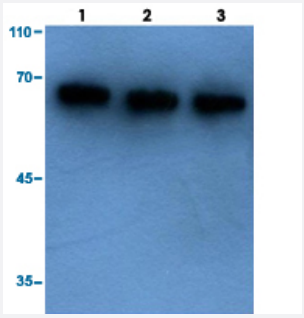
PRKAA1/PRKAA2 polyclonal antibody

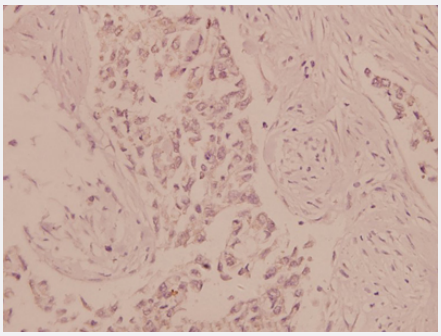
Catalog # PAB27017 Size 100 uL

Applications



Western Blot

Western Blot analysis of (1) Hela cell lysate, (2) mouse brain tissue lysate and (3) rat brain tissue lysate at 1:500 dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

Immunohistochemical staining (Formalin-fixed paraffin-embedded sections) of human breast carcinoma tissue at 1:100.

Specification

Product Description	Rabbit polyclonal antibody raised against synthetic peptide of PRKAA1/PRKAA2.
Immunogen	A synthetic peptide corresponding to amino acids 150-200 of human PRKAA1.
Host	Rabbit
Theoretical MW (kDa)	63
Reactivity	Human, Mouse, Rat
Specificity	PRKAA1/PRKAA2 polyclonal antibody detects endogenous levels of PRKAA1/PRKAA2 protein.
Form	Liquid

Purification	Antigen affinity purification
Concentration	1 mg/mL
Recommend Usage	Immunohistochemistry (1:50-1:200) Western Blot (1:500-1:1000) The optimal working dilution should be determined by the end user.
Storage Buffer	In PBS, pH 7.2 (0.05% sodium azide).
Storage Instruction	Store at 4°C. For long term storage store at -20°C. Aliquot to avoid repeated freezing and thawing.
Note	This product contains sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which shoul d be handled by trained staff only.

Applications

- Western Blot

  Western Blot analysis of (1) Hela cell lysate, (2) mouse brain tissue lysate and (3) rat brain tissue lysate at 1:500 dilution.

- Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

  Immunohistochemical staining (Formalin-fixed paraffin-embedded sections) of human breast carcinoma tissue at 1:100.

Gene Info — PRKAA1

Entrez GeneID	5562
Protein Accession#	Q13131 (Gene ID : 5562);P54646 (Gene ID : 5563)
Gene Name	PRKAA1
Gene Alias	AMPK, AMPKa1, MGC33776, MGC57364
Gene Description	protein kinase, AMP-activated, alpha 1 catalytic subunit
Omim ID	602739
Gene Ontology	Hyperlink

Gene Summary	The protein encoded by this gene belongs to the ser/thr protein kinase family. It is the catalytic sub unit of the 5'-prime-AMP-activated protein kinase (AMPK). AMPK is a cellular energy sensor con served 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 t hrough phosphorylation. It protects cells from stresses that cause ATP depletion by switching off A TP-consuming biosynthetic pathways. Alternatively spliced transcript variants encoding distinct is oforms have been observed. [provided by RefSeq
Other Designations	5'-AMP-activated protein kinase, catalytic alpha-1 chain|AMP -activate kinase alpha 1 subunit|AM P-activated protein kinase, catalytic, alpha-1|AMPK alpha 1

Gene Info — PRKAA2

Entrez GeneID	5563
Protein Accession#	Q13131 (Gene ID : 5562);P54646 (Gene ID : 5563)
Gene Name	PRKAA2
Gene Alias	AMPK, AMPK2, PRKAA
Gene Description	protein kinase, AMP-activated, alpha 2 catalytic subunit
Omim ID	600497
Gene Ontology	Hyperlink
Gene Summary	The protein encoded by this gene is a catalytic subunit of the AMP-activated protein kinase (AMP K). AMPK is a heterotrimer consisting of an alpha catalytic subunit, and non-catalytic beta and ga mma subunits. AMPK is an important energy-sensing enzyme that monitors cellular energy status. In response to cellular metabolic stresses, AMPK is activated, and thus phosphorylates and inacti vates acetyl-CoA carboxylase (ACC) and beta-hydroxy beta-methylglutaryl-CoA reductase (HMG CR), key enzymes involved in regulating de novo biosynthesis of fatty acid and cholesterol. Studie s of the mouse counterpart suggest that this catalytic subunit may control whole-body insulin sensit ivity and is necessary for maintaining myocardial energy homeostasis during ischemia. [provided by RefSeq
Other Designations	5'-AMP-activated protein kinase, catalytic alpha-2 chain|AMP-activated protein kinase alpha 2 ca talytic subunit|AMPK-alpha-2 chain|OTTHUMP00000009993

Pathway

- Adipocytokine signaling pathway
- Adipocytokine signaling pathway
- Hypertrophic cardiomyopathy (HCM)

- Hypertrophic cardiomyopathy (HCM)
- Insulin signaling pathway
- Insulin signaling pathway
- mTOR signaling pathway
- mTOR signaling pathway
- Regulation of autophagy
- Regulation of autophagy

Disease

- Alzheimer disease
- Atherosclerosis
- Atherosclerosis
- Calcinosis
- Calcinosis
- Cardiovascular Diseases
- Cardiovascular Diseases
- Colonic Neoplasms
- Coronary Artery Disease
- Coronary Artery Disease
- Diabetes Complications
- Diabetes Mellitus
- Diabetes Mellitus
- Drug Toxicity
- Drug Toxicity
- Edema
- Edema

- Genetic Predisposition to Disease
- Hypercholesterolemia
- Hypercholesterolemia
- Insulin Resistance
- Metabolic Syndrome X
- Neoplasms
- Osteoporosis
- Rectal Neoplasms