Best Tools for immunology Research

AMPK a2 protein

Catalog No :	YD0014
Reactivity :	Human
Applications :	WB;SDS-PAGE
Gene Name :	PRKAA2
Protein Name :	AMPK a2 protein
Sequence :	Amino acid: 252-321, with his-MBP tag.
Human Gene Id :	5563
Human Swiss Prot No :	P54646
Mouse Swiss Prot No :	Q8BRK8
Formulation :	Liquid in PBS
Source :	E.coli
Dilution :	WB 1:500-2000
Concentration :	SDS-PAGE >90%
Storage Stability :	-20°C/6 month,-80°C for long storage
Background :	catalytic activity:ATP + a protein = ADP + a phosphoprotein.,cofactor:Magnesium.,enzyme regulation:Binding of AMP results in allosteric activation, inducing phosphorylation on Thr-172 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 subunit.,similarity:Belongs to the protein kinase superfamily. CAMK Ser/Thr protein kinase family. SNF1 subfamily.,similarity:Contains 1 protein kinase domain.,subunit:Heterotrimer of a catalytic subunit, a beta and a gamma non-catalytic subunits.,

Function : protein complex assembly, protein amino acid phosphorylation, fatty acid metabolic process, fatty acid biosynthetic process, steroid biosynthetic process, cholesterol biosynthetic process, phosphorus metabolic process, phosphate metabolic process, steroid metabolic process, cholesterol metabolic process, lipid biosynthetic process, regulation of cellular ketone metabolic process, organic acid biosynthetic process, sterol metabolic process, sterol biosynthetic process, phosphorylation, regulation of lipid metabolic process, regulation of fatty acid metabolic process,macromolecular complex subunit organization, regulation of fatty acid oxidation, carboxylic acid biosynthetic process,protein oligomerization, protein heterooligomerization, macromolecular complex assembly, protein complex biogenesis,

Subcellular Location : Cytoplasm . Nucleus . In response to stress, recruited by p53/TP53 to specific promoters. .

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