For Research Use Only

# AMPK Beta 1 Polyclonal antibody

Catalog Number:10308-1-AP Featured Product 30 Publications

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## Basic Information

Catalog Number:
10308-1-AP

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

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 |

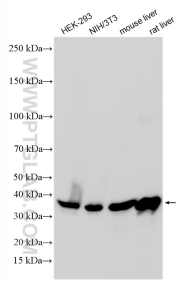
## Storage

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

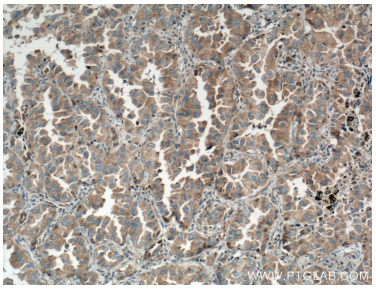
For technical support and original validation data for this product please contact:
T: 4006900926 E: Proteintech-CN@ptglab.com W: ptgcn.com

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

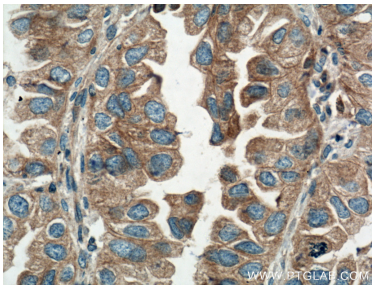
## Selected Validation Data



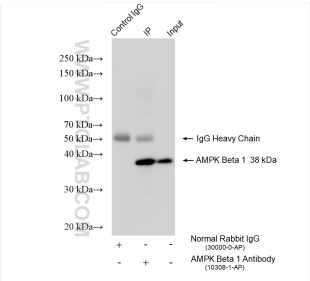

Various lysates were subjected to SDS PAGE followed by western blot with 10308-1-AP (AMPK Beta 1 antibody) at dilution of 1:4000 incubated at room temperature for 1.5 hours.



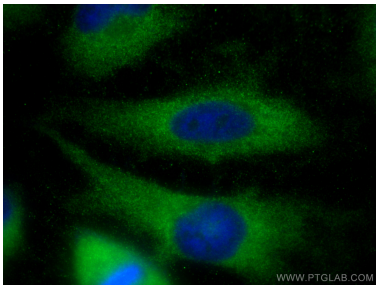

Immunohistochemical analysis of paraffin-embedded human lung cancer tissue slide using 10308-1-AP (AMPK beta 1 antibody at dilution of 1:200 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).




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).