

## Product datasheet for TP302082L

### alpha 1 Antitrypsin (SERPINA1) (NM\_000295) Human Recombinant Protein

#### Product data:

Product Type:	Recombinant Proteins
Description:	Recombinant protein of human serpin peptidase inhibitor, clade A (alpha-1 antiproteinase, antitrypsin), member 1 (SERPINA1), transcript variant 1, 1 mg
Species:	Human
Expression Host:	HEK293T
Expression cDNA Clone or AA Sequence:	>RC202082 protein sequence Red=Cloning site Green=Tags(s)
	<p>MPSSVSWGILLLAGLCLLPVSLAEDPQGDAAQKTDTSHHQDHPFNKITPNLAEFASFSLYRQLAHQSN STNIFFSPVSIATAFAMLSLGTKADTHDEILEGLNFNLTEIPEAQIHEGFQELLRTLNPDSQLQLTTGN GLFLSEGLKLVDFLEDVKKLYHSEFTVNFVGDTEEAQQINDYVEKGTQGGKIVDLVKELDRDVFALVN YIFFKGGKWERPFVEKDTTEEDFHVDQVTTVKVPMMKRLGMFNIQHCKKLSSWVLLMKYLGNATAIFFLPD EGKLQHLLENLTHDIITKFLNEDRRSASLHLPKLSITGTYDLKSVLGGQGITKVFNSGADLSGVTEEAP LKLSKAVHKAVLTIDEKGTAAAGAMFLEAIPMSIPPEVKFNKPFVFLMIDQNTKSPLFMGKVVNPTQK</p> <p>TRTRPLEQKLISEEDLAANDILDYKDDDDKV</p>
Tag:	C-Myc/DDK
Predicted MW:	44.3 kDa
Concentration:	>0.05 µg/µL as determined by microplate BCA method
Purity:	> 80% as determined by SDS-PAGE and Coomassie blue staining
Buffer:	25 mM Tris-HCl, 100 mM glycine, pH 7.3, 10% glycerol
Bioactivity:	In vivo treatment (PMID: <a href="#">26265629</a> ) In vivo treatment (PMID: <a href="#">27936229</a> )
Preparation:	Recombinant protein was captured through anti-DDK affinity column followed by conventional chromatography steps.
Note:	For testing in cell culture applications, please filter before use. Note that you may experience some loss of protein during the filtration process.
Storage:	Store at -80°C.



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**Stability:** Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.

**RefSeq:** [NP\\_000286](#)

**Locus ID:** 5265

**UniProt ID:** [P01009](#), [E9KL23](#)

**RefSeq Size:** 3220

**Cytogenetics:** 14q32.13

**RefSeq ORF:** 1254

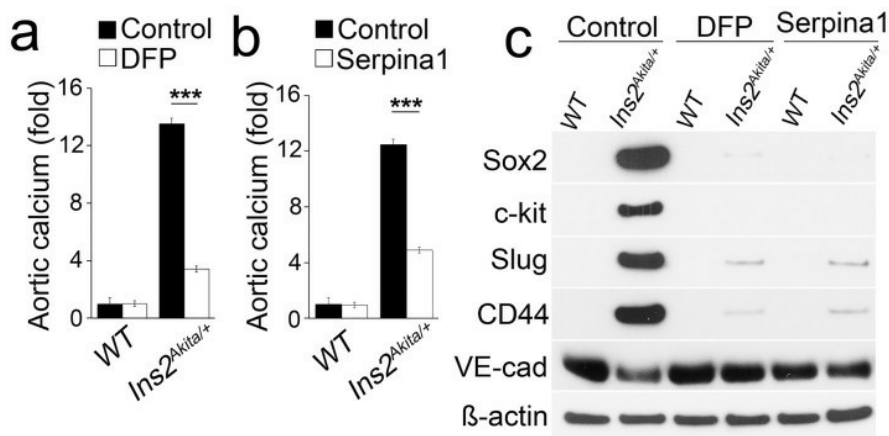
**Synonyms:** A1A; A1AT; AAT; alpha1AT; nNIF; PI; PI1; PRO2275

**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]

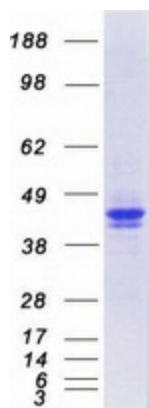
**Protein Families:** Druggable Genome, ES Cell Differentiation/IPS, Secreted Protein

**Protein Pathways:** Complement and coagulation cascades

### Product images:



Total calcium level of aortas from wild-type (WT) or Ins2Akita/+ mice after treatment of (a) diisopropylfluorophosphate (DFP) or (b) serpin1 (OriGene [TP302082]). \*\*\* p 0.001. (c) Expression of stem-cell markers in isolated aortic endothelial cells of wild-type or Ins2Akita/+ mice after treatment with diisopropylfluorophosphate (DFP) or serpin1 (OriGene [TP302082]), as determined by immunoblotting. Figure cited from PLoS ONE, PMID: 27936229



Coomassie blue staining of purified SERPINA1 protein (Cat# [TP302082]). The protein was produced from HEK293T cells transfected with SERPINA1 cDNA clone (Cat# [RC202082]) using MegaTran 2.0 (Cat# [TT210002]).