

For Research Use Only

# ATP1A1 Polyclonal antibody

Catalog Number: 14418-1-AP

Featured Product

228 Publications



## Basic Information

### Catalog Number:

14418-1-AP

### Size:

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

### Source:

Rabbit

### Isotype:

IgG

### Immunogen Catalog Number:

AG5763

### GenBank Accession Number:

BC050359

### GeneID (NCBI):

476

### ENSEMBL Gene ID:

ENSG00000163399

### UNIPROT ID:

P05023

### Full Name:

ATPase, Na<sup>+</sup>/K<sup>+</sup> transporting, alpha 1 polypeptide

### Calculated MW:

113 kDa

### Observed MW:

100-110 kDa

### Purification Method:

Antigen affinity purification

### Recommended Dilutions:

WB 1:5000-1:20000

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

IHC 1:1000-1:4000

IF/ICC 1:400-1:1600

## Applications

### Tested Applications:

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

### Cited Applications:

WB, IHC, IF, IP, CoIP

### Species Specificity:

human, mouse, rat

### Cited Species:

human, mouse, rat, pig, chicken

**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**: mouse heart tissue, HEK-293 cells, 37°C incubated HEK-293 cells, 37°C incubated mouse brain tissue, rat heart tissue

**IP**: HEK-293 cells, A431 cells

**IHC**: human ovary tumor tissue, human cervical cancer tissue, human colon tissue, human liver cancer tissue

**IF/ICC**: Caco-2 cells, HEK-293 cells

## Background Information

ATP1A1 is the catalytic component of Na<sup>+</sup>/K<sup>+</sup>-ATPase which is a membrane bound enzyme primarily involved in generation of Na<sup>+</sup> and K<sup>+</sup> gradients across plasma membranes and in determination of cytoplasmic Na<sup>+</sup> levels. ATP1A1 is a ubiquitously expressed membrane protein and often used as the marker or internal control for plasma membrane protein. For optimal WB detection of this membrane protein, we recommend to avoid boiling the sample after lysis.

## Notable Publications

Author	Pubmed ID	Journal	Application
Zhen-Ning Lu	31568987	Biomed Pharmacother	WB
Raphael Berges	30250248	Cell Death Dis	WB
Hideaki Kuge	32963038	J Lipid Res	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

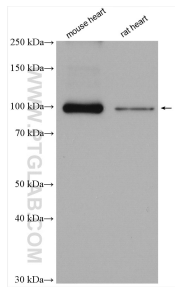
For technical support and original validation data for this product please contact:

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

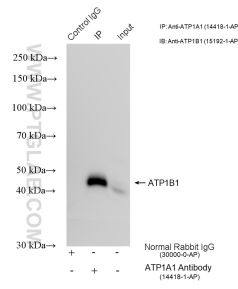
E: proteintech@ptglab.com  
W: ptglab.com

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

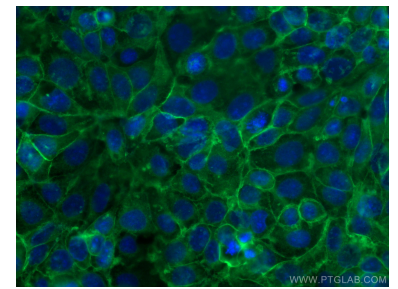
## Selected Validation Data



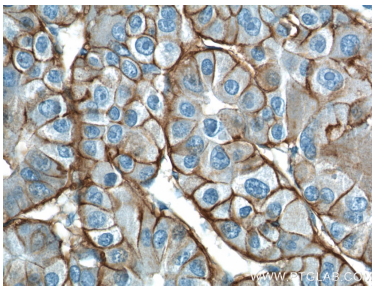
Various lysates were subjected to SDS PAGE followed by western blot with 14418-1-AP (ATP1A1 antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours.



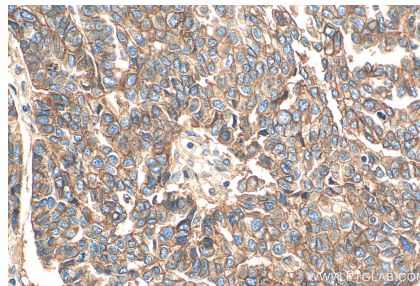
Co-IP result of anti-ATP1A1 (IP:14418-1-AP, 4ug; Detection:15192-1-AP 1:5000) with A431 cells lysate 1000ug.



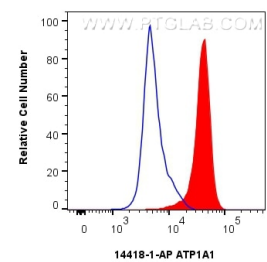
Immunofluorescent analysis of (-20°C Methanol) fixed Caco-2 cells using ATP1A1 antibody (14418-1-AP) at dilution of 1:800 and CoralLite@488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L).



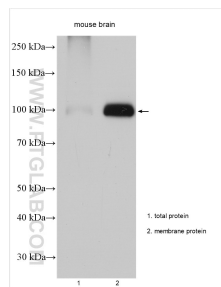
Immunohistochemical analysis of paraffin-embedded human liver cancer tissue slide using 14418-1-AP (ATP1A1 Antibody) at dilution of 1:200 (under 40x lens).



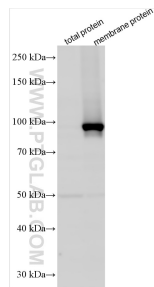
Immunohistochemical analysis of paraffin-embedded human ovary tumor tissue slide using 14418-1-AP (ATP1A1 antibody) at dilution of 1:2000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



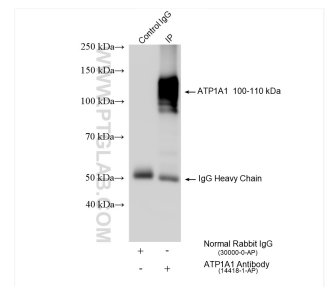
$1 \times 10^6$  HEK-293 cells were intracellularly stained with 0.4 ug ATP1A1 Polyclonal antibody (14418-1-AP) and CoralLite@488-Conjugated Goat Anti-Rabbit IgG(H+L) (SA00013-2)(red), or 0.4 ug Rabbit IgG control Rabbit PolyAb (30000-0-AP) (blue). Cells were fixed with 4% PFA and permeabilized with Flow Cytometry Perm Buffer (PF00011-C).



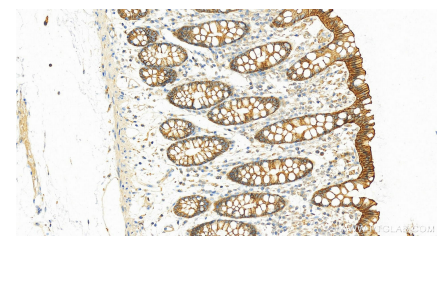
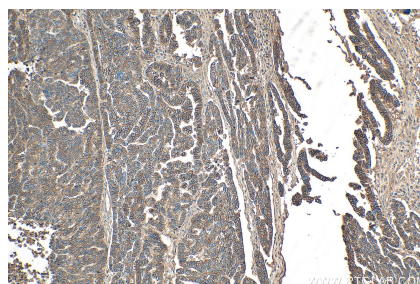
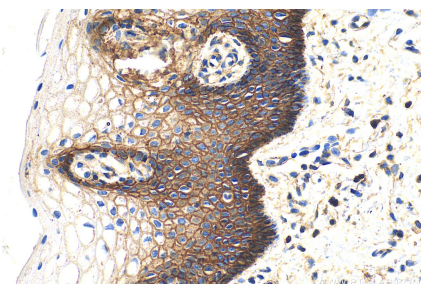
37°C incubated mouse brain total extract lysate and membrane extract lysate were subjected to SDS PAGE followed by western blot with 14418-1-AP (ATP1A1 antibody) at dilution of 1:100000 incubated at room temperature for 1.5 hours.



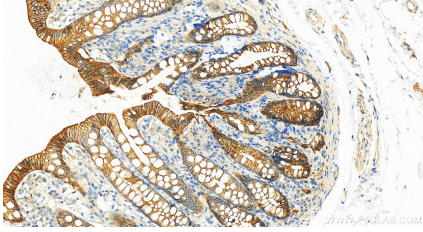
37°C incubated HEK-293 membrane extract lysate were subjected to SDS PAGE followed by western blot with 14418-1-AP (ATP1A1 antibody) at dilution of 1:100000 incubated at room temperature for 1.5 hours.



IP result of anti-ATP1A1 (IP:14418-1-AP, 4ug; Detection:14418-1-AP 1:20000) with HEK-293 cells lysate 1470 ug.

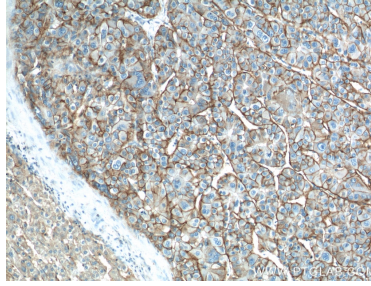


Immunohistochemical analysis of paraffin-embedded human cervical cancer tissue slide using 14418-1-AP (ATP1A1 antibody) at dilution of 1:2000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



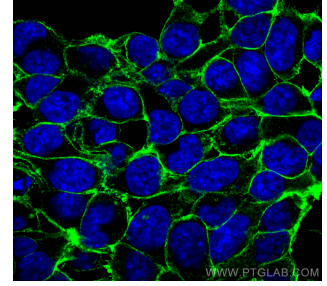
Immunohistochemical analysis of paraffin-embedded human normal colon slide using 14418-1-AP (ATP1A1 antibody) at dilution of 1:2000 (under 20x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).

Immunohistochemical analysis of paraffin-embedded human ovary tumor tissue slide using 14418-1-AP (ATP1A1 antibody) at dilution of 1:2000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded human liver cancer tissue slide using 14418-1-AP (ATP1A1 Antibody) at dilution of 1:200 (under 10x lens).

Immunohistochemical analysis of paraffin-embedded human normal colon slide using 14418-1-AP (ATP1A1 antibody) at dilution of 1:2000 (under 20x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunofluorescent analysis of (-20°C Methanol) fixed HEK-293 cells using ATP1A1 antibody (14418-1-AP) at dilution of 1:200 and CoraLite® 488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L).