

Product datasheet for **SC323033**

alpha 1 Antitrypsin (SERPINA1) (NM_001127703) Human Untagged Clone

Product data:

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| Product Type: | Expression Plasmids |
| Product Name: | alpha 1 Antitrypsin (SERPINA1) (NM_001127703) Human Untagged Clone |
| Tag: | Tag Free |
| Symbol: | SERPINA1 |
| Synonyms: | A1A; A1AT; AAT; alpha1AT; nNIF; PI; PI1; PRO2275 |
| Vector: | <u>pCMV6 series</u> |
| Fully Sequenced ORF: | >NCBI ORF sequence for NM_001127703, the custom clone sequence may differ by one or more nucleotides ATGCCGCTTCTGTCTCGTGGGGCATCCTCCTGCTGGCAGGCCTGTGCTGCCTGGTCCCT GTCTCCCTGGCTGAGGATCCCCAGGGAGATGCTGCCCAGAAGACAGATACATCCCACCAT GATCAGGATCACCCAACCTTCAACAAGATCACCCCAACCTGGCTGAGTTCGCCTTCAGC CTATACCGCCAGCTGGCACACCAGTCCAACAGCACCAATATCTTCTTCTCCCCAGTGAGC ATCGCTACAGCCTTTGCAATGCTCTCCCTGGGGACCAAGGCTGACACTCAGATGAAATC CTGGAGGGCCTGAATTTCAACCTCACGGAGATTCGGAGGCTCAGATCCATGAAGGCTTC CAGGAACCTCCTCCGTACCCTCAACCAGCCAGACAGCCAGCTCCAGCTGACCACCGCAAT GGCCTGTTCTCAGCGAGGGCCTGAAGTAGTGGATAAGTTTTTGGAGGATGTTAAAAAG TTGTACCACTCAGAAGCCTTCACTGTCAACTTCGGGGACACCGAAGAGGCCAAGAAACAG ATCAACGATTACGTGGAGAAGGGTACTCAAGGGAAAATTGTGGATTTGGTCAAGGAGCTT GACAGAGACACAGTTTTTGTCTGGTGAATTACATCTTCTTTAAAGGCAAATGGGAGAGA CCCTTTGAAGTCAAGGACACCGAGGAAGAGGACTTCCACGTGGACCAGGTGACCACCGTG AAGGTGCCTATGATGAAGCGTTTAGGCATGTTTAAACATCCAGCACTGTAAGAAGCTGTCC AGCTGGGTGCTGCTGATGAAATACCTGGGCAATGCCACCGCCATCTTCTCCTGCCTGAT GAGGGGAAACTACAGCACCTGGAAAATGAACTCACCCACGATATCATCACCAGTTCCTG GAAAATGAAGACAGAAGGTCTGCCAGTTACATTTACCCAAACTGTCCATTACTGGAACC TATGATCTGAAGAGCGTCTGGGTCAACTGGGCATCACTAAGGTCTTCAAGCAATGGGGCT GACCTCTCCGGGGTACAGAGGAGGCACCCCTGAAGCTCTCCAAGGCCGTGCATAAGGCT GTGCTGACCATCGACGAGAAAGGACTGAAGCTGCTGGGGCCATGTTTTTAGAGGCCATA CCCATGTCTATCCCCCGAGGTCAAGTCAACAAACCTTTGTCTTCTTAATGATTGAA CAAAATACCAAGTCTCCCTCTTCATGGGAAAAGTGGTGAATCCCACCAAAAA |
| Restriction Sites: | Please inquire |
| ACCN: | NM_001127703 |



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| OTI Disclaimer: | <p>Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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</p> |
| OTI Annotation: | <p>This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.</p> |
| Components: | <p>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).</p> |
| Reconstitution Method: | <ol style="list-style-type: none"> 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: | <p><u>NM_001127703.1</u>, <u>NP_001121175.1</u></p> |
| RefSeq Size: | <p>3495 bp</p> |
| RefSeq ORF: | <p>1257 bp</p> |
| Locus ID: | <p>5265</p> |
| UniProt ID: | <p><u>P01009</u></p> |
| Cytogenetics: | <p>14q32.13</p> |
| Protein Families: | <p>Druggable Genome, ES Cell Differentiation/IPS, Secreted Protein</p> |
| Protein Pathways: | <p>Complement and coagulation cascades</p> |

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 (7) differs in the 5' UTR compared to variant 1. All eleven variants encode the same protein. 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.