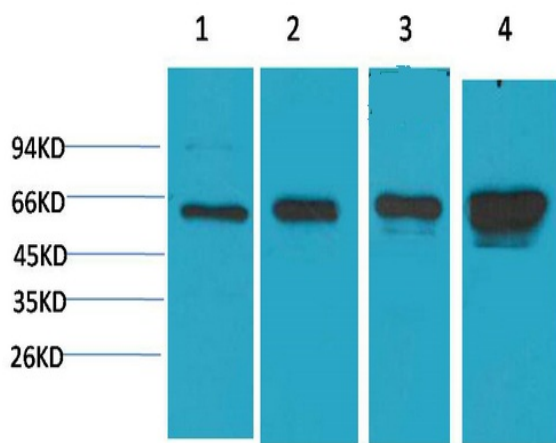


AMPK α 1 Monoclonal Antibody(5G11)

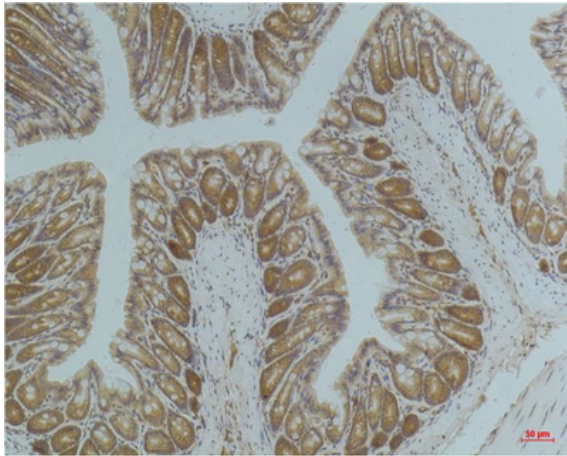
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|------------------------------|--|
| Catalog No : | YM3520 |
| Reactivity : | Human |
| Applications : | WB;IHC;IF |
| Target : | AMPK α 1 |
| Fields : | >>FoxO signaling pathway;>>Autophagy - animal;>>mTOR signaling pathway;>>PI3K-Akt signaling pathway;>>AMPK 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 |
| Gene Name : | PRKAA1 |
| Protein Name : | 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) |
| Human Gene Id : | 5562 |
| Human Swiss Prot No : | Q13131 |
| Mouse Swiss Prot No : | Q5EG47 |
| Rat Swiss Prot No : | P54645 |
| Immunogen : | Synthetic Peptide of AMPK α 1 |
| Specificity : | AMPK α 1 protein detects endogenous levels of AMPK α 1 |
| Formulation : | Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide. |
| Source : | Monoclonal, Mouse |

| | |
|-------------------------------|---|
| Dilution : | <u>WB 1:1000-2000, IHC 1:50-100. IF 1:50-200</u> |
| Purification : | <u>The antibody was affinity-purified from mouse ascites by affinity-chromatography using specific immunogen.</u> |
| Concentration : | <u>1 mg/ml</u> |
| Storage Stability : | <u>-15°C to -25°C/1 year(Do not lower than -25°C)</u> |
| Observed Band : | <u>63kD</u> |
| Cell Pathway : | <u>Regulation of autophagy;mTOR;Insulin_Receptor;Adipocytokine;Hypertrophic cardiomyopathy (HCM);</u> |
| Background : | <u>The protein encoded by this gene belongs to the ser/thr protein kinase family. It is the catalytic subunit of the 5'-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> |
| Function : | <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> |
| Subcellular Location : | <u>Cytoplasm . Nucleus . In response to stress, recruited by p53/TP53 to specific promoters. .</u> |
| Expression : | <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.