

## Product datasheet for **RG225661**

### alpha 1 Antitrypsin (SERPINA1) (NM\_001127705) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	alpha 1 Antitrypsin (SERPINA1) (NM_001127705) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	SERPINA1
Synonyms:	A1A; A1AT; AAT; alpha1AT; nNIF; PI; PI1; PRO2275
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG225661 representing NM_001127705 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGCCGCTTCTGTCTCGTGGGGCATCCTCCTGCTGGCAGGCCTGTGCTGCCTGGTCCCTGTCTCCCTGG  
CTGAGGATCCCCAGGGAGATGCTGCCAGAAGACAGATACATCCCACCATGATCAGGATCACCCAACCTT  
CAACAAGATCACCCCAACCTGGCTGAGTTCGCCTTCAGCCTATACCGCCAGCTGGCACACCAGTCCAAC  
AGCACCAATATCTTCTTCTCCCAAGTGAAGTACGCTACAGCCTTTCGAATGCTCTCCCTGGGGACCAAGG  
CTGACACTCACGATGAAATCCTGGAGGGCCTGAATTTCAACCTCACGGAGATTCCGGAGGCTCAGATCCA  
TGAAGGCTTCCAGGAACCTCCGTACCTCAACCAGCCAGACAGCCAGCTCCAGCTGACCACCGCAAT  
GGCCTGTTCCCTCAGCGAGGGCCTGAAGCTAGTGGATAAGTTTTGGAGGATGTTAAAAAGTTGTACCACT  
CAGAAGCCTTCACTGTCAACTTCGGGGACACCGAAGAGGCCAAGAAACAGATCAACGATTACGTGGAGAA  
GGTACTCAAGGGAAAAATTGGGATTTGGTCAAGGAGCTTGACAGAGACACAGTTTTTGCTCTGGTGAAT  
TACATCTTCTTTAAAGGCAATGGGAGAGACCTTTGAAGTCAAGGACACCGAGGAAGAGGACTTCCACG  
TGGACCAGGTGACCACCGTGAAGGTGCCTATGATGAAGCGTTTAGGCATGTTAACATCCAGCACTGTA  
GAAGCTGTCCAGCTGGGTGCTGCTGATGAAATACCTGGCAATGCCACCGCCATCTTCTCTGCCTGAT  
GAGGGGAAACTACAGCACCTGGAAAATGAACTCACCCACGATATCATACCAAGTTCCTGGAAAATGAAG  
ACAGAAGGTCTGCCAGTTACATTTACCCAAACTGTCCATTACTGGAACCTATGATCTGAAGAGCGTCT  
GGGTCAACTGGGCATCACTAAGGTCTTACGAATGGGGCTGACCTCTCCGGGGTACAGAGGAGGCCACCC  
CTGAAGCTCTCCAAGGCCGTGCATAAGGCTGTGCTGACCATCGACGAGAAAGGGACTGAAGCTGCTGGG  
CCATGTTTTTAGAGGCCATACCCATGTCTATCCCCCGAGGTCAAGTTCAACAAACCTTTGTCTTCTT  
AATGATTGAACAAAATACCAAGTCTCCCCTCTTCATGGGAAAAGTGGTGAATCCCACCAAAAA

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >RG225661 representing NM\_001127705  
 Red=Cloning site Green=Tags(s)

MPSSVSWGILLLAGLCLLPVSLAEDPQGDAAQKTDTSHHDDHPTFNKITPNLAEFASFSLYRQLAHQSN  
 STNIFFSPVSIATAFAMLSLGTKADTHDEILEGLNFNLTEIPEAQIHEGFQELLRTLNPDSQLQLTTGN  
 GLFLSEGLKLVDFLEDVKKLYHSEAFVNFVGDTEEAKKQINDYVEKGTQGKIVDLVKELDRDVFALVN  
 YIFFKKGWERPFVVKDTEEDDFHVDQVTTVKVPMMKRLGMFNIQHCKLSSWVLLMKYLGNATAIFFLPD  
 EGKLQHLLENLTHDIITKFLNEDRRSASLHLPKLSITGTYYDLKSVLGQLGITKVFVNGADLSGVTEEAP  
 LKLSKAVHKAVLTIDEKGTAAAGAMFLEAIPMSIPPEVKFNKPFVFLMIEQNTKSPLFMGKVVNPTQK

TRTRPLE - GFP Tag - V

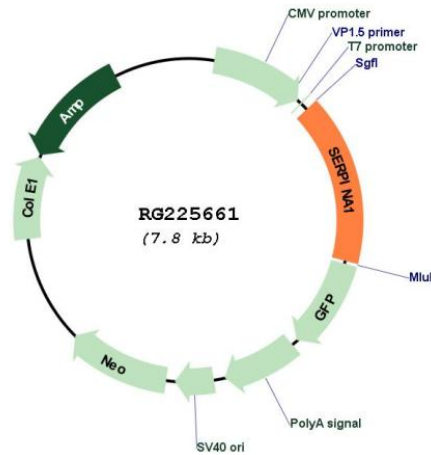
**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**



**Plasmid Map:**



**ACCN:**

NM\_001127705

<b>ORF Size:</b>	1254 bp
<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_001127705.2</a>
<b>RefSeq Size:</b>	3510 bp
<b>RefSeq ORF:</b>	1257 bp
<b>Locus ID:</b>	5265
<b>UniProt ID:</b>	<a href="#">P01009</a>
<b>Cytogenetics:</b>	14q32.13
<b>Protein Families:</b>	Druggable Genome, ES Cell Differentiation/IPS, Secreted Protein
<b>Protein Pathways:</b>	Complement and coagulation cascades
<b>Gene Summary:</b>	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]