

Product datasheet for **RG222845**

Antithrombin III (SERPINC1) (NM_000488) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Antithrombin III (SERPINC1) (NM_000488) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Antithrombin III
Synonyms:	AT3; AT3D; ATIII; ATIII-R2; ATIII-T1; ATIII-T2; THPH7
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG222845 representing NM_000488
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGTATTCCAATGTGATAGGAAGTGAACCTCTGGAAAAAGGAAGTTTATCTTTTGTCTTGTGCTCA
 TTGGCTTCTGGGACTGCGTGACCTGTACGGGAGCCCTGTGGACATCTGCACAGCCAAGCCGCGGACAT
 TCCCATGAATCCCATGTGCATTTACCGCTCCCCGGAGAAGAAGGCAACTGAGGATGAGGGCTCAGAACAG
 AAGATCCCGGAGGCCACCAACCGCGTGTCTGGGAACTGTCCAAGGCCAATTCGCCGTTTGTACCACTT
 TCTATCAGCACCTGGCAGATTCCAAGAATGACAATGATAACATTTTCTGTCAACCCTGAGTATCTCCAC
 GGCTTTTGTCTATGACCAAGCTGGGTGCCTGTAATGACACCCTCCAGCAACTGATGGAGGTATTTAAGTTT
 GACACCATATCTGAGAAAACATCTGATCAGATCCACTTCTTCTTGGCAAAGTGAAGTCCGACTCTATC
 GAAAAGCCAACAAATCTCCAAGTTAGTATCAGCCAATCGCTTTTTGGAGACAAATCCCTACCTTCAA
 TGAGACCTACCAGGACATCAGTGAAGTGGTATATGGAGCCAAGCTCCAGCCCTGGACTCAAGGAAAAT
 GCAGAGCAATCCAGAGCGCCATCAACAAATGGGTGTCCAATAAGACCGAAGGCCGAATCACCGATGTCA
 TTCCCTCGGAAGCCATCAATGAGCTCACTGTTCTGGTGTGGTTAACACCATTTACTTCAAGGGCCTGTG
 GAAGTCAAAGTTCAGCCCTGAGAACACAAGGAAGGAAGTGTCTACAAGGCTGATGGAGAGTCGTGTTCA
 GCATCTATGATGTACCAGGAAGGCAAGTTCGGTTATCGGCGCGTGGCTGAAGGCACCCAGGTGCTTGA
 TGCCCTTCAAAGGTGATGACATCACCATGGTCTCATCTTGGCCAAGCCTGAGAAGAGCCTGGCCAAAGT
 AGAGAAGGAAGTCAACCCAGAGGTGCTGCAAGAGTGGCTGGATGAATTGGAGGAGATGATGCTGGTGGT
 CACATGCCCGCTTCCGATTGAGGACGGCTTCAGTTTGAAGGAGCAGCTGCAAGACATGGGCCTTGTGCG
 ATCTGTTCAAGCCTGAAAAGTCCAACTCCAGGTATTGTTGCAAGAGCCGAGATGACCTCATGTCTC
 AGATGCATTCCATAAGGCATTTCTTGGAGTAAATGAAGAAGGCAGTGAAGCAGCTGCAAGTACCGCTGTT
 GTGATTGCTGGCGTTCCGCTAAACCCCAACAGGTGACTTTCAAGGCCAACAGGCCTTCTCGTGTGTTTA
 TAAGAGAAGTTCCTCTGAACACTATTATCTTCATGGGCAGAGTAGCCAACCCCTGTGTTAAG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG222845 representing NM_000488
 Red=Cloning site Green=Tags(s)

MYSNVIGTVTSGKRKYVLLSLLLIGFWDCVTCHGSPVDICTAKPRDIPMNPNCIYRSPEKKATEDEGSEQ
 KIPEATNRRVWELSKANSRFATTFYQHLADSKNDNDNIFLSPLSISTAFAMTKLGACNDTLQQLMEVFKF
 DTISEKTSQIHHFFAKLNCRLYRKANKSSKLVANRLFQDKSLTFNETYQDISELVYGAKLQPLDFKEN
 AEQSRAAINKWSNKTEGRITDVIPSEAINELTVLVLVNTIYFKGLWKSFSPEINTRKELFYKADGESCS
 ASMMYQEGKFRYRRVAEGTQVLELFPKGDDITMVLILPKPEKSLAKVEKELTPEVLQEWLDEEMMLVV
 HMPRFRIEDGFSLKEQLQDMGLVDLFSPEKSLPGIIVAEGRDDLIVSDAFHKAFLEVNEEGSEAAASTAV
 VIAGRSLNPNRVTFKANRPFLVFIREVPLNTIIFMGRVANPCVK

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_000488

ORF Size: 1392 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: [NM_000488.4](#)

RefSeq Size: 1559 bp

RefSeq ORF: 1395 bp

Locus ID: 462

UniProt ID: [P01008](#)

Cytogenetics: 1q25.1

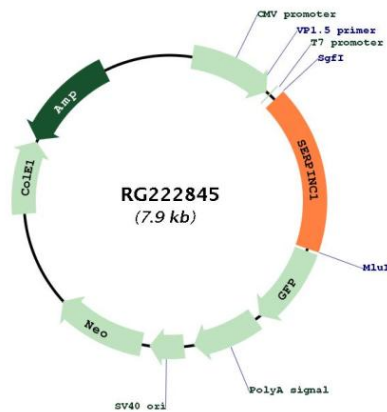
Domains: SERPIN

Protein Families: Druggable Genome, Secreted Protein

Protein Pathways: Complement and coagulation cascades

Gene Summary: The protein encoded by this gene, antithrombin III, 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. Numerous mutations have been identified for this gene, many of which are known to cause antithrombin-III deficiency which constitutes a strong risk factor for thrombosis. A reduction in the serum level of this protein is associated with severe cases of Coronavirus Disease 19 (COVID-19). [provided by RefSeq, Sep 2020]

Product images:



Circular map for RG222845