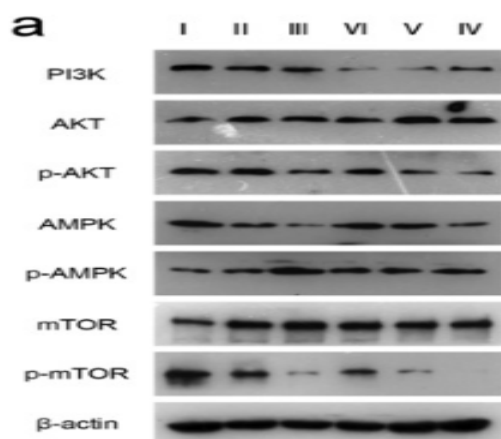


## AMPK $\alpha$ 1/2 Polyclonal Antibody

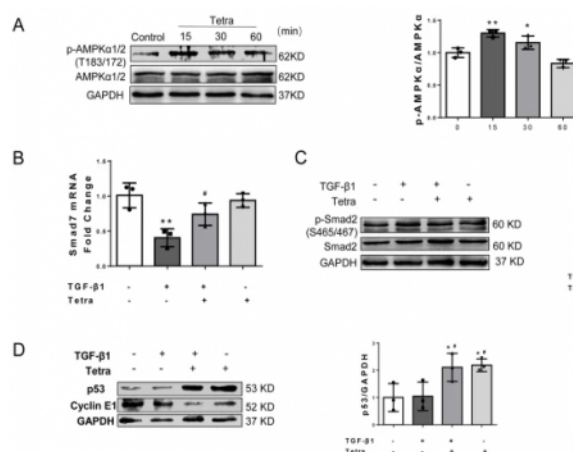
<b>Catalog No :</b>	YT0216
<b>Reactivity :</b>	Human;Mouse;Rat;Monkey;Bovine;Fish
<b>Applications :</b>	WB;IHC;IF;ELISA
<b>Target :</b>	AMPK $\alpha$ 1/2
<b>Fields :</b>	>>FoxO signaling pathway;>>Autophagy - animal;>>mTOR signaling pathway;>>PI3K-Akt signaling pathway;>>AMPK signaling pathway;>>Longevity 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>	AAPK1/AAPK2
<b>Protein Name :</b>	5'-AMP-activated protein kinase catalytic subunit alpha-1/2
<b>Human Gene Id :</b>	5562/5563
<b>Human Swiss Prot No :</b>	Q13131/P54646
<b>Mouse Gene Id :</b>	105787/108079
<b>Rat Gene Id :</b>	65248/78975
<b>Rat Swiss Prot No :</b>	P54645/Q09137
<b>Immunogen :</b>	The antiserum was produced against synthesized peptide derived from human AMPK alpha. AA range:140-189
<b>Specificity :</b>	AMPK $\alpha$ 1/2 Polyclonal Antibody detects endogenous levels of AMPK $\alpha$ 1/2 protein.
<b>Formulation :</b>	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

<b>Source :</b>	Polyclonal, Rabbit,IgG
<b>Dilution :</b>	WB 1:500-2000;IHC 1:100-500;IF ICC 1:100-500;ELISA 1:5000-20000
<b>Purification :</b>	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
<b>Concentration :</b>	1 mg/ml
<b>Storage Stability :</b>	-15°C to -25°C/1 year(Do not lower than -25°C)
<b>Observed Band :</b>	63kD
<b>Cell Pathway :</b>	Insulin Receptor; mTOR; AMPK
<b>Background :</b>	<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>
<b>Function :</b>	<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>
<b>Subcellular Location :</b>	Cytoplasm . Nucleus . In response to stress, recruited by p53/TP53 to specific promoters. .
<b>Expression :</b>	Brain,Intestine,Liver,Mammary gland,Platelet,Testis

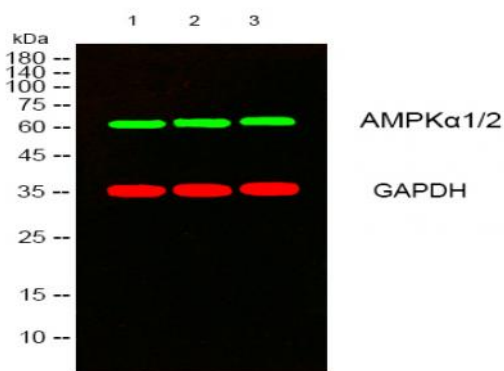
## Products Images



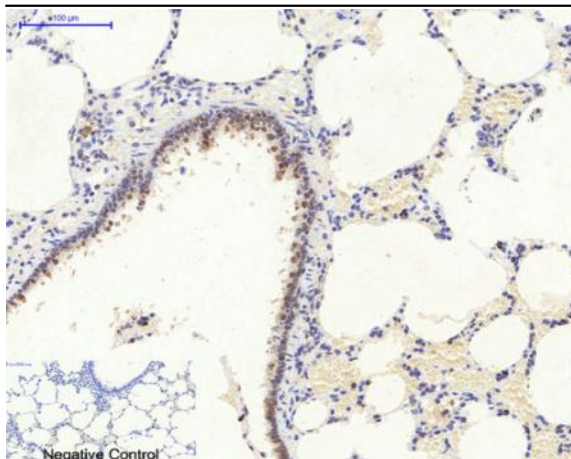
Kang, Min, et al. "Autophagy was activated against the damages of placentas caused by nano-copper oral exposure." *Ecotoxicology and Environmental Safety* 220 (2021): 112364.



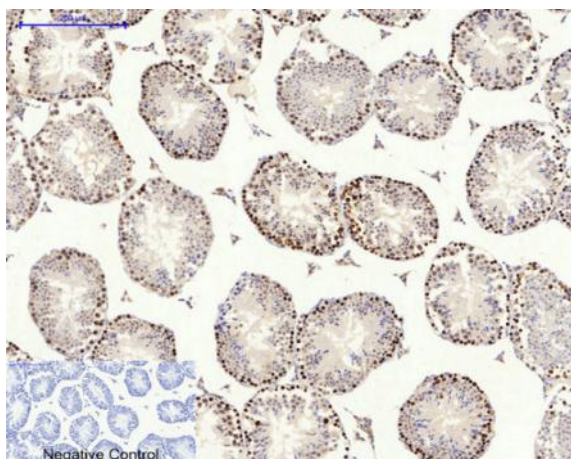
Gao, L., Wang, Ly., Liu, Zq. et al. TNAP inhibition attenuates cardiac fibrosis induced by myocardial infarction through deactivating TGF-β1/Smads and activating P53 signaling pathways. *Cell Death Dis* 11, 44 (2020)



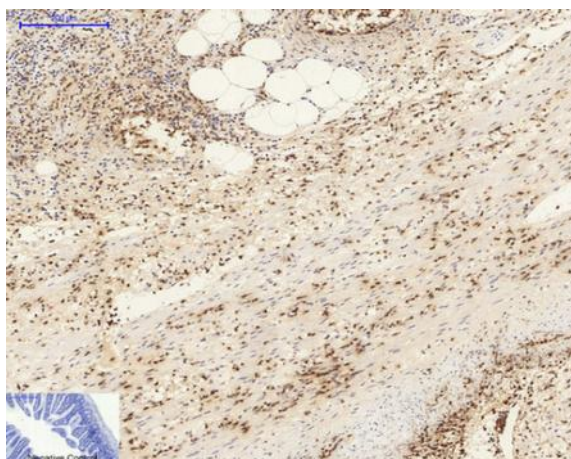
Western blot analysis of lysates from 1) K562 , 2) COS7 , 3) KB cells, [Green] primary antibody was diluted at 1:1000, 4° over night, secondary antibody(cat:RS23920)was diluted at 1:10000, 37° 1hour. [Red] GAPDH Monoclonal Antibody(2B8) (cat:YM3029) antibody was diluted at 1:5000 as loading control, 4° over night,secondary antibody(cat:RS23710)was diluted at 1:10000, 37° 1hour.



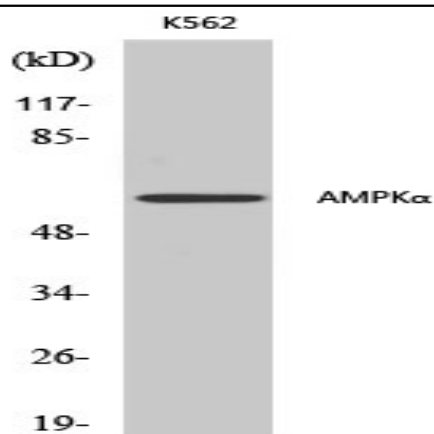
Immunohistochemical analysis of paraffin-embedded Rat-lung tissue. 1, AMPK $\alpha$ 1/2 Polyclonal Antibody was diluted at 1:200 (4 °C, overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval (>98 °C, 20min). 3, Secondary antibody was diluted at 1:200 (room temperature, 30min). Negative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



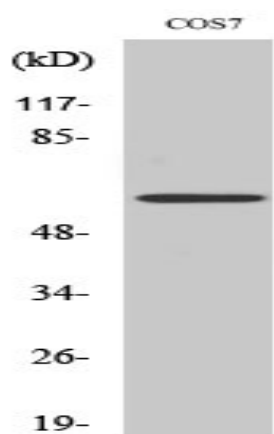
Immunohistochemical analysis of paraffin-embedded Mouse-testis tissue. 1, AMPK $\alpha$ 1/2 Polyclonal Antibody was diluted at 1:200 (4 °C, overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval (>98 °C, 20min). 3, Secondary antibody was diluted at 1:200 (room temperature, 30min). Negative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



Immunohistochemical analysis of paraffin-embedded Mouse-colon tissue. 1, AMPK $\alpha$ 1/2 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 AMPKα1/2  
Polyclonal Antibody diluted at 1:500



Western Blot analysis of COS7 cells using AMPKα1/2 Polyclonal  
Antibody diluted at 1:500