



## **Product** Data Sheet

# Antithrombin III/Serpin C1 Protein, Cynomolgus (HEK293, His)

Cat. No.: HY-P75581

Synonyms: Antithrombin-III; ATIII; Serpin C1; SERPINC1; AT3

Species: Cynomolgus Source: HEK293

Accession: A0A2K5UYN7 (S35-S464)

Gene ID: 102117641

Molecular Weight: Approximately 55-75 kDa

### **PROPERTIES**

| AA Sequence         | SPVDICTAKP  R DIPMNPMCIY RSPEKKATED EGSEQKIPEA  TNRRVWELSK ANSRFATTFY QHLADSKNDK DNIFLSPLSV  STAFAMTKLG ACNDTLKQLM EVFKFDTISE KTSDQIHFFF  AKLNCRLYRK ANKSSKLVSA NRLFGDKSLT FNETYQDISE  LVYGAKLQPL DFKENAEQSR AAINKWVSNK TEGRITDVIP  PEAINELTVL VLVNTIYFKG LWKSKFSPEN TRMEPFYKAD  GESCSASMMY QEGKFRYRRV AEGTQVLELP FKGDDITMVL  ILPKPEKSLT KVEQELTPEV LQEWLDELEE MMLVVHMPRF  RIEDGFSLKE QLQDMGLVDL FSPEKSKLPG IVAEGRDDLY  VSDAFHKAFL EVNEEGSEAA ASTAIGIAGR SLNPNRVTFK  ANRPFLVFIR EVPLNTIIFM GRVANPCVS |
|---------------------|--|
| Biological Activity | Measured by its ability to inhibit Recombinant Human Coagulation Factor II/Thrombin cleavage of a fluorogenic peptide substrate Boc-VPR-AMC. The IC <sub>50</sub> value is 2.185 nM, as measured under the described conditions.   |
| Appearance          | Lyophilized powder   |
| Formulation         | Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4.  |
| Endotoxin Level     | <1 EU/μg, determined by LAL method.  |
| Reconsititution     | It is not recommended to reconstitute to a concentration less than 100 $\mu$ g/mL in ddH <sub>2</sub> O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).   |
| Storage & Stability | Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.   |
| Shipping            | Room temperature in continental US; may vary elsewhere.  |

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#### **DESCRIPTION**

#### Background

Antithrombin III (ATIII), also known as Serpin C1, is a crucial serine protease inhibitor that forms a protease inhibiting heterodimer with TMPRSS7. This interaction underlines ATIII's role in regulating coagulation processes by inhibiting the activity of various proteases involved in the blood clotting cascade. The formation of a heterodimer with TMPRSS7 emphasizes the specificity of ATIII in targeting and modulating the activity of specific proteases. This protease inhibiting function plays a central role in preventing excessive blood clotting and maintaining hemostatic balance.

Caution: Product has not been fully validated for medical applications. For research use only.

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