

Datasheet for ABIN6242246  
**anti-PRKAA1/PRKAA2 antibody (N-Term)**



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1 Image

## Overview

Quantity:	400 µL
Target:	PRKAA1/PRKAA2
Binding Specificity:	AA 14-47, N-Term
Reactivity:	Mouse
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This PRKAA1/PRKAA2 antibody is un-conjugated
Application:	Western Blotting (WB)

## Product Details

Immunogen:	This PRKAA1/2 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 14-47 amino acids from the N-terminal region of human PRKAA1/2.
Clone:	RB43852
Isotype:	Ig Fraction
Predicted Reactivity:	Rat, H, Pig
Purification:	This antibody is purified through a protein A column, followed by peptide affinity purification.

## Target Details

Target:	PRKAA1/PRKAA2
Alternative Name:	PRKAA1/2 ( <a href="#">PRKAA1/PRKAA2 Products</a> )

## Target Details

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**Background:** Catalytic subunit of AMP-activated protein kinase (AMPK), an energy sensor protein kinase that plays a key role in regulating cellular energy metabolism. In response to reduction of intracellular ATP levels, AMPK activates energy-producing pathways and inhibits energy-consuming processes: inhibits protein, carbohydrate and lipid biosynthesis, as well as cell growth and proliferation. AMPK acts via direct phosphorylation of metabolic enzymes, and by longer-term effects via phosphorylation of transcription regulators. Also acts as a regulator of cellular polarity by remodeling the actin cytoskeleton, probably by indirectly activating myosin. Regulates lipid synthesis by phosphorylating and inactivating lipid metabolic enzymes such as ACACA, ACACB, GYS1, HMGCR and LIPE, regulates fatty acid and cholesterol synthesis by phosphorylating acetyl-CoA carboxylase (ACACA and ACACB) and hormone-sensitive lipase (LIPE) enzymes, respectively. Regulates insulin-signaling and glycolysis by phosphorylating IRS1, PFKFB2 and PFKFB3. AMPK stimulates glucose uptake in muscle by increasing the translocation of the glucose transporter SLC2A4/GLUT4 to the plasma membrane, possibly by mediating phosphorylation of TBC1D4/AS160. Regulates transcription and chromatin structure by phosphorylating transcription regulators involved in energy metabolism such as CRTC2/TORC2, FOXO3, histone H2B, HDAC5, MEF2C, MLXIPL/ChREBP, EP300, HNF4A, p53/TP53, SREBF1, SREBF2 and PPARGC1A. Acts as a key regulator of glucose homeostasis in liver by phosphorylating CRTC2/TORC2, leading to CRTC2/TORC2 sequestration in the cytoplasm. In response to stress, phosphorylates 'Ser-36' of histone H2B (H2BS36ph), leading to promote transcription. Acts as a key regulator of cell growth and proliferation by phosphorylating TSC2, RPTOR and ATG1/ULK1: in response to nutrient limitation, negatively regulates the mTORC1 complex by phosphorylating RPTOR component of the mTORC1 complex and by phosphorylating and activating TSC2. In response to nutrient limitation, promotes autophagy by phosphorylating and activating ATG1/ULK1. AMPK also acts as a regulator of circadian rhythm by mediating phosphorylation of CRY1, leading to destabilize it. May regulate the Wnt signaling pathway by phosphorylating CTNNB1, leading to stabilize it. Also has tau-protein kinase activity: in response to amyloid beta A4 protein (APP) exposure, activated by CAMKK2, leading to phosphorylation of MAPT/TAU, however the relevance of such data remains unclear in vivo. Also phosphorylates CFTR, EEF2K, KLC1, NOS3 and SLC12A1.

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**Molecular Weight:** 64009

**UniProt:** [Q13131](#)

## Application Details

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**Application Notes:** WB: 1:1000

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## Application Details

Restrictions: For Research Use only

## Handling

Format: Liquid

Buffer: Purified polyclonal antibody supplied in PBS with 0.09 % (W/V) sodium azide.

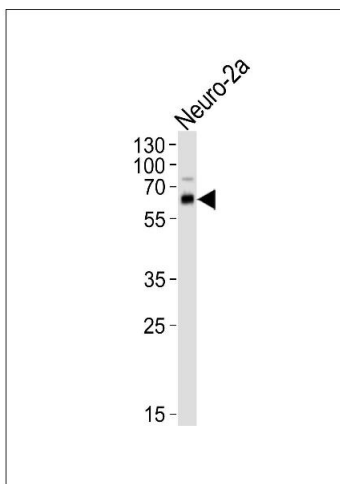
Preservative: Sodium azide

Precaution of Use: This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

Storage: 4 °C,-20 °C

Expiry Date: 6 months

## Images



### Western Blotting

**Image 1.** Western blot analysis of lysate from mouse Neuro-2a cell line, using PRK/2 Antibody (N-term) (ABIN6242246 and ABIN6577642). (ABIN6242246 and ABIN6577642) was diluted at 1:1000. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody. Lysate at 20 µg.