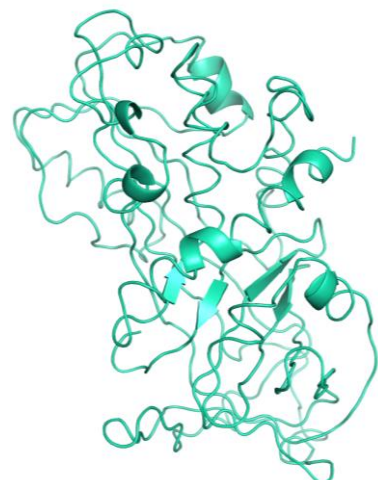


## Product Information

Protein:	Alpha-1-antitrypsin (45.8 kDa)
Uniprot#:	P01009
Sequence:	EDPQGDAQKTDTSHHDDQDPTFNKITPNLAEFAFSLYRQLAHQSNSTNIFFSPVSIATA FAMLSLGTKADTHDEILEGLNFNLTEIPEAQIHEGFQELLRTLNPDSQLQTTGNGLFL SEGLKLVDFLEDVKKLYHSEFTVNFVGDTEEAKKQINDYVEKGTQGGKIVDLVKELDRDT VFALVNYIFFKGGWERPFVVKDTEEEDFHVDQVTTVKVPMMKRLGMFNIQHCKKLSWVL LMKYLGNATAIFFLPDEGKLQHLLENLTHDIITKFLNEDRRSASLHLPKLSITGTDLK SVLGQLGITKVFVSGADLSGVTEEAPLKLKAVHKAVLTIDEKGTAAAGAMFLEAIPMSI PPEVKFNKPFVFLMIEQNTKSPLFMGKVVNPTQK
	N-terminal His-tag not shown in sequence.
Source:	Recombinantly expressed in HEK293 cells.
Tag(s):	His-tag, N-terminal
Purification:	Purified by affinity chromatography and subsequent buffer exchange.
Formulation:	10 mM Tris, 200 mM NaCl, 1 mM EDTA, 1 mM $\beta$ -Mercaptoethanol; pH 8.0. Liquid, stored and shipped at -80 °C.
Purity:	> 95 % (will be determined by densitometry of Coomassie stained gel, example next page)
Concentration:	Will be determined by BCA-Assay.
Long-term storage:	No recommendations.
Comment:	Protein migrates at higher molecular weight during SDS-PAGE due to posttranslational modifications.

## **Background Information:**

Alpha-1-antitrypsin also known as Alpha-1 proteinase inhibitor is a serine protease inhibitor (Serpine). Its primary mechanism is inhibiting the action of the serine protease called elastase (also plasmin and thrombin) preventing the proteolysis of elastin tissues in alveolar lung structures. The reactive center loop (RCL) of alpha-1 proteinase inhibitor extends out from the body of the protein and directs binding to the target protease. The protease cleaves the serpin at the reactive site, establishing a covalent linkage between the carboxyl group of the serpin reactive site and the serine hydroxyl of the protease. The resulting inactive serpin-protease complex is highly stable.



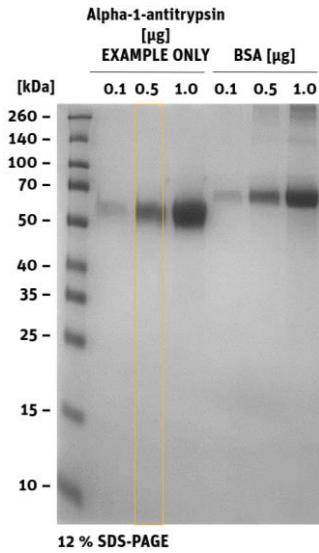
*Structural model of the Alpha-1-antitrypsin*

# Alpha-1-antitrypsin

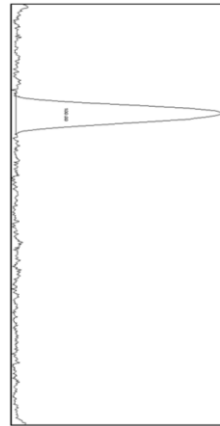
Cat. no. P2020-112

## Product Information

Quality Information (provided for each lot):



SDS-PAGE/Coll.Coomassie



	Area	Percent
1	16972.861	100

Histogram (of marked lane in gel picture)