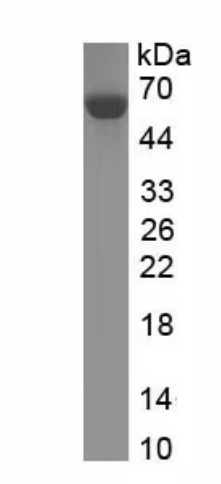
Active Antithrombin (AT)

Catalog#:NP12839

概述（Summary）

别称（Alternative Names）	AT3; ATIII; SERPINC1; Anti-Thrombin Antibodies; Serpin Peptidase Inhibitor Clade C Member 1; Coding Sequence Signal Peptide Antithrombin Part 1
纯度（Purity）	Greater than 90% as determined by reducing SDS-PAGE.
内毒素（Endotoxin level）	Please contact with the lab for this information
Accession #	P01008
表达宿主（Host）	Human
种属（Species）	Homo sapiens (Human)
预测分子量（Predicted MW）	62.0 kDa
制剂（Form）	Lyophilized from a 0.2 μm filtered solution of PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
运输方式（Shipping）	The product is shipped with ice bag. Upon receipt, store it immediately at the temperature listed below.
稳定性&储存（Stability &Storage）	12 months at -20°C to -80°C in lyophilized state.6 months at -20°C to -80°C under sterile conditions after reconstitution.7-10 days at 2°C to 8°C under sterile conditions after reconstitution.Please minimize freeze-thaw cycles.
复溶（Reconstitution）	Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
背景介绍（References）	Most important serine protease inhibitor in plasma that regulates the blood coagulation cascade. AT-III inhibits thrombin, matriptase-3/TMPRSS7, as well as factors IXa, Xa and XIa. Its inhibitory activity is greatly enhanced in the presence of heparin.

电泳图（SDS-PAGE image）



Greater than 90% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）

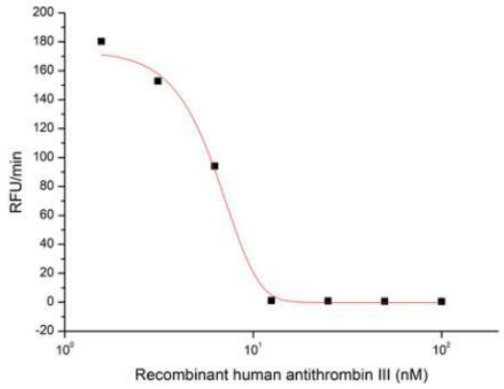


Figure 1. Inhibition of thrombin activity by recombinant human antithrombin III

Antithrombin III, also known as Serpin C1, is a member of the Serpin superfamily of the serine protease inhibitors. It is the principal plasma Serpin of blood clotting proteases and inhibits thrombin as well as several factors such as Xa. Similar to Serpins A5 and D1, its thrombin inhibitory activity is enhanced by heparin. Hereditary and acquired Serpin C1 deficiency is the cause of an increased thrombotic tendency in many cases. For example, acquired Serpin C1 deficiency is a common condition in sepsis, after major trauma or surgery. The activity of recombinant human antithrombin III was measured by its ability to inhibit thrombin cleavage of a fluorogenic peptide substrate Boc-VPR-AMC in the assay buffer 50 mM Tris, 10 mM CaCl2, 150 mM NaCl, 0.05% (w/v) Brij-35, pH 7.5. Thrombin was diluted to 0.5 U with heparin at 50 µg/ml in the assay buffer and 10 ul different concentrations of recombinant human antithrombin III (MW: 50 KD) was incubated with 10 ul diluted thrombin at 37 ℃ for 30 minutes. Loading 50 µL of the incubated mixtures which were diluted five-fold in assay buffer into empty wells of a plate, and start the reaction by adding 50 µL of 200 µM substrate. Include a substrate blank containing 50 µL of assay buffer and 50 µL of 200 µM substrate. Then read at excitiation and emission wavelengths of 380 nm and 460 nm, respectively, in kinetic mode for 5 minutes. The result was shown in Figure 1 and it was obvious that recombinant human antithrombin III significantly decreased thrombin activity. The inhibition IC50 was <8 nM.

注意事项（Note）

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