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Product datasheet for SC110831

Antithrombin III (SERPINC1) (NM_000488) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Antithrombin III (SERPINC1) (NM_000488) Human Untagged Clone
Tag:	Tag Free
Symbol:	Antithrombin III
Synonyms:	AT3; AT3D; ATIII; ATIII-R2; ATIII-T1; ATIII-T2; THPH7
Mammalian Cell Selection:	None
Vector:	pCMV6-XL4
E. coli Selection:	Ampicillin (100 ug/mL)

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Fully Sequenced ORF:

>OriGene ORF within SC110831 sequence for NM_000488 edited (data generated by NextGen Sequencing)

ATGTATTCCAATGTGATAGGAACTGTAACCTCTGGAAAAAGGAAGGTTTATCTTTTGTCC
TTGCTGCTCATTGGCTTCTGGGACTGCGTGACCTGTCACGGGAGCCCTGTGGACATCTGC
ACAGCCAAGCCGCGGGACATTCCCATGAATCCCATGTGCATTTACCGCTCCCCGGAGAAG
AAGGCAACTGAGGATGAGGGCTCAGAACAGAAGATCCCGGAGGCCACCAACCGGCGTGTC
TGGGAACTGTCCAAGGCCAATTCCCGCTTTGCTACCACTTTCTATCAGCACCTGGCAGAT
TCCAAGAATGACAATGATAACATTTTCCTGTCACCCCTGAGTATCTCCACGGCTTTTGCT
ATGACCAAGCTGGGTGCCTGTAATGACACCCTCCAGCAACTGATGGAGGTATTTAAGTTT
GACACCATATCTGAGAAAACATCTGATCAGATCCACTTCTTCTTTGCCAAACTGAACTGC
CGACTCTATCGAAAAGCCAACAAATCCTCCAAGTTAGTATCAGCCAATCGCCTTTTTGGA
GACAAATCCCTTACCTTCAATGAGACCTACCAGGACATCAGTGAGTTGGTATATGGAGCC
AAGCTCCAGCCCCTGGACTTCAAGGAAAATGCAGAGCAATCCAGAGCGGCCATCAACAAA
TGGGTGTCCAATAAGACCGAAGGCCGAATCACCGATGTCATTCCCTCGGAAGCCATCAAT
GAGCTCACTGTTCTGGTGCTGGTTAACACCATTTACTTCAAGGGCCTGTGGAAGTCAAAG
TTCAGCCCTGAGAACACAAGGAAGGAACTGTTCTACAAGGCTGATGGAGAGTCGTGTTCA
GCATCTATGATGTACCAGGAAGGCAAGTTCCGTTATCGGCGCGTGGCTGAAGGCACCCAG
GTGCTTGAGTTGCCCTTCAAAGGTGATGACATCACCATGGTCCTCATCTTGCCCAAGCCT
GAGAAGAGCCTGGCCAAGGTGGAGAAGGAACTCACCCCAGAGGTGCTGCAGGAGTGGCTG
GATGAATTGGAGGAGATGATGCTGGTGGTCCACATGCCCCGCTTCCGCATTGAGGACGGC
TTCAGTTTGAAGGAGCAGCTGCAAGACATGGGCCTTGTCGATCTGTTCAGCCCTGAAAAG
TCCAAACTCCCAGGTATTGTTGCAGAAGGCCGAGATGACCTCTATGTCTCAGATGCATTC
CATAAGGCATTTCTTGAGGTAAATGAAGAAGGCAGTGAAGCAGCTGCAAGTACCGCTGTT
GTGATTGCTGGCCGTTCGCTAAACCCCAACAGGGTGACTTTCAAGGCCAACAGGCCTTTC
CTGGTTTTTATAAGAGAAGTTCCTCTGAACACTATTATCTTCATGGGCAGAGTAGCCAAC
CCTTGTGTTAAGTAA

Clone variation with respect to NM_000488.3
981 a=>g;1011 a=>g

5' Read Nucleotide Sequence:

>OriGene 5' read for NM_000488 unedited
TCAGAATTTTGTAATACGACTCACTTATAGGGCGGCCGCGATTCGGCACGAGCTCCACTT
GCCCAGCCCTGTGGAAGATTAGCGGCCATGTATTCCAATGTGATAGGAACTGTAACCTCT
GGAAAAAGGAAGGTTTATCTTTTGTCCTTGCTGCTCATTGGCTTCTGGGACTGCGTGACC
TGTCACGGGAGCCCTGTGGACATCTGCACAGCCAAGCCGCGGGACATTCCCATGAATCCC
ATGTGCATTTACCGCTCCCCGGAGAAGAAGGCAACTGAGGATGAGGGCTCAGAACAGAAG
ATCCCGGAGGCCACCAACCGGCGTGTCTGGGAACTGTCCAAGGCCAATTCCCGCTTTGCT
ACCACTTTCTATCAGCACCTGGCAGATTCCAAGAATGACAATGATAACATTTTCCTGTCA
CCCCTGAGTATCTCCACGGCTTTTGCTATGACCAAGCTGGGTGCCTGTAATGACACCCTC
CAGCAACTGATGGAGGTATTTAAGTTTGACACCATATCTGAGAAAACATCTGATCAGATC
CACTTCTTCTTTGCCAAACTGAACTGCCGACTCTATCGAAAAGCCAACAAATCCTCCAAG
TTAGTATCAGCCAATCGCCTTTTTGGAGACAAATCCCTTACCTTCAATGAGACCTACCAG
GACATCAGTGAGTTGGTATATGGAGCCAAGCTCCAGCCCCTGGACTTCAAGGAAAATGCA
GAGCAATCCAGAGCGGCCATCAACAAATGGGGTGTCCAATAAGACCGAAGGCCGAATCAC
CGATGTCATTCCCTTCGAAGCCATCAATGAGCTCACTGGNTCTGGGTGCTGGNTAACACC
ATTTACTTCAGGGGCCTGTGAAGTCAAAGTTCAGCCCTGAGACACANGNAGGAACTGTTC
TACAGGCTGATGGANAGTCGTGTCACATCTTGATGTACAGNAAGGCAAGTCCGTTATGGC
GCGTGCTGAAA

3' Read Nucleotide Sequence:

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>OriGene 3' read for NM_000488 unedited
NNTTTTTACTCTGNACCGCGGNCCGCATNCTANGATCGAGTTTTTTTTTTTTTTTTTTTT
TTTTTTTTTTTTTTTTTTTTAATGGGAGAAGGAAGTAGTTTGTATTTATTTTTACTTCTG
TTCACAAACCAAAAATAGGAAGAGGGGCAAAAAATAAAAACATTTTACTTAACACAAGGG
TTGGCTACTCTGCCCATGAAAAAATAGTGTTCAAAGGAACTTCTTTTATAAAAACCAAAA
AAGGCCTGTTGGCCTTGAAAGTCACCCTGTTGGGGTTTAGCGAACGGCCAGCAATCACAA
CAGCGGTACTTGCAGCTGCTTCACTGCCTTCTTCATTTACCTCAAAAAATGCCTTATGGA
ATGCATCTGAAACATAAAGGTCATTTCGGCCTTTTGCAACAATACCTGGGAGTTTGGACT
TTTCAGGGCTGAACAAATCGACAAGGCCCATGTTTTGCAACTGCTCCTTCAAACTGAAGC
CGTCCTCAATGCGGAAGCGGGGCATGTGGACCACCAGCATCATTTCCTCCAATTCATCCA
GCCACTCCTGCAGCACCTTTGGGGTGAGTTCCTTCTCCACCTTGGCCAGGCTCTTCTCAG
GCTTGGGCAAAATGAGGACCATGGTGATGTCATCACCTTTGAAGGGCAACTCAAGCACCT
GGGTGCCTTCAGCCACGCGCCGATAACGGAACTTGCCTTCCTGGTACATCATAGATGCTG
AACACGACTCTCCATCAGCCTTGTAGACAGTTCCTTCCTTGTGTTCTCAGGGCTGAACTT
TGACTTCCACAGCCCTTGAGTAAATGGGTGTTAACCAGCACAGAACAGTGAGCTCATTGA
TGGCTTCCGAGGGAATGACATCGGNGATTCGGCCTTTCGTCTTATTGAAACCCATTTGTT
GATGGCCCGTCTGAATGCTCTGCATTTCCCTGAAGTCAGGGC
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Restriction Sites: NotI-NotI

ACCN: NM_000488

Insert Size: 1600 bp

OTI Disclaimer: Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

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_000488.2, NP_000479.1

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]