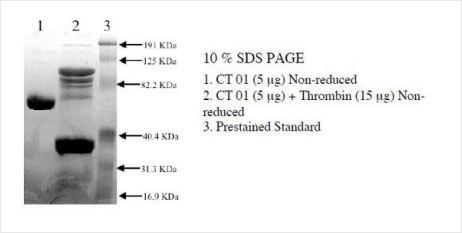
# Antithrombin (SERPINC1) Human Protein

## PRODUCT OVERVIEW

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| **Product Name** | Antithrombin (SERPINC1), Protein |
| **Full Product Name** | Human Antithrombin |
| **Product Gene Name** | SERPINC1 protein |
| **Product Synonym Names** | Human Antithrombin |
| **Form/Format** | 0.05M $NaPO_4$; 0.1 M NaCl; 1mM EDTA; pH7.4 |
| **Purity/Purification** | This preparation is >95% pure as determined by SDS-PAGE. |
| **Concentration** | 1.38 mg/mL determined spectrophotometrically. (lot specific) |
| **Preparation and Storage** | Ships on dry ice. Store at -80 degree C. Avoid Repeated freeze thaw cycles. |
| **Molecular Weight** | 58 kDa |
| **OMIM** | 107300 |
| **3D Structure** | ModBase 3D Structure for P01008 |
| **Procedural Notes** | This product is 98% active as determined by Thrombin titration. |
| **Preparation** | This prep is prepared from fresh plasma using multi-step chromatographic methods |
| **Dry Ice Shipment** | Extra charge fee may add to your shipping cost as dry ice is required to ship this product. |
| **Related Product Information for SERPINC1 protein** | **Description:** Antithrombin is a single chain glycoprotein which acts as the primary inhibitor of thrombin and factor Xa. |
| **Product References and Citations for SERPINC1 protein** | Olson, ST et al. Methods in Enzymology (Lorand & Mann) Vol. 222, 1993. |
| **Other Notes** | Small volumes of SERPINC1 protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply. |
| **Searchable Terms for SERPINC1 purchase** | MBS480578 is a protein targeting SERPINC1. Also known as Human Antithrombin. |




**Testing Data of SERPINC1 protein**

## ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for SERPINC1. It may not necessarily be applicable to this product.

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| **NCBI GI #** | 28907 |
| **NCBI GeneID** | 462 |

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| **NCBI Accession #** | CAA48690.1 |
| **UniProt Primary Accession #** | P01008 |
| **UniProt Secondary Accession #** | P78439; P78447; Q13815; Q5TC78; Q7KZ43; Q7KZ97; Q9UC78; B2R6P0 |
| **UniProt Related Accession #** | P01008 |
| **NCBI Official Full Name** | antithrombin |
| **NCBI Official Synonym Full Names** | serpin peptidase inhibitor, clade C (antithrombin), member 1 |
| **NCBI Official Symbol** | SERPINC1 |
| **NCBI Official Synonym Symbols** | AT3; AT3D; ATIII; THPH7 |
| **UniProt Protein Name** | Antithrombin-III |
| **UniProt Synonym Protein Names** | Serpin C1 |
| **Protein Family** | Antithrombin |
| **UniProt Gene Name** | SERPINC1 |
| **UniProt Synonym Gene Names** | AT3; ATIII |
| **UniProt Entry Name** | ANT3_HUMAN |
| **NCBI Protein Information** | antithrombin-III; serine (or cysteine) proteinase inhibitor, clade C (antithrombin), member 1 |
| **NCBI Summary for SERPINC1** | The protein encoded by this gene is a plasma protease inhibitor and a member of the serpin superfamily. This protein inhibits thrombin as well as other activated serine proteases of the coagulation system, and it regulates the blood coagulation cascade. The protein includes two functional domains: the heparin binding-domain at the N-terminus of the mature protein, and the reactive site domain at the C-terminus. The inhibitory activity is enhanced by the presence of heparin. More than 120 mutations have been identified for this gene, many of which are known to cause antithrombin-III deficiency. [provided by RefSeq, Jul 2009] |
| **UniProt Comments for SERPINC1** | SERPINC1: 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. Defects in SERPINC1 are the cause of antithrombin III deficiency (AT3D). AT3D is an important risk factor for hereditary thrombophilia, a hemostatic disorder characterized by a tendency to recurrent thrombosis. AT3D is classified into 4 types. Type I: characterized by a 50% decrease in antigenic and functional levels. Type II: has defects affecting the thrombin- binding domain. Type III: alteration of the heparin-binding domain. Plasma AT-III antigen levels are normal in type II and III. Type IV: consists of miscellaneous group of unclassifiable mutations. Belongs to the serpin family.<br><br>Protein type: Inhibitor; Secreted, signal peptide; Secreted<br><br>Chromosomal Location of Human Ortholog: 1q25.1<br><br>Cellular Component: extracellular space; plasma membrane; extracellular region<br><br>Molecular Function: heparin binding; serine-type endopeptidase inhibitor activity; protein binding; protease binding<br><br>Biological Process: negative regulation of inflammatory response; blood coagulation; response to nutrient<br><br>Disease: Antithrombin Iii Deficiency |
| **Research Articles on SERPINC1** | **1.** prevalence of mutations in a cohort of pediatric patients with venous thromboembolism is reported |
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