

For Research Use Only

# Alpha-1-Antitrypsin Polyclonal antibody

Catalog Number: 16382-1-AP

Featured Product

28 Publications



## Basic Information

### Catalog Number:

16382-1-AP

### Size:

150ul, Concentration: 600 ug/ml by Nanodrop;

### Source:

Rabbit

### Isotype:

IgG

### Immunogen Catalog Number:

AG9369

### GenBank Accession Number:

BC015642

### GeneID (NCBI):

5265

### UNIPROT ID:

P01009

### Full Name:

serpin peptidase inhibitor, clade A (alpha-1 antiproteinase, antitrypsin), member 1

### Calculated MW:

418 aa, 47 kDa

### Observed MW:

47-51 kDa

### Purification Method:

Antigen affinity purification

### Recommended Dilutions:

WB 1:5000-1:50000

IP 0.5-4.0 ug for 1.0-3.0 mg of total protein lysate

IHC 1:400-1:1600

IF-P 1:50-1:500

IF/ICC 1:400-1:1600

## Applications

### Tested Applications:

WB, IHC, IF/ICC, IF-P, FC (Intra), IP, ELISA

### Cited Applications:

WB, IHC, IF

### Species Specificity:

human, mouse, rat

### Cited Species:

human, mouse, rat

**Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (\*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0**

### Positive Controls:

**WB**: HeLa cells, human kidney tissue, human placenta tissue, human urine sample, mouse liver tissue, mouse lung tissue, mouse skin tissue, HepG2 cells, mouse kidney tissue, human saliva

**IP**: mouse kidney tissue,

**IHC**: mouse liver tissue, human colon tissue, human liver cancer tissue, mouse kidney tissue, rat kidney tissue

**IF-P**: mouse liver tissue,

**IF/ICC**: HepG2 cells,

## Background Information

SERPINA1 is the gene for a protein called alpha-1-antitrypsin (AAT), which is a serine protease inhibitor whose targets include elastase, plasmin, thrombin, trypsin, chymotrypsin, and plasminogen activator. AAT is a glycoprotein synthesized primarily by hepatocytes, with smaller amount synthesized by intestinal epithelial cells, neutrophils, pulmonary alveolar cells and macrophages. AAT is the most abundant, endogenous serine protease inhibitor in blood circulation and it has been implicated in regulating vital fluid phase biological events such as blood coagulation, fibrinolysis, complement activation, apoptosis, reproduction, tumor progression and inflammatory response. The primary function of AAT is thought to be the inactivation of neutrophil elastase and other endogenous serine proteases. Defects in SERPINA1 can cause emphysema or liver disease. Alpha 1 Antitrypsin has two bands (PMID: 36703990, PMID: 26869867).

## Notable Publications

Author	Pubmed ID	Journal	Application
Mehrpouya B Mobin	27665711	Nat Commun	WB
Eman Khatib-Massalha	29046295	Am J Physiol Renal Physiol	WB
Jifeng Yang	36228974	J Nutr Biochem	WB

## Storage

### Storage:

Store at -20°C. Stable for one year after shipment.

### Storage Buffer:

PBS with 0.02% sodium azide and 50% glycerol, pH7.3

Aliquoting is unnecessary for -20°C storage

\*\*\* 20ul sizes contain 0.1% BSA

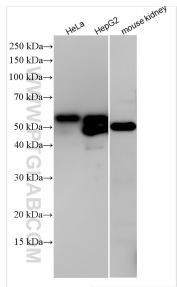
For technical support and original validation data for this product please contact:

T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)

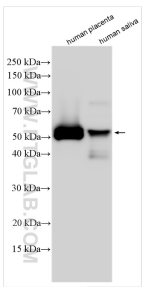
E: [proteintech@ptglab.com](mailto:proteintech@ptglab.com)  
W: [ptglab.com](http://ptglab.com)

This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.

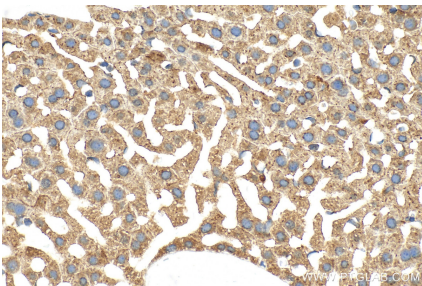
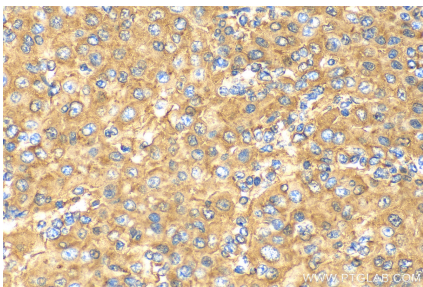
Selected Validation Data



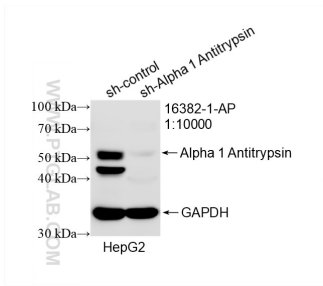
Various lysates were subjected to SDS PAGE followed by western blot with 16382-1-AP (Alpha-1-Antitrypsin antibody) at dilution of 1:30000 incubated at room temperature for 1.5 hours.



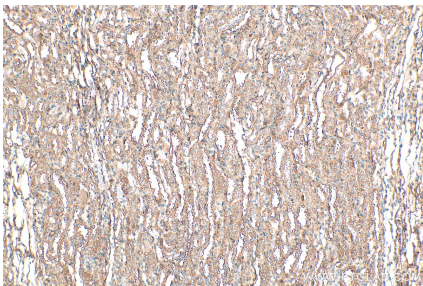
Various lysates were subjected to SDS PAGE followed by western blot with 16382-1-AP (Alpha-1-Antitrypsin antibody) at dilution of 1:30000 incubated at room temperature for 1.5 hours.



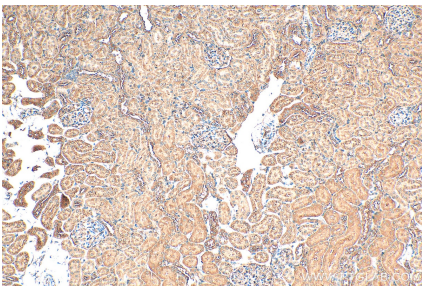
Immunohistochemical analysis of paraffin-embedded mouse liver tissue slide using 16382-1-AP (Alpha 1 Antitrypsin antibody) at dilution of 1:800 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



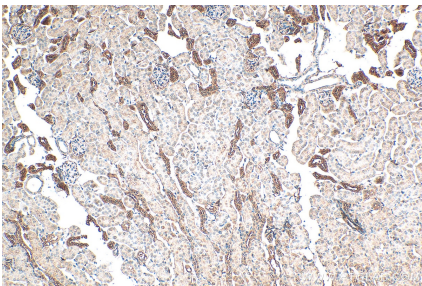
WB result of Alpha 1 Antitrypsin antibody (16382-1-AP; 1:10000; incubated at room temperature for 1.5 hours) with sh-Control and sh-Alpha 1 Antitrypsin transfected HepG2 cells.



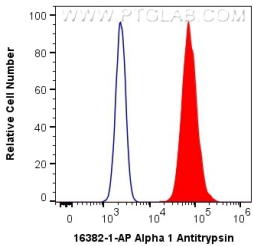
Immunohistochemical analysis of paraffin-embedded rat kidney tissue slide using 16382-1-AP (Alpha 1 Antitrypsin antibody) at dilution of 1:1000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



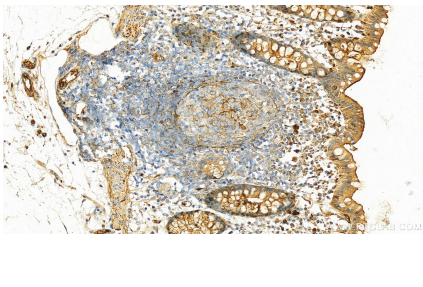
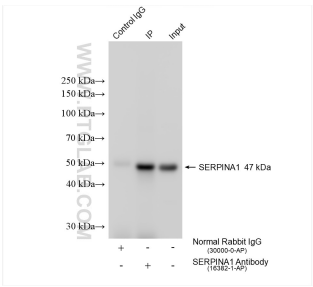
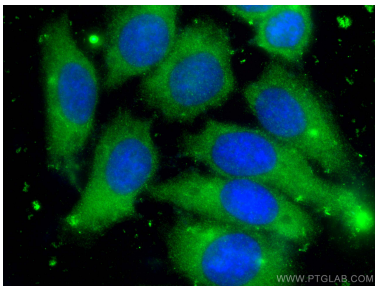
Immunohistochemical analysis of paraffin-embedded rat kidney tissue slide using 16382-1-AP (Alpha 1 Antitrypsin antibody) at dilution of 1:1000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



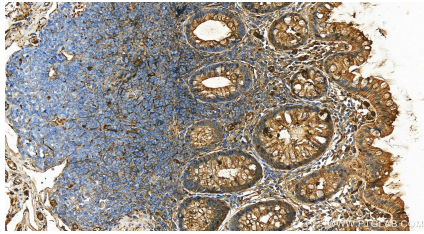
Immunohistochemical analysis of paraffin-embedded mouse kidney tissue slide using 16382-1-AP (Alpha 1 Antitrypsin antibody) at dilution of 1:1000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



1X10<sup>6</sup> HepG2 cells were intracellularly stained with 0.4 ug Anti-Human Alpha 1 Antitrypsin (16382-1-AP) and CoralLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L) at dilution 1:1000 (red), or 0.4 ug Isotype Control. Cells were fixed with 4% PFA and permeabilized with Flow Cytometry Perm Buffer (PF00011-C).



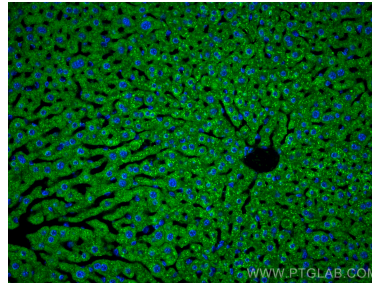
Immunofluorescent analysis of (-20°C Methanol) fixed HepG2 cells using Alpha 1 Antitrypsin antibody (16382-1-AP) at dilution of 1:800 and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L).



Immunohistochemical analysis of paraffin-embedded human colon tissue slide using 16382-1-AP (Alpha 1 Antitrypsin antibody) at dilution of 1:1600 (under 20x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).

IP result of anti-Alpha 1 Antitrypsin (IP:16382-1-AP, 4ug; Detection:16382-1-AP 1:5000) with mouse kidney tissue lysate 1600 ug.

Immunohistochemical analysis of paraffin-embedded human normal colon slide using 16382-1-AP (Alpha 1 Antitrypsin antibody) at dilution of 1:1600 (under 20x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunofluorescent analysis of (4% PFA) fixed paraffin-embedded mouse liver tissue using Alpha 1 Antitrypsin antibody (16382-1-AP) at dilution of 1:200 and Multi-rAb CoraLite® Plus 488-Goat Anti-Rabbit Recombinant Secondary Antibody (H+L) (RGAR002). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).