For Research Use Only

AMPK Beta 1 Polyclonal antibody

Catalog Number:10308-1-AP Featured Product 20 Publications

proteintech®
Antibodies | ELISA kits | Proteins
www.ptglab.com

Basic Information

Catalog Number:
10308-1-AP

Concentration:
400 μg/ml

Source:
Rabbit

Isotype:
IgG

Immunogen Catalog Number:
AG0301

GenBank Accession Number:
BC001007

GeneID (NCBI):
5564

UNIPROT ID:
Q9Y478

Full Name:
protein kinase, AMP-activated, beta 1 non-catalytic subunit

Calculated MW:
38 kDa

Observed MW:
38 kDa

Purification Method:
Antigen affinity purification

Recommended Dilutions:
WB: 1:500-1:2000
IP: 0.5-4.0 ug for 1.0-3.0 mg of total protein lysate
IHC: 1:50-1:500
IF/ICC: 1:200-1:800

Applications

Tested Applications:
WB, IHC, IF/ICC, IP, ELISA

Cited Applications:
WB, IF, IP

Species Specificity:
human, mouse

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 : mouse liver tissue, A431 cells, HEK-293 cells, HeLa cells

IP : mouse liver tissue,

IHC : human lung cancer tissue,

IF/ICC : HeLa cells,

Background Information

AMPK Beta 1 (5'-AMP-activated protein kinase subunit beta-1) is also named as PRKAB1 and AMPK. AMPK, a serine/threonine kinase that exists as a heterotrimer comprised of a catalytic α -subunit and regulatory β - and γ - subunits, has been recognized as a sensor of cellular energy homeostasis (PMID: 21937710). AMPK regulates key metabolic enzymes, cell growth, apoptosis, gene transcription, and protein synthesis (PMID: 12829246). AMPK is an energy sensor and plays an essential role in the control of cellular bioenergetics by responding to various stresses including those that induce changes in the cellular AMP:ATP ratio or modulation in intracellular calcium (PMID: 27812976, PMID: 26616193). Recent studies have shown that AMPK mediates the inhibition of cell proliferation and growth of tumor cells (PMID: 16613876). AMPK also inhibits the expression of Glut1 and glycolysis in Tregs by inhibiting mTORC1 signaling (PMID: 25477880).

Notable Publications

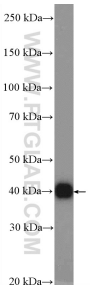
Author	Pubmed ID	Journal	Application
Jie Huang	36068398	Hum Cell	WB
Qidong Li	31155494	Cell Metab	WB,IP
Zhe Zheng	33658485	Cell Death Dis	IF

Storage

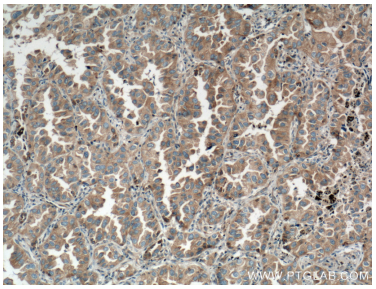
Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol, pH7.3
Aliquoting is unnecessary for -20°C storage

For technical support and original validation data for this product please contact:
T: 4006900926 E: Proteintech-CN@ptglab.com W: ptgcn.com

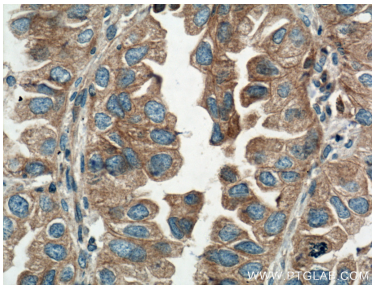
Selected Validation Data



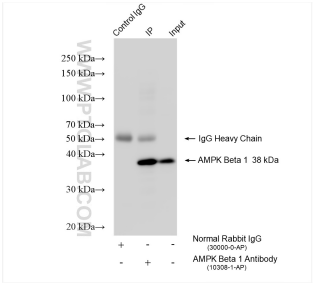
mouse liver tissue were subjected to SDS PAGE followed by western blot with 10308-1-AP (AMPK beta 1 antibody at dilution of 1:1000 incubated at room temperature for 1.5 hours.



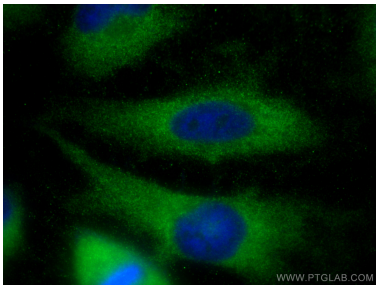
Immunohistochemical analysis of paraffin-embedded human lung cancer tissue slide using 10308-1-AP (AMPK beta 1 antibody at dilution of 1:200 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded human lung cancer tissue slide using 10308-1-AP (AMPK beta 1 antibody at dilution of 1:200 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



IP result of anti-AMPK Beta 1 (IP:10308-1-AP, 4ug; Detection:10308-1-AP 1:5000) with mouse liver tissue lysate 1960 ug.



Immunofluorescent analysis of (-20°C Ethanol) fixed HeLa cells using AMPK Beta 1 antibody (10308-1-AP) at dilution of 1:400 and Multi-rAb CoraLite ® Plus 488-Goat Anti-Rabbit Recombinant Secondary Antibody (H+L) (RGAR002).