

For Research Use Only

# ATPIF1 Polyclonal antibody

Catalog Number: 12067-1-AP

Featured Product

10 Publications



## Basic Information

### Catalog Number:

12067-1-AP

### Size:

150ul, Concentration: 1000 ug/ml by Nanodrop and 400 ug/ml by Bradford method using BSA as the standard;

### Source:

Rabbit

### Isotype:

IgG

### Immunogen Catalog Number:

AG2704

### GenBank Accession Number:

BC009677

### GeneID (NCBI):

93974

### UNIPROT ID:

Q9UII2

### Full Name:

ATPase inhibitory factor 1

### Calculated MW:

106 aa, 12 kDa

### Observed MW:

12 kDa

### Purification Method:

Antigen affinity purification

### Recommended Dilutions:

WB: 1:500-1:2400

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

IHC: 1:50-1:500

IF/ICC: 1:50-1:500

## Applications

### Tested Applications:

WB, IHC, IF/ICC, IP, ELISA

### Cited Applications:

WB, IHC, IF

### Species Specificity:

human

### Cited Species:

human

### Positive Controls:

WB: HeLa cells,

IP: HeLa cells,

IHC: human liver tissue,

IF/ICC: HepG2 cells,

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

## Background Information

The H(+)-ATP synthase is a reversible engine of mitochondria that synthesizes or hydrolyzes ATP upon changes in cell physiology. ATP synthase dysfunction is involved in the onset and progression of diverse human pathologies. ATPIF1 gene encodes mitochondrial ATPase Inhibitory Factor 1 (IF1), also named ATP1, ATPIP or IP. Endogenous IF1 limits ATP depletion when the mitochondrial membrane potential falls below a threshold and the ATP synthase starts hydrolyzing ATP to pump protons out of the mitochondrial matrix. Mitochondrial content of IF1 controls the activity of oxidative phosphorylation mediating the shift of cancer cells to an enhanced aerobic glycolysis, thus supporting an oncogenic role of IF1 in cancer.

## Notable Publications

Author	Pubmed ID	Journal	Application
Kailiang Zhang	34608240	Lab Invest	WB,IF
Helen Tanton	30050450	Front Physiol	IHC,IF
Kang Wang	33422124	Cell Biosci	IF,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

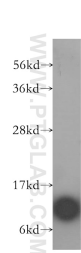
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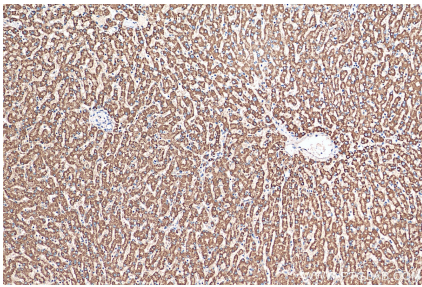
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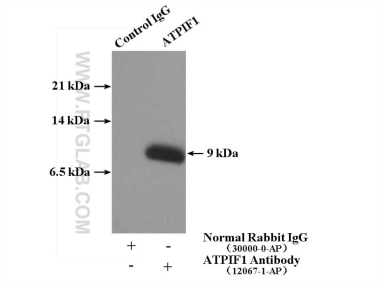
Selected Validation Data



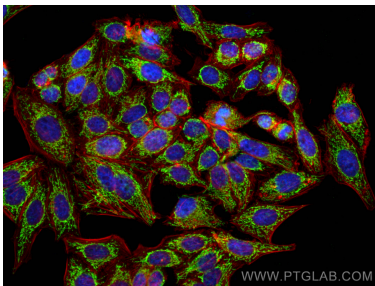
HeLa cells were subjected to SDS PAGE followed by western blot with 12067-1-AP (ATPIF1 antibody) at dilution of 1:500 incubated at room temperature for 1.5 hours.



Immunohistochemical analysis of paraffin-embedded human liver tissue slide using 12067-1-AP (ATPIF1 antibody) at dilution of 1:200 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



IP result of anti-ATPIF1 (IP:12067-1-AP, 4ug; Detection:12067-1-AP 1:500) with HeLa cells lysate 3440ug.



Immunofluorescent analysis of (4% PFA) fixed HepG2 cells using ATPIF1 antibody (12067-1-AP) at dilution of 1:200 and Coralite® 488-Conjugated Goat Anti-Rabbit IgG(H+L), CL594-Phalloidin (red).