AMPKα1 Mouse mAb

CatalogNo: YM0024

Key Features

Host Species
- Mouse

Reactivity
- Human,Mouse,Rat,Monkey

Applications
- WB,IHC,IF,Flow Cyt,ELISA

MW
- 64kD (Calculated)

Recommended Dilution Ratios

WB 1:500-1:2000
IHC 1:200-1:1000
IF 1:200-1:1000
Flow Cyt 1:200-1:400
ELISA 1:10000
Not yet tested in other applications.

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

Immunogen Information

Immunogen	Purified recombinant fragment of human AMPKα1 expressed in E. Coli.
Specificity	AMPKα1 Monoclonal Antibody detects endogenous levels of AMPKα1 protein.

Target Information

Gene name AAPK1

Protein Name 5'-AMP-activated protein kinase catalytic subunit alpha-1

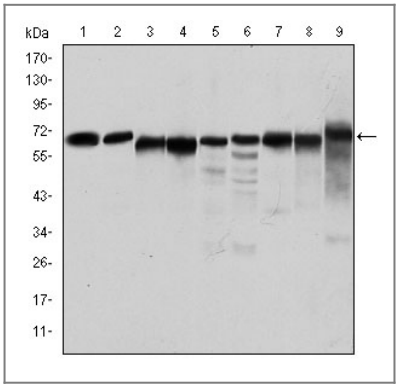
Organism	Gene ID	UniProt ID
Human	5562;	Q13131;
Mouse	105787;	Q5EG47;
Rat	65248;	P54645;

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

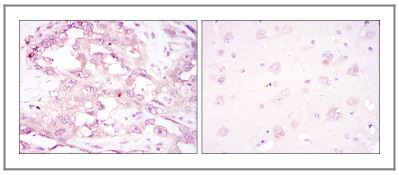
Tissue specificity Brain,Intestine,Liver,Mammary gland,Platelet,Testis

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.,

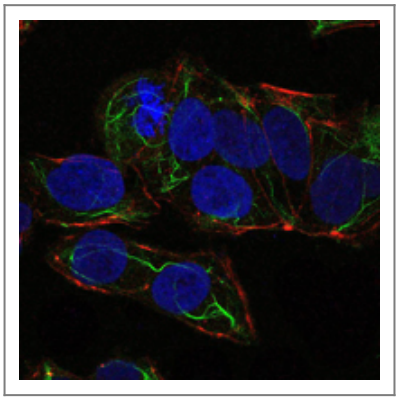
Validation Data



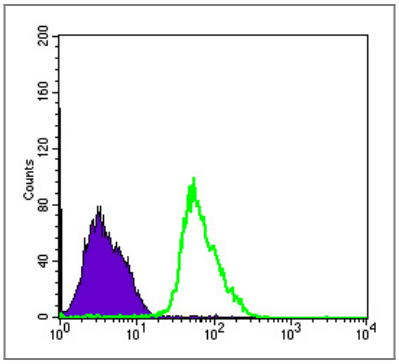
Western Blot analysis using AMPKα1 Monoclonal Antibody against Jurkat (1), HeLa (2), HepG2 (3), MCF-7 (4), Cos7 (5), NIH/3T3 (6), K562 (7), HEK293 (8), and PC-12 (9) cell lysate.



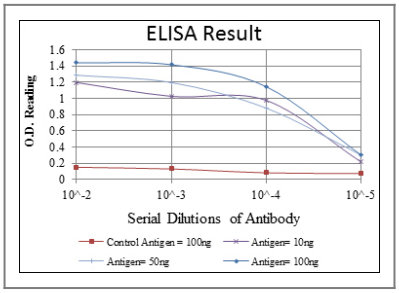
Immunohistochemistry analysis of paraffin-embedded ovarian cancer (left) and brain tissues (right) with DAB staining using AMPKα1 Monoclonal Antibody.



Immunofluorescence analysis of NTERA-2 cells using AMPKα1 Monoclonal Antibody (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.



Flow cytometric analysis of PC-2 cells using AMPKα1 Monoclonal Antibody (green) and negative control (purple).



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Please scan the QR code to access additional product information:
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