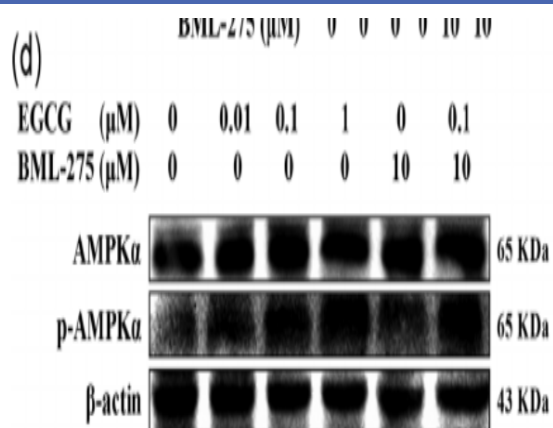


AMPK α 1 (phospho Ser496) Polyclonal Antibody

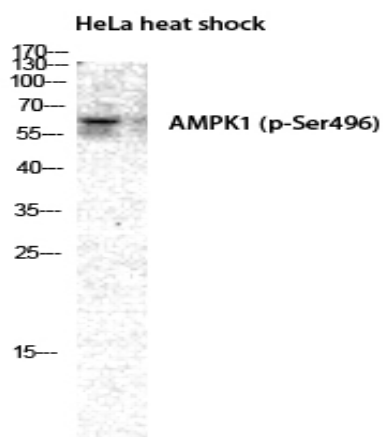
Catalog No :	YP0010
Reactivity :	Human;Mouse;Rat;Canine;Fish
Applications :	WB;IHC;IF;ELISA
Target :	AMPK α 1
Fields :	>>FoxO signaling pathway;>>Autophagy - animal;>>mTOR signaling pathway;>>PI3K-Akt signaling pathway;>>AMPK signaling pathway;>>Longevity regulating pathway;>>Longevity regulating pathway - 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 around the phosphorylation site of Ser496. AA range:451-500
Specificity :	Phospho-AMPK α 1 (S496) Polyclonal Antibody detects endogenous levels of AMPK α 1 protein only when phosphorylated at S496.

Formulation :	<u>Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.</u>
Source :	<u>Polyclonal, Rabbit,IgG</u>
Dilution :	<u>WB 1:500 - 1:2000. IHC 1:100 - 1:300. ELISA: 1:20000.. IF 1:50-200</u>
Purification :	<u>The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-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>62kD</u>
Cell Pathway :	<u>Insulin Receptor; mTOR; AMPK</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>

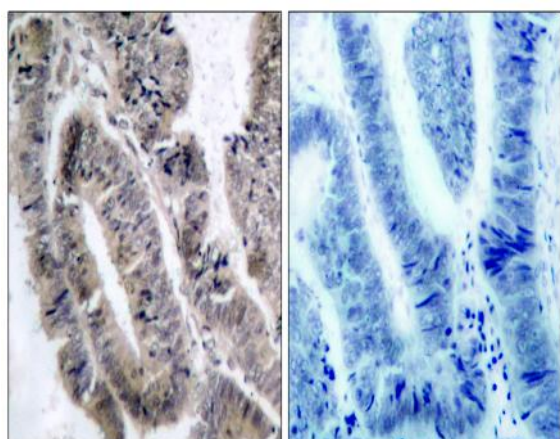
Products Images



Ding, Hongyan, et al. "Epigallocatechin-3-gallate activates the AMP-activated protein kinase signaling pathway to reduce lipid accumulation in canine hepatocytes." *Journal of Cellular Physiology* 236.1 (2021): 405-416.



Western Blot analysis of HELA cells using Phospho-AMPKα1 (S496) Polyclonal Antibody diluted at 1:2000



Immunohistochemistry analysis of paraffin-embedded human colon carcinoma, using AMPK1 (Phospho-Ser485) Antibody. The picture on the right is blocked with the phospho peptide.