

For Research Use Only

ATPIF1 Polyclonal antibody

Catalog Number: 12067-1-AP

Featured Product

9 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 pH 7.3.

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)

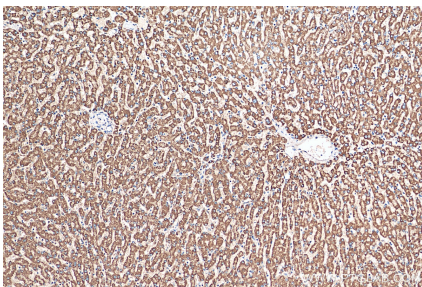
E: proteintech@ptglab.com
W: ptglab.com

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

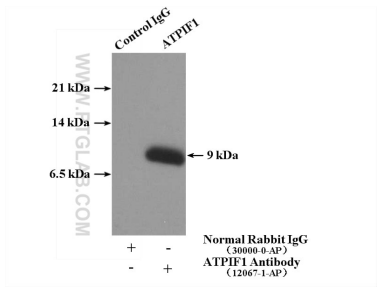
Selected Validation Data



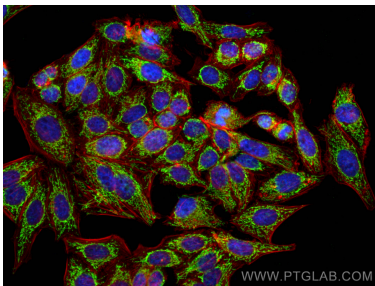
HeLa cells were subjected to SDS PAGE followed by western blot with 12067-1-AP (ATPIF1 antibody) at dilution of 1:500 incubated at room temperature for 1.5 hours.



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 AffiniPure Goat Anti-Rabbit IgG(H+L), CL594-Phalloidin (red).