



Mouse Monoclonal Antibody **AMPK  $\alpha$ 1** conjugated to Sepharose Beads

CatalogNo: **ANT8099-S**

Size 200ul

Storage Store at 4 °C for frequent use

### Description

This Antagene antibody is immobilized via covalent binding of primary amino groups to N-hydroxysuccinimide (NHS)-activated sepharose beads. It is useful for immunoprecipitation assays.

**AMPK  $\alpha$ 1 (ANT0065R) Rabbit mAb**

Formulation: 50% slurry in PBS pH 7.2 with 0.01mg NaN<sub>3</sub> preservative.

#### Host Species

- Rabbit
- Human, Mouse, Rat,

#### Reactivity

- WB, IHC, IF, IP, ELISA

#### Applications

#### MW

- 64kD (Calculated)
  - IgG, Kappa
- 64kD (Observed)

#### Isotype

## Recommended Dilution Ratios

IP

### Basic Information

#### Clonality

Monoclonal

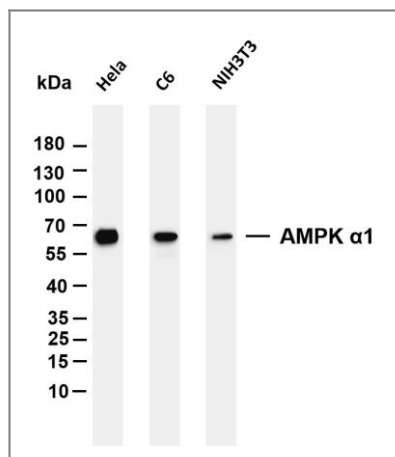
Clone Number ANT0065R

Immunogen Information Specificity

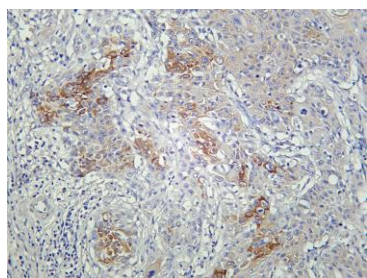
Endogenous

Gene name	PRKAA1												
Protein Name	5'-AMP-activated protein kinase catalytic subunit alpha-1 (AMPK subunit alpha-1) (AcetylCoA carboxylase kinase) (ACACA kinase) (Hydroxymethylglutaryl-CoA reductase kinase) (HMGCR kinase) (Tau-protein kinase PRK												
	<table><tr><th>Organism</th><th>Gene ID</th><th>UniProt ID</th></tr><tr><td>Human</td><td><a href="#">5562;</a></td><td><a href="#">Q13131;</a></td></tr><tr><td>Mouse</td><td></td><td><a href="#">Q5EG47;</a></td></tr><tr><td>Rat</td><td></td><td><a href="#">P54645;</a></td></tr></table>	Organism	Gene ID	UniProt ID	Human	<a href="#">5562;</a>	<a href="#">Q13131;</a>	Mouse		<a href="#">Q5EG47;</a>	Rat		<a href="#">P54645;</a>
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Rat		<a href="#">P54645;</a>											
Cellular Localization	Cytoplasm												
Tissue specificity	Brain,Intestine,Liver,Mammary gland,Platelet,Testis												
Function	Catalytic activity:ATP + a protein = ADP + a phosphoprotein.,cofactor:Magnesium.,enzyme regulation:Binding of AMP results in allosteric activation, inducing phosphorylation on Thr-174 by STK11 in complex with STE20-related adapter-alpha (STRAD alpha) pseudo kinase and CAB39. Also activated by phosphorylation by CAMKK2 triggered by a rise in intracellular calcium ions, without detectable changes in the AMP/ATP ratio.,Function:Responsible for the regulation of fatty acid synthesis by phosphorylation of acetyl-CoA carboxylase. It also regulates cholesterol synthesis via phosphorylation and inactivation of hormone-sensitive lipase and hydroxymethylglutaryl-CoA reductase. Appears to act as a metabolic stress-sensing protein kinase switching off biosynthetic pathways when cellular ATP levels are depleted and when 5'-AMP rises in response to fuel limitation and/or hypoxia. This is a catalytic subunit.,sequence Caution:Translation N-terminally shortened.,similarity:Belongs to the protein kinase superfamily.,similarity:Belongs to the protein kinase superfamily. CAMK Ser/Thr protein kinase family. SNF1 subfamily.,similarity:Contains 1 protein kinase domain.,subunit:Heterotrimer of an alpha catalytic subunit, a beta and a gamma non-catalytic subunits. Interacts with FNIP1 and FNIP2.,												

## Validation Data



Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-AMPK  $\alpha$ 1 (ANT0065R) antibody. The HRPconjugated Goat anti-Rabbit IgG(H + L) antibody was used to detect the antibody. Lane 1: HeLa Lane 2: C6 Lane 3: NIH3T3 Predicted band size: 64kDa Observed band size: 64kDa



Human cervical carcinoma was stained with Anti-AMPK $\alpha$ 1 (PT0165R) rabbit antibody

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Contact Antagene Inc Tel 1-866-964-2589 Email: [info@antageneinc.com](mailto:info@antageneinc.com)