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Product datasheet for RC222845

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:	Myc-DDK
Symbol:	Antithrombin III
Synonyms:	AT3; AT3D; ATIII; ATIII-R2; ATIII-T1; ATIII-T2; THPH7
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

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ORF Nucleotide Sequence:

>RC222845 representing NM_000488
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGTATTCCAATGTGATAGGAACTGTAACCTCTGGAAAAAGGAAGGTTTATCTTTTGTCCTTGCTGCTCA
TTGGCTTCTGGGACTGCGTGACCTGTCACGGGAGCCCTGTGGACATCTGCACAGCCAAGCCGCGGGACAT
TCCCATGAATCCCATGTGCATTTACCGCTCCCCGGAGAAGAAGGCAACTGAGGATGAGGGCTCAGAACAG
AAGATCCCGGAGGCCACCAACCGGCGTGTCTGGGAACTGTCCAAGGCCAATTCCCGCTTTGCTACCACTT
TCTATCAGCACCTGGCAGATTCCAAGAATGACAATGATAACATTTTCCTGTCACCCCTGAGTATCTCCAC
GGCTTTTGCTATGACCAAGCTGGGTGCCTGTAATGACACCCTCCAGCAACTGATGGAGGTATTTAAGTTT
GACACCATATCTGAGAAAACATCTGATCAGATCCACTTCTTCTTTGCCAAACTGAACTGCCGACTCTATC
GAAAAGCCAACAAATCCTCCAAGTTAGTATCAGCCAATCGCCTTTTTGGAGACAAATCCCTTACCTTCAA
TGAGACCTACCAGGACATCAGTGAGTTGGTATATGGAGCCAAGCTCCAGCCCCTGGACTTCAAGGAAAAT
GCAGAGCAATCCAGAGCGGCCATCAACAAATGGGTGTCCAATAAGACCGAAGGCCGAATCACCGATGTCA
TTCCCTCGGAAGCCATCAATGAGCTCACTGTTCTGGTGCTGGTTAACACCATTTACTTCAAGGGCCTGTG
GAAGTCAAAGTTCAGCCCTGAGAACACAAGGAAGGAACTGTTCTACAAGGCTGATGGAGAGTCGTGTTCA
GCATCTATGATGTACCAGGAAGGCAAGTTCCGTTATCGGCGCGTGGCTGAAGGCACCCAGGTGCTTGAGT
TGCCCTTCAAAGGTGATGACATCACCATGGTCCTCATCTTGCCCAAGCCTGAGAAGAGCCTGGCCAAGGT
GGAGAAGGAACTCACCCCAGAGGTGCTGCAGGAGTGGCTGGATGAATTGGAGGAGATGATGCTGGTGGTC
CACATGCCCCGCTTCCGCATTGAGGACGGCTTCAGTTTGAAGGAGCAGCTGCAAGACATGGGCCTTGTCG
ATCTGTTCAGCCCTGAAAAGTCCAAACTCCCAGGTATTGTTGCAGAAGGCCGAGATGACCTCTATGTCTC
AGATGCATTCCATAAGGCATTTCTTGAGGTAAATGAAGAAGGCAGTGAAGCAGCTGCAAGTACCGCTGTT
GTGATTGCTGGCCGTTCGCTAAACCCCAACAGGGTGACTTTCAAGGCCAACAGGCCTTTCCTGGTTTTTA
TAAGAGAAGTTCCTCTGAACACTATTATCTTCATGGGCAGAGTAGCCAACCCTTGTGTTAAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC222845 representing NM_000488
Red=Cloning site Green=Tags(s)

MYSNVIGTVTSGKRKVYLLSLLLIGFWDCVTCHGSPVDICTAKPRDIPMNPMCIYRSPEKKATEDEGSEQ
KIPEATNRRVWELSKANSRFATTFYQHLADSKNDNDNIFLSPLSISTAFAMTKLGACNDTLQQLMEVFKF
DTISEKTSDQIHFFFAKLNCRLYRKANKSSKLVSANRLFGDKSLTFNETYQDISELVYGAKLQPLDFKEN
AEQSRAAINKWVSNKTEGRITDVIPSEAINELTVLVLVNTIYFKGLWKSKFSPENTRKELFYKADGESCS
ASMMYQEGKFRYRRVAEGTQVLELPFKGDDITMVLILPKPEKSLAKVEKELTPEVLQEWLDELEEMMLVV
HMPRFRIEDGFSLKEQLQDMGLVDLFSPEKSKLPGIVAEGRDDLYVSDAFHKAFLEVNEEGSEAAASTAV
VIAGRSLNPNRVTFKANRPFLVFIREVPLNTIIFMGRVANPCVK

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6046_d08.zip

Restriction Sites: SgfI-MluI

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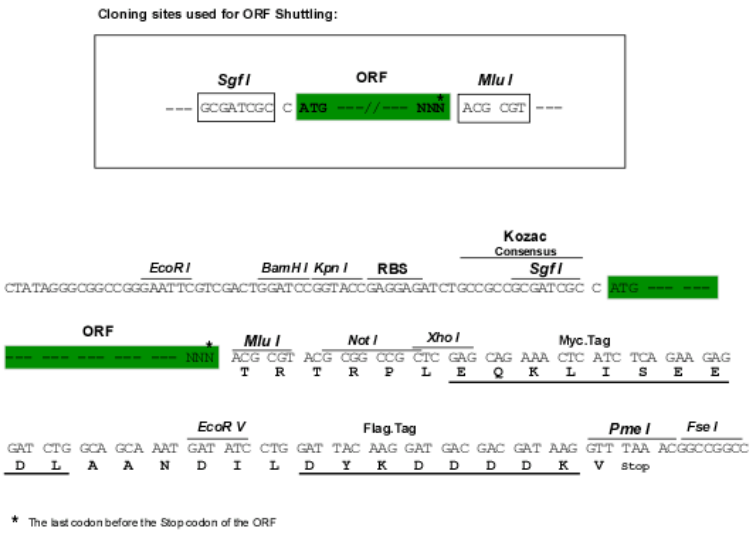
Cloning Scheme:



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_000488.1

RefSeq Size: 1559 bp

RefSeq ORF: 1395 bp

Locus ID: 462

UniProt ID: P01008

Cytogenetics: 1q25.1

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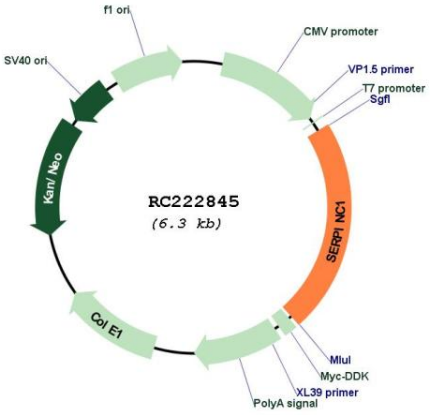
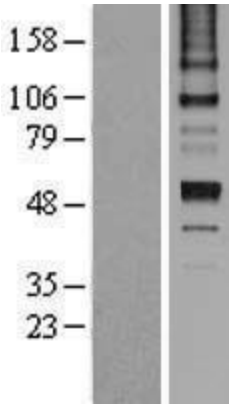
Domains:	SERPIN
Protein Families:	Druggable Genome, Secreted Protein
Protein Pathways:	Complement and coagulation cascades
MW:	52.6 kDa
Gene Summary:	The protein encoded by this gene, antithrombin III, is a plasma protease inhibitor and a member of the serpin superfamily. This protein inhibits thrombin 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 RC222845



Western blot validation of overexpression lysate (Cat# [LY400166]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC222845 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).

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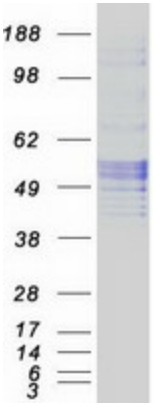

Coomassie blue staining of purified SERPINC1 protein (Cat# [TP322845]). The protein was produced from HEK293T cells transfected with SERPINC1 cDNA clone (Cat# RC222845) using MegaTran 2.0 (Cat# [TT210002]).

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