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# Human Antithrombin III

## Product No. ADG433N

#### Description

Antithrombin III (ATIII) is a single chain glycoprotein with a molecular weight of 58,000. It is a member of the serpin (serine protease inhibitor) super family and is considered to be the most important inhibitor in the coagulation cascade <sup>(1,2)</sup>. ATIII inhibits a wide spectrum of serine proteases including Thrombin, Factors IXa, Xa and XIa, Kallikrein, Plasmin, Urokinase, C1-esterase, and Trypsin. The mechanism of inhibition involves the formation of a stable 1:1 complex between the active site of the protease and ATIII.

ATIII is prepared from fresh frozen plasma by heparin-agarose affinity chromatography.

#### **Properties**

Antithrombin III contains three intra-chain disulfide bonds, a carbohydrate rich domain, an NH<sub>2</sub>terminal heparin binding domain, and a COOHterminal serine protease binding domain.

Molecular weight: 58,000 Da Extinction coefficient: 6.2

#### **Specific activity**

Specific activity is given in U/mg. Specific Activity is determined by Instrumentation Laboratories Liquid Antithrombin Kit #002030100, Assay Principle: Factor Xa is inhibited by ATIII in the presence of excess heparin. See vial label for lotspecific activity.

### Warning

The product is of humen blood/plasma origin. Although the starting material was tested and was found negative for HIV-1/2, HIV antigen(s), HbsAg, STS, anti-HCV, anti-HBcore and HTLV I & II, extrem caution should be used when handling this material as there is a margin of error an all tests, and testing does not always disclose pathogens or other harmful substances contained in human blood/plasma product.

#### Presentation

1 vial containing 1 mg of protein in a 50% vol/vol glycerol/water solution. See vial label for lot-specific concentration.

#### **Storage and Stability**

Store frozen at -20°C. Do <u>not</u> subject to freezethaw cycles! Spin briefly before opening.

#### References

- Griffith, MJ, In Blood Coagulation, ed. Zwaal and Hemker, pp. 259-283, Amersterdam: Elsevier, 1986.
- 2. Rosenberg, RD, et al., J Clin Invest, 74, 1 (1984).



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Hinweis/Note:

Der Packungsbeileger dient nur als erste Information. Der relevante Packungsbeileger liegt der Ware bei.

The datasheet is for information purposes only. The current datasheet will be enclosed with product shipment.

For research use only!