentially hazardous. Store powder at -20oC. Reconstitute powder at 100 ug/ml or higher in PBS or other buffers. Store at -20oC in suitable aliquots. Stable for up to 6 months.

Recommended Usage

Western Blotting use at 100-500 ng per lane and detect with appropriate antibodies (#APOA11-S). Human AT III s approx. ~58 KDa (1).

ELISA (1:10K-1:100K; using 50-100 ng of control protein/well).

General References: Yin ET (1971) JBC 246, 3712-3719; Conrad J (1983) Haemostasis 13, 36-3-368; Stephen AW (1987) PNAS 84, 3886-3890

*This product is for In vitro research use only.

Related material available from ADI

Catalog#	ProdDescription
ATH35-N-100	Antithrombin III, Human Plasma, purified
ATH36-N-100	Antithrombin III, Mouse Plasma, purified
ATH35-A	Anti-Human Antithrombin III IgG, purified
ATH37-A	Anti-Human Antithrombin III IgG, purified
RP-784	Recombinant Human Factor VIII
RP-794	Recombinant Human Factor VIIa
RP-942	Recombinant Human Factor VIII Related Antigen

ATH35-N-100

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