

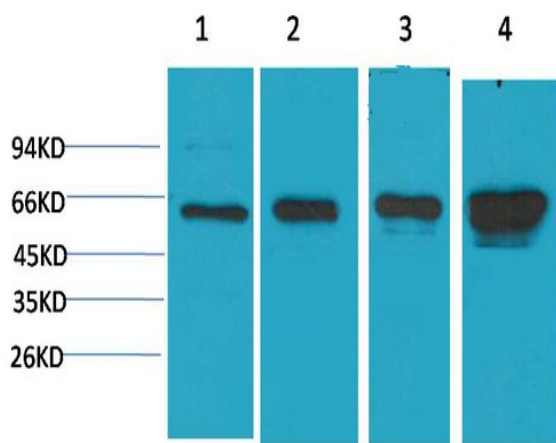
**AMPK  $\alpha$ 1 Monoclonal Antibody(5G11)**

<b>Catalog No :</b>	YM3520
<b>Reactivity :</b>	Human
<b>Applications :</b>	WB;IHC;IF
<b>Target :</b>	AMPK $\alpha$ 1
<b>Fields :</b>	>>FoxO signaling pathway;>>Autophagy - animal;>>mTOR signaling pathway;>>PI3K-Akt signaling pathway;>>AMPK signaling pathway;>>Longevity regulating pathway;>>Longevity regulating pathway - multiple species;>>Apelin signaling pathway;>>Tight junction;>>Circadian rhythm;>>Thermogenesis;>>Insulin signaling pathway;>>Adipocytokine signaling pathway;>>Oxytocin signaling pathway;>>Glucagon signaling pathway;>>Insulin resistance;>>Non-alcoholic fatty liver disease;>>Alcoholic liver disease;>>Hypertrophic cardiomyopathy;>>Fluid shear stress and atherosclerosis
<b>Gene Name :</b>	PRKAA1
<b>Protein Name :</b>	5'-AMP-activated protein kinase catalytic subunit alpha-1 (AMPK subunit alpha-1) (EC 2.7.11.1) (Acetyl-CoA carboxylase kinase) (ACACA kinase) (EC 2.7.11.27) (Hydroxymethylglutaryl-CoA reductase kinase)
<b>Human Gene Id :</b>	5562
<b>Human Swiss Prot No :</b>	Q13131
<b>Mouse Swiss Prot No :</b>	Q5EG47
<b>Rat Swiss Prot No :</b>	P54645
<b>Immunogen :</b>	Synthetic Peptide of AMPK $\alpha$ 1
<b>Specificity :</b>	AMPK $\alpha$ 1 protein detects endogenous levels of AMPK $\alpha$ 1
<b>Formulation :</b>	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
<b>Source :</b>	Monoclonal, Mouse

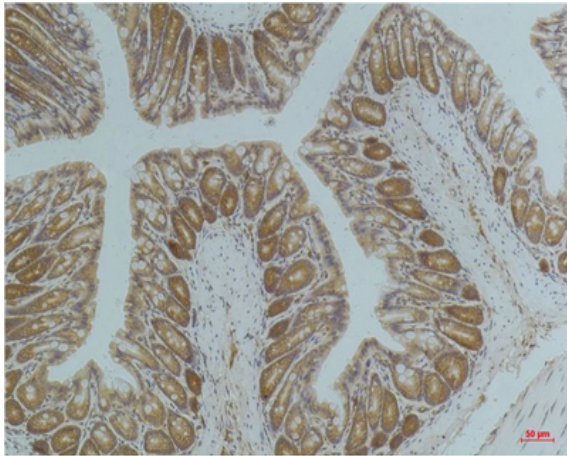
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<b>Dilution :</b>	<u>WB 1:1000-2000, IHC 1:50-100. IF 1:50-200</u>
<b>Purification :</b>	<u>The antibody was affinity-purified from mouse ascites by affinity-chromatography using specific immunogen.</u>
<b>Concentration :</b>	<u>1 mg/ml</u>
<b>Storage Stability :</b>	<u>-15°C to -25°C/1 year(Do not lower than -25°C)</u>
<b>Observed Band :</b>	<u>63kD</u>
<b>Cell Pathway :</b>	<u>Regulation of autophagy;mTOR;Insulin_Receptor;Adipocytokine;Hypertrophic cardiomyopathy (HCM);</u>
<b>Background :</b>	<u>The protein encoded by this gene belongs to the ser/thr protein kinase family. It is the catalytic subunit of the 5&amp;apos;-prime-AMP-activated protein kinase (AMPK). AMPK is a cellular energy sensor conserved in all eukaryotic cells. The kinase activity of AMPK is activated by the stimuli that increase the cellular AMP/ATP ratio. AMPK regulates the activities of a number of key metabolic enzymes through phosphorylation. It protects cells from stresses that cause ATP depletion by switching off ATP-consuming biosynthetic pathways. Alternatively spliced transcript variants encoding distinct isoforms have been observed. [provided by RefSeq, Jul 2008],</u>
<b>Function :</b>	<u>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 s</u>
<b>Subcellular Location :</b>	<u>Cytoplasm . Nucleus . In response to stress, recruited by p53/TP53 to specific promoters. .</u>
<b>Expression :</b>	<u>Brain,Intestine,Liver,Mammary gland,Platelet,Testis</u>

**Products Images**



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 Colon Tissue using AMPK a1 Mouse mAb diluted at 1:200.