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Datasheet for ABIN7184469

## anti-PRKACA antibody (N-Term)

### 1 Image

#### Overview

Quantity:	100 µL
Target:	PRKACA
Binding Specificity:	N-Term
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This PRKACA antibody is un-conjugated
Application:	Western Blotting (WB), ELISA

#### Product Details

Immunogen:	Synthesized peptide derived from N-terminal of Human KAPC A/B.
Isotype:	IgG
Cross-Reactivity:	Human, Mouse, Rat
Purification:	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.

#### Target Details

Target:	PRKACA
Alternative Name:	PRKACA ( <a href="#">PRKACA Products</a> )
Background:	Background: Phosphorylates a large number of substrates in the cytoplasm and the nucleus.

Regulates the abundance of compartmentalized pools of its regulatory subunits through phosphorylation of PJA2 which binds and ubiquitinates these subunits, leading to their subsequent proteolysis. Phosphorylates CDC25B, ABL1, NFKB1, CLDN3, PSMC5/RPT6, PJA2, RYR2, RORA and VASP. RORA is activated by phosphorylation. Required for glucose-mediated adipogenic differentiation increase and osteogenic differentiation inhibition from osteoblasts. Involved in the regulation of platelets in response to thrombin and collagen, maintains circulating platelets in a resting state by phosphorylating proteins in numerous platelet inhibitory pathways when in complex with NF-kappa-B (NFKB1 and NFKB2) and I-kappa-B-alpha (NFKBIA), but thrombin and collagen disrupt these complexes and free active PRKACA stimulates platelets and leads to platelet aggregation by phosphorylating VASP. Prevents the antiproliferative and anti-invasive effects of alpha-difluoromethylornithine in breast cancer cells when activated. RYR2 channel activity is potentiated by phosphorylation in presence of luminal Ca<sup>2+</sup>, leading to reduced amplitude and increased frequency of store overload-induced Ca<sup>2+</sup> release (SOICR) characterized by an increased rate of Ca<sup>2+</sup> release and propagation velocity of spontaneous Ca<sup>2+</sup> waves, despite reduced wave amplitude and resting cytosolic Ca<sup>2+</sup>. PSMC5/RPT6 activation by phosphorylation stimulates proteasome. Negatively regulates tight junctions (TJs) in ovarian cancer cells via CLDN3 phosphorylation. NFKB1 phosphorylation promotes NF-kappa-B p50-p50 DNA binding. Involved in embryonic development by down-regulating the Hedgehog (Hh) signaling pathway that determines embryo pattern formation and morphogenesis. Prevents meiosis resumption in prophase-arrested oocytes via CDC25B inactivation by phosphorylation. May also regulate rapid eye movement (REM) sleep in the pedunculo pontine tegmental (PPT). Phosphorylates APOBEC3G and AICDA. Isoform 2 phosphorylates and activates ABL1 in sperm flagellum to promote spermatozoa capacitation.

Maldonado F., *Nucleic Acids Res.* 16:8189-8190(1988).

Desseyn J.-L., *Proc. Natl. Acad. Sci. U.S.A.* 97:6433-6438(2000).

Ficarro S., *J. Biol. Chem.* 278:11579-11589(2003).

Aliases: cAMP dependent protein kinase alpha catalytic subunit antibody, cAMP dependent protein kinase beta catalytic subunit antibody, cAMP dependent protein kinase catalytic beta subunit isoform 4ab antibody, cAMP dependent protein kinase catalytic subunit alpha antibody, cAMP dependent protein kinase catalytic subunit alpha, isoform 1 antibody, cAMP dependent protein kinase catalytic subunit beta antibody, cAMP-dependent protein kinase catalytic subunit alpha antibody, KAPCA\_HUMAN antibody, PKA C alpha antibody, PKA C beta antibody, PKA C-alpha antibody, PKACA antibody, PKACB antibody, PPNAD4 antibody, PRKACA antibody, PRKACAA antibody, PRKACB antibody, Protein kinase A catalytic subunit alpha antibody, Protein kinase A catalytic subunit antibody, Protein kinase A catalytic subunit beta antibody,

## Target Details

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Protein kinase, cAMP dependent, catalytic, alpha antibody, Protein kinase, cAMP dependent, catalytic, beta antibody

UniProt: [P17612](#)

Pathways: [NF-kappaB Signaling](#), [Hedgehog Signaling](#), [EGFR Signaling Pathway](#), [Neurotrophin Signaling Pathway](#), [Thyroid Hormone Synthesis](#), [Carbohydrate Homeostasis](#), [Myometrial Relaxation and Contraction](#), [M Phase](#), [G-protein mediated Events](#), [Signaling Events mediated by VEGFR1 and VEGFR2](#), [Interaction of EGFR with phospholipase C-gamma](#), [Thromboxane A2 Receptor Signaling](#), [VEGFR1 Specific Signals](#), [Lipid Metabolism](#), [SARS-CoV-2 Protein Interactome](#), [The Global Phosphorylation Landscape of SARS-CoV-2 Infection](#)

## Application Details

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Application Notes: WB:1:500-1:3000,

Restrictions: For Research Use only

## Handling

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Format: Liquid

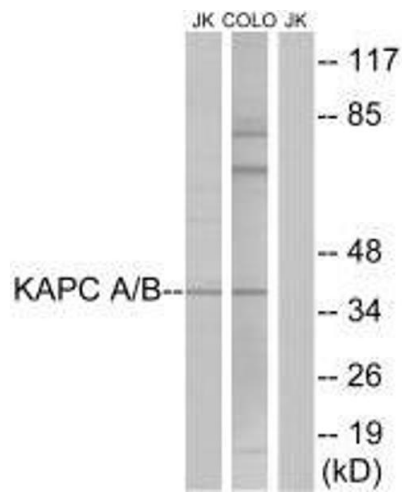
Buffer: Rabbit IgG in phosphate buffered saline (without Mg<sup>2+</sup> and Ca<sup>2+</sup>), pH 7.4, 150 mM NaCl, 0.02 % sodium azide and 50 % glycerol.

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: -20 °C,-80 °C

Storage Comment: Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.



### Western Blotting

**Image 1.** Western blot analysis of extracts from Jurkat cells and COLO cells, using KAPC A/B antibody.