



AMPK α 1/2 (phospho Thr183/172) Polyclonal Antibody

Catalog No	BYab-14424
Isotype	IgG
Reactivity	Human;Mouse;Rat;Monkey;Pig;Marsupenaeus japonicus
Applications	IF;WB;IHC;ELISA
Gene Name	AAPK1/AAPK2
Protein Name	5'-AMP-activated protein kinase catalytic subunit alpha-1/2
Immunogen	The antiserum was produced against synthesized peptide derived from human AMPK alpha around the phosphorylation site of Thr172. AA range:140-189
Specificity	Phospho-AMPK α 1/2 (T183/172) Polyclonal Antibody detects endogenous levels of AMPK α 1/2 protein only when phosphorylated at T183/172.
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Source	Polyclonal, Rabbit,IgG
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Dilution	IF: 1:50-200 Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. ELISA: 1/40000. Not yet tested in other applications.
Concentration	1 mg/ml
Purity	≥90%
Storage Stability	-20°C/1 year
Synonyms	PRKAA1; AMPK1; 5'-AMP-activated protein kinase catalytic subunit alpha-1; AMPK subunit alpha-1; Acetyl-CoA carboxylase kinase; ACACA kinase; Hydroxymethylglutaryl-CoA reductase kinase; HMGCR kinase; Tau-protein kinase PRKAA1; PRKAA2; AMPK;
Observed Band	63kD
Cell Pathway	Cytoplasm . Nucleus . In response to stress, recruited by p53/TP53 to specific promoters. .
Tissue Specificity	Brain,Intestine,Liver,Mammary gland,Platelet,Testis
Function	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

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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

Background

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],

matters needing attention

Avoid repeated freezing and thawing!

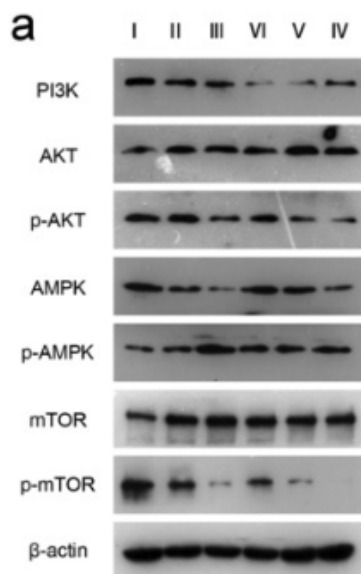
Usage suggestions

This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.

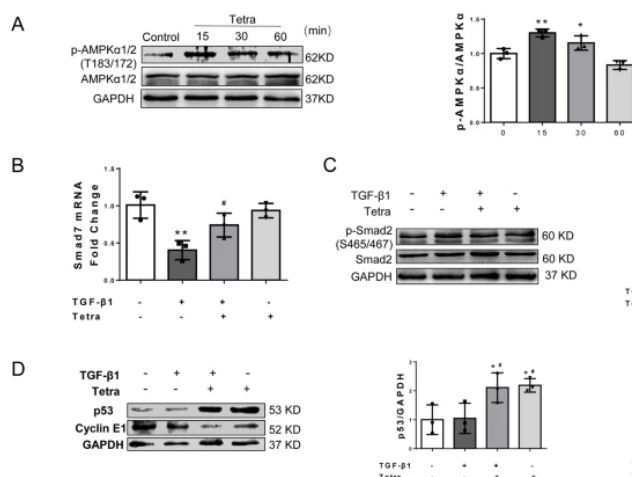
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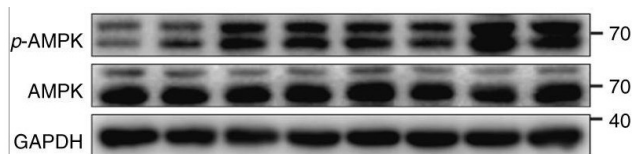
Products Images



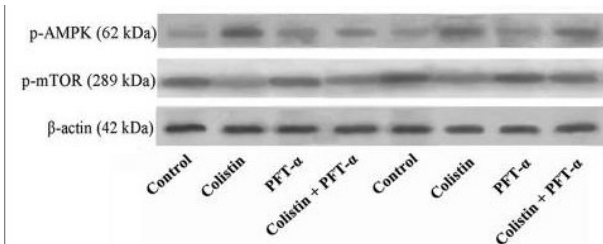
Kang, Min, et al. "Autophagy was activated against the damages of placentas caused by nano-copper oral exposure." *Ecotoxicology and Environmental Safety* 220 (2021): 112364.



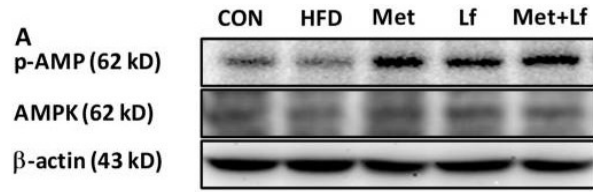
Gao, L., Wang, Ly., Liu, Zq. et al. TNAP inhibition attenuates cardiac fibrosis induced by myocardial infarction through deactivating TGF-β1/Smads and activating P53 signaling pathways. *Cell Death Dis* 11, 44 (2020)



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Zhang, Ling, et al. "P53 mediates colistin-induced autophagy and apoptosis in PC-12 cells." *Antimicrobial agents and chemotherapy* (2016): AAC-00641.



Min, Qing-Qing, et al. "Effects of Metformin Combined with Lactoferrin on Lipid Accumulation and Metabolism in Mice Fed with High-Fat Diet." *Nutrients* 10.11 (2018): 1628.