AMPK α1 (5G11) Mouse mAb

CatalogNo: YM3520 Orthogonal Validated

Key Features

Host Species
- Mouse

Reactivity
- Human

Applications
- WB,IHC,IF

MW
- 63kD (Observed)

Recommended Dilution Ratios

WB 1:1000-2000
IHC 1:50-100
IF 1:50-200

Storage

Storage*	-15°C to -25°C/1 year(Do not lower than -25°C)
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

Basic Information

Clonality	Monoclonal
Clone Number	5G11

Immunogen Information

Immunogen	Synthetic Peptide of AMPK α1
Specificity	AMPK α1 protein detects endogenous levels of AMPK α1

Target Information

Gene name PRKAA1

Protein Name 5'-AMP-activated protein kinase catalytic subunit alpha-1 (AMPK subunit alpha-1) (Acetyl-CoA carboxylase kinase) (ACACA kinase) (Hydroxymethylglutaryl-CoA reductase kinase) (HMGCR kinase) (Tau-protein kinase PRK

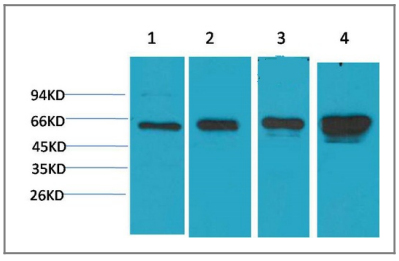
Organism	Gene ID	UniProt ID
Human	5562;	Q13131;
Mouse		Q5EG47;
Rat		P54645;

Cellular Localization Cytoplasm . Nucleus . In response to stress, recruited by p53/TP53 to specific promoters. .

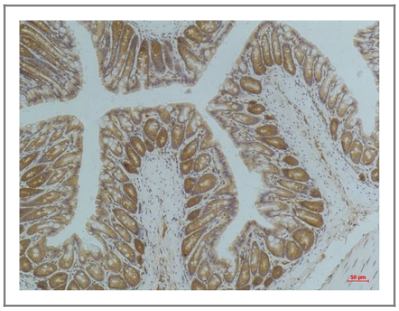
Tissue specificity Brain,Intestine,Liver,Mammary gland,Platelet,Testis

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



Western blot analysis of 1)Hela, 2) 293T, 3)3T3, 4) PC12 with AMPK a1 Mouse mAb diluted at 1:2,000.



Immunohistochemical analysis of paraffin-embedded Mouse ColonTissue using AMPK a1 Mouse mAb diluted at 1:200.

Contact information

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Please scan the QR code to access additional product information: **AMPK α1 (5G11) Mouse mAb**