

Product datasheet for **SC119951**

alpha 1 Antitrypsin (SERPINA1) (NM_000295) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	alpha 1 Antitrypsin (SERPINA1) (NM_000295) Human Untagged Clone
Tag:	Tag Free
Symbol:	alpha 1 Antitrypsin
Synonyms:	A1A; A1AT; AAT; alpha1AT; nNIF; PI; PI1; PRO2275
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL6</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>NCBI ORF sequence for NM_000295, the custom clone sequence may differ by one or more nucleotides

```
ATGCCGTCTTCTGTCTCGTGGGGCATCCTCCTGCTGGCAGGCCTGTGCTGCCTGGTCCCTGTCTCCCTGG
CTGAGGATCCCCAGGGAGATGCTGCCAGAAACAGATACATCCCACCATGATCAGGATCACCCAACCTT
CAACAAGATACCCCCAACCTGGCTGAGTTCGCCTTCAGCCTATACCGCCAGCTGGCACACCAGTCCAAC
AGCACCAATATCTTCTTCTCCCCAGTGAGCATCGCTACAGCCTTTGCAATGCTCTCCCTGGGGACCAAGG
CTGACACTCACGATGAAATCCTGGAGGGCCTGAATTTCAACCTCACGGAGATTCCGGAGGCTCAGATCCA
TGAAGGCTTCCAGGAACCTCCGTACCCTCAACCAGCCAGACAGCCAGCTCCAGCTGACCACCGGCAAT
GGCCTGTTCTCAGCGAGGGCCTGAAGCTAGTGGATAAGTTTTTGGAGGATGTTAAAAAGTTGTACCACT
CAGAAGCCTTCACTGTCAACTTCGGGGACACCGAAGAGGCCAAGAAACAGATCAACGATTACGTGGAGAA
GGTACTCAAGGGAAAATTTGGGATTTGGTCAAGGAGCTTGACAGAGACACAGTTTTTGGCTCGTGGTAA
TACATCTTCTTTAAAGGCAAAATGGGAGAGACCTTTGAAGTCAAGGACACCGAGGAAGAGGACTTCCACG
TGGACCAGGTGACCACCGTGAAGGTGCCTATGATGAAGCGTTTAGGCATGTTAACATCCAGCACTGTAA
GAAGCTGTCCAGCTGGTGTGCTGATGAAATACCTGGGCAATGCCACCGCCATCTTCTTCTGCCTGAT
GAGGGGAAACTACAGCACCTGGAAAATGAACTCACCCACGATATCATACCAAGTTCTGGAAAAATGAAG
ACAGAAGGTCTGCCAGCTTACATTTACCCAAACTGTCCATTACTGGAACCTATGATCTGAAGAGCGTCT
GGGTCAACTGGGCATCACTAAGGTCTTCAGCAATGGGGCTGACCTCTCCGGGGTACAGAGGAGGCCACCC
CTGAAGCTCTCCAAGCCGTGCATAAGGCTGTGCTGACCATCGACGAGAAAGGGACTGAAGCTGCTGGGG
CCATGTTTTTAGAGGCCATACCCATGTCTATCCCCCCGAGGTCAAGTTCAACAAACCCTTTGTCTTCTT
AATGATTGAACAAAATACCAAGTCTCCCCTCTTCATGGGAAAAGTGGTGAATCCCACCAAAAATAA
```



[View online »](#)

5' Read Nucleotide Sequence:

>OriGene 5' read for NM_000295 unedited
 TTTGTAATACGACTCACTATAGGGCGGCCGCAATTCGGCACGAGGCCAGGTTGGAGGGG
 CGGCAACCTCCTGCCAGCCTTCAGGCCACTCTCCTGTGCCTGCCAGAAGAGACAGAGCTT
 GAGGAGAGCTTGAGGAGAGCAGGAAAGGACAATGCCGTCTTCTGTCTCGTGGGGCATCCT
 CCTGCTGGCAGGCCTGTGCTGCCTGGTCCCTGTCTCCCTGGCTGAGGATCCCCAGGGAGA
 TGCTGCCAAGAAGACAGATACATCCCACCATGATCAGGATCACCCAACCTTCAACAAGAT
 CACCCCAACCTGGCTGAGTTCGCCTTCAGCCTATACCGCCAGCTGGCACACCAAGTCCAA
 CAGCACCAATATCTTCTTCTCCCAAGTGCATCGCTACAGCCTTGCAATGCTCTCCCT
 GGGGACCAAGGCTGACACTCACGATGAAATCCTGGAGGGCCTGAATTTCAACCTCACGGA
 GATTCGGAGGCTCAGATCCATGAAGGCTTCCAGGAACTCCTCCGTACCCTCAACCAGCC
 AGACAGCCAGCTCCAGCTGACCACCGCAATGGCCTGTTCTCAGCGAGGGCCTGAAGCT
 AGTGGATAAGTTTTTGGAGGATGTTAAAAAGTTGTACCACTCAGAAGCCTTCACTGTCAA
 CTTCCGGGACACCGAAGAGGCCAAGAAACAGATCAACGATTACGTGGAGAANGTACTCA
 AGGGAAAATTGTGATTTGGTCAAGGAGCTTGACAGAGACACAGTTTTTGTCTGTGTGAA
 TTACATCTTCTTAAAGGCAATGGGAGAGACCCTTTGAAGTCAAGACACCGAGAAGAGGA
 CTTCCGTGNACCAAGTGCACCGTGAAGTGTATGAGAGCGTTTAGCATGTTAACTCCACC
 GTAGAGCTGTCACTG

3' Read Nucleotide Sequence:

>OriGene 3' read for NM_000295 unedited
 CCGCAATCTAGAGTCGAGTTTTTTTTTTTTTTTTTGCAGGCAGGGACCAGCTCAACCCT
 TCTTTAATGTCATCCAGGGAGGGGGCCAGGGATGGAGGGGAGGGTTGAGGAGCGAGAGG
 CAGTTATTTTTGGGTGGGATTACCACCTTTCCCATGAAGAGGGGAGACTTGGTATTTTG
 TTCAATCATTAAAGAAGACAAAGGGTTTGTGAACCTTGACCTCGGGGGGGATAGACATGGG
 TATGGCCTCTAAAACATGGCCCCAGCAGCTTCAGTCCCTTTCTCGTCGATGGTCAAGCAC
 AGCCTTATGCACGGCCTTGAGAGCTTCAGGGGTGCCTCCTCTGTGACCCCGGAGAGGTC
 AGCCCCATTGCTGAAGACCTTAGTGATGCCAGTTGACCCAGGACGCTCTTCCAGATCATA
 GGTTCAGTAATGGACAGTTTGGGTAATGTAAGCTGGCAGACCTTCTGTCTTCAATTTTC
 CAGGAACCTGGTGATGATATCGCGGGTGAGTTCATTTCCAGGTGCTGTAGTTTCCCCTC
 CTCATGCAAGAAGAATATGGCCGTGGCATTGCCCAGGTATTTTCATCAGCAGACCCAGC
 TGGACAGCTTCTACAGGGCTGGATGTAACATGCCTAAACGCTTCATCATAAGCACCTTC
 ACGGGGGCCACCTGGCCCCGTGGAAGTCCTCTTCTCGGTGCCCTGACTCCAAAAGGGCT
 CTCCCTTTGCCTTTAAAGAGATGATTTCCACACCAAAAAGTGCCTTTTGTAAACCCCT
 GGACCAATCCCAATTTTCTTGAGACCCCTCTCCACTAATCGTGAACCGCCTCTCGCCC
 CCTTCGGGGCCCCCAATTTACATTAAGGCTTCTCATGTCCCTTTTATATCCCCAAAAA
 CTTATCTCTTTTGCCTTCTTGAATAAAGCCCTTCCCGCGGCCCTCCCACCTCTCC
 GCCTGCCGGAGGCCGAATAATCCTTCAACN

Restriction Sites:

NotI-NotI

ACCN:

NM_000295

Insert Size:

1500 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_000295.3](#), [NP_000286.3](#)

RefSeq Size: 1607 bp

RefSeq ORF: 1257 bp

Locus ID: 5265

UniProt ID: [P01009](#)

Cytogenetics: 14q32.13

Domains: SERPIN

Protein Families: Druggable Genome, ES Cell Differentiation/IPS, Secreted Protein

Protein Pathways: Complement and coagulation cascades

Gene Summary: The protein encoded by this gene is a serine protease inhibitor belonging to the serpin superfamily whose targets include elastase, plasmin, thrombin, trypsin, chymotrypsin, and plasminogen activator. This protein is produced in the liver, the bone marrow, by lymphocytic and monocytic cells in lymphoid tissue, and by the Paneth cells of the gut. Defects in this gene are associated with chronic obstructive pulmonary disease, emphysema, and chronic liver disease. Several transcript variants encoding the same protein have been found for this gene. [provided by RefSeq, Aug 2020]

Transcript Variant: This variant (1) encodes the same protein as the other ten variants of this gene. Sequence Note: This RefSeq record was created from transcript and genomic sequence data because no single transcript was available for the full length of the gene. The extent of this transcript is supported by transcript alignments.