

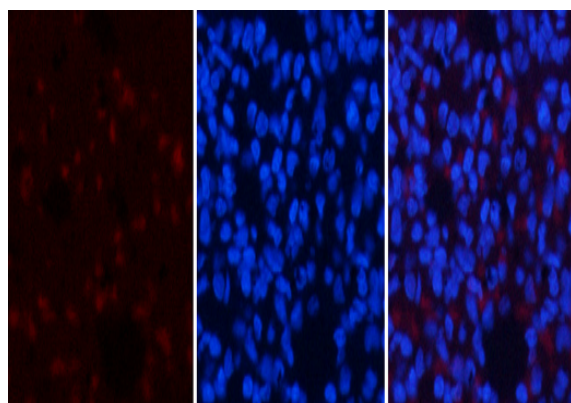
AMPK α 1 Polyclonal Antibody

Catalog No :	YT0215
Reactivity :	Human;Mouse;Rat
Applications :	WB;IHC;IF;ELISA
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
Human Gene Id :	5562
Human Swiss Prot No :	Q13131
Mouse Gene Id :	105787
Mouse Swiss Prot No :	Q5EG47
Rat Gene Id :	65248
Rat Swiss Prot No :	P54645
Immunogen :	The antiserum was produced against synthesized peptide derived from human AMPK1. AA range:451-500
Specificity :	AMPK α 1 Polyclonal Antibody detects endogenous levels of AMPK α 1 protein.

Formulation :	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Source :	Polyclonal, Rabbit,IgG
Dilution :	WB 1:500 - 1:2000. IHC 1:100 - 1:300. IF 1:200 - 1:1000. ELISA: 1:10000. Not yet tested in other applications.
Purification :	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Concentration :	1 mg/ml
Storage Stability :	-15°C to -25°C/1 year(Do not lower than -25°C)
Observed Band :	65kD
Cell Pathway :	Insulin Receptor; mTOR; AMPK
Background :	<p>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],</p>
Function :	<p>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</p>
Subcellular Location :	Cytoplasm . Nucleus . In response to stress, recruited by p53/TP53 to specific promoters. .
Expression :	Brain,Intestine,Liver,Mammary gland,Platelet,Testis

Tag :	<u>orthogonal</u>
Sort :	<u>393</u>
No3 :	<u>ab32047</u>
No4 :	<u>1</u>
Host :	<u>Rabbit</u>
Modifications :	<u>Unmodified</u>

Products Images

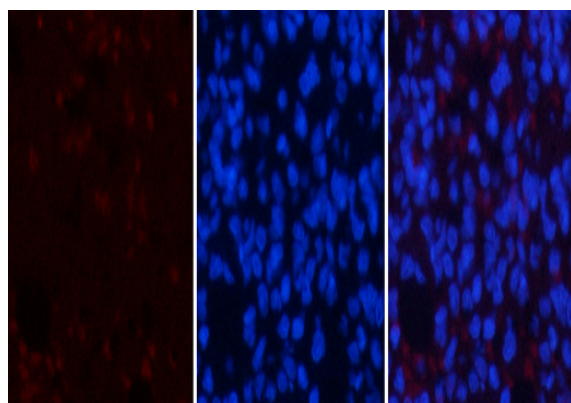


A

B

C

Immunofluorescence analysis of rat-lung tissue. 1, AMPK α 1 Polyclonal Antibody (red) was diluted at 1:200 (4 °C, overnight). 2, Cy3 labeled Secondary antibody was diluted at 1:300 (room temperature, 50min). 3, Picture B: DAPI (blue) 10min. Picture A: Target. Picture B: DAPI. Picture C: merge of A+B

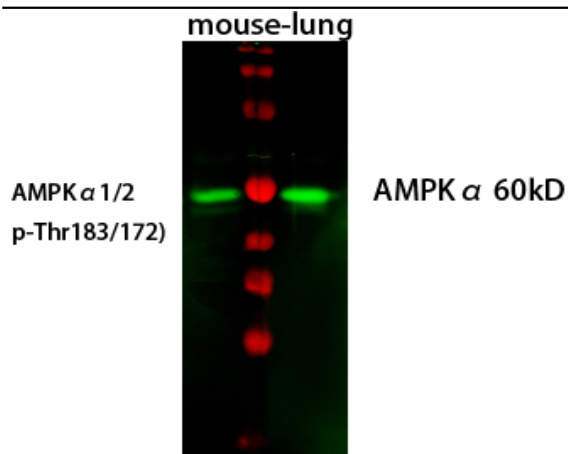


A

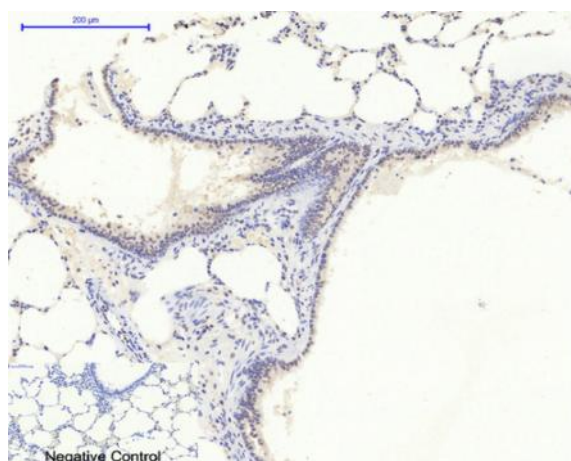
B

C

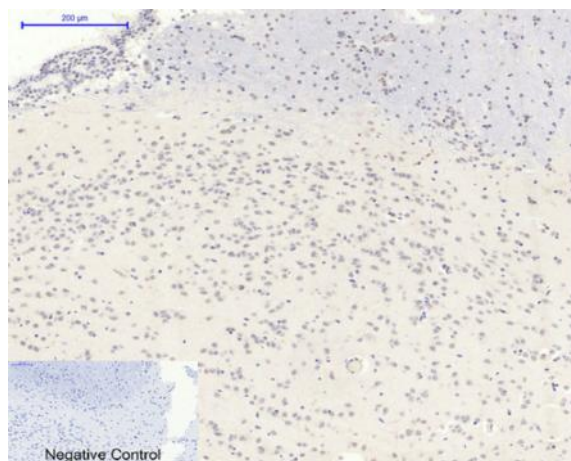
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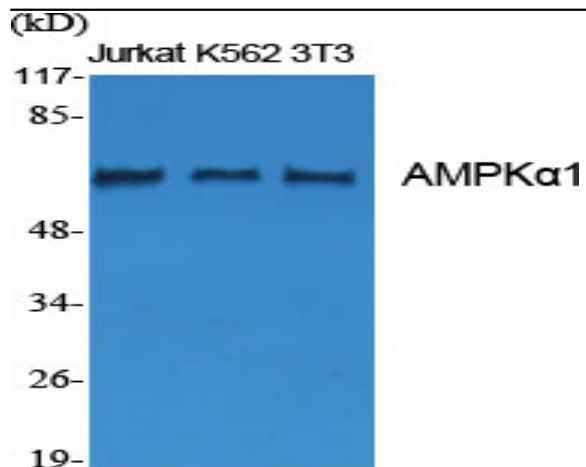
Western Blot analysis of mouse-lung cells using primary antibody diluted at 1:1000(4°C overnight). Secondary antibody:Goat Anti-rabbit IgG IRDye 800(diluted at 1:5000, 25°C, 1 hour). Cell lysate was extracted by Minute™ Plasma Membrane Protein Isolation and Cell Fractionation Kit(SM-005, Inventbiotech,MN,USA).



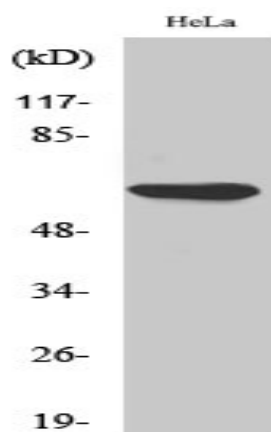
Immunohistochemical analysis of paraffin-embedded Rat-lung tissue. 1,AMPK α 1 Polyclonal Antibody was diluted at 1:200(4°C,overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C,20min). 3,Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.



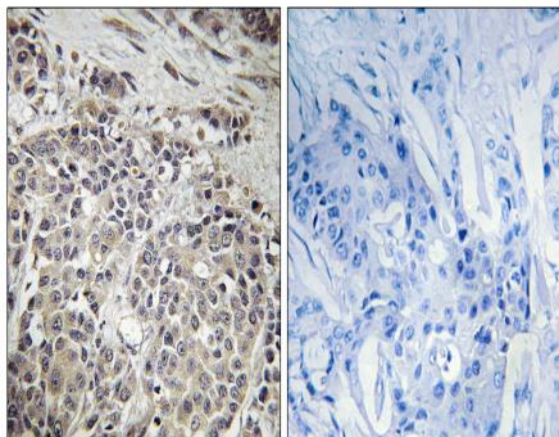
Immunohistochemical analysis of paraffin-embedded Rat-brain tissue. 1,AMPK α 1 Polyclonal Antibody was diluted at 1:200(4°C,overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C,20min). 3,Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.



Western Blot analysis of various cells using AMPK α 1 Polyclonal Antibody diluted at 1:1000



Western Blot analysis of HeLa cells using AMPK α 1 Polyclonal Antibody diluted at 1:1000



Immunohistochemistry analysis of paraffin-embedded human breast carcinoma tissue, using AMPK1 Antibody. The picture on the right is blocked with the synthesized peptide.

