For Research Use Only

AMPK Beta 1 Polyclonal antibody

Catalog Number:10308-1-AP Featured Product 31 Publications

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Basic Information

Catalog Number:
10308-1-AP

Size:
150ul , Concentration: 500 ug/ml by Nanodrop;

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: 1:1000-1:8000
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, IHC, IF, IP

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 : HEK-293 cells, HeLa cells, A431 cells, NIH/3T3 cells, mouse liver tissue, rat liver tissue

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

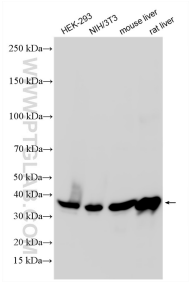
Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol, pH7.3
Aliquoting is unnecessary for -20°C storage

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

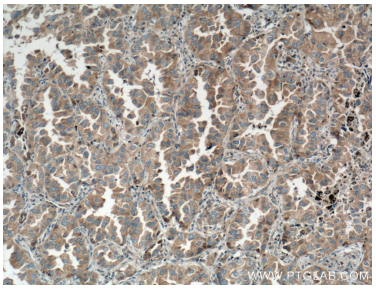
For technical support and original validation data for this product please contact:
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)
E: proteintech@ptglab.com
W: ptglab.com

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

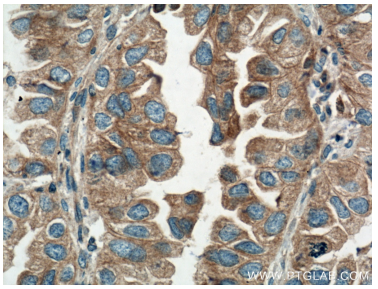
Selected Validation Data



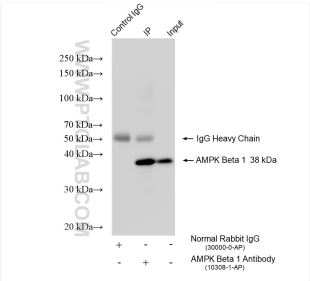
Various lysates were subjected to SDS PAGE followed by western blot with 10308-1-AP (AMPK Beta 1 antibody) at dilution of 1:4000 incubated at room temperature for 1.5 hours.



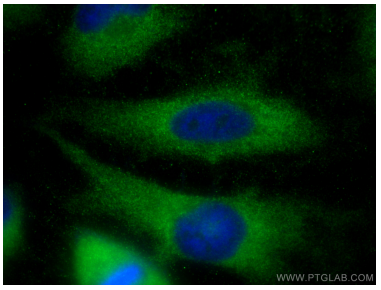
Immunohistochemical analysis of paraffin-embedded human lung cancer tissue slide using 10308-1-AP (AMPK beta 1 antibody at dilution of 1:200 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



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).