

**PKC Antibody**  
**Rabbit Polyclonal Antibody**  
**Catalog # ABV10329****Specification**

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**PKC Antibody - Product Information**

Application	WB
Primary Accession	<a href="#">P68404</a>
Other Accession	<a href="#">EDL17279.1</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	76751

**PKC Antibody - Additional Information****Gene ID** 18751**Application & Usage**

Western blotting (0.5-4 µg/ml). However, the optimal concentrations should be determined individually. The antibody recognizes 60-75 kDa PKC  $\beta$  isoforms from samples of human, mouse, rat, pig and bovine origins. A 40 kDa band can also be detected, presumably to be a shorter form of PKC isoforms. Reactivity to other species has not been tested.

**Other Names**

Protein kinase C

**Target/Specificity**

PKC

**Antibody Form**

Liquid

**Appearance**

Colorless liquid

**Formulation**

100 µg (0.5 mg/ml) affinity purified rabbit polyclonal antibody in phosphate-buffered saline (PBS) containing 30% glycerol, 0.5% BSA, and 0.01% thimerosal.

**Handling**

The antibody solution should be gently mixed before use.

**Reconstitution & Storage**

-20 °C

## Background Descriptions

### Precautions

PKC Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## PKC Antibody - Protein Information

**Name** Prkcb

**Synonyms** Pkcb, Prkcb1

### Function

Calcium-activated, phospholipid- and diacylglycerol (DAG)- dependent serine/threonine-protein kinase involved in various cellular processes such as regulation of the B-cell receptor (BCR) signalosome, oxidative stress-induced apoptosis, androgen receptor-dependent transcription regulation, insulin signaling and endothelial cells proliferation. Plays a key role in B-cell activation by regulating BCR- induced NF-kappa-B activation. Mediates the activation of the canonical NF-kappa-B pathway (NFKB1) by direct phosphorylation of CARD11/CARMA1 at 'Ser-559', 'Ser-644' and 'Ser-652'. Phosphorylation induces CARD11/CARMA1 association with lipid rafts and recruitment of the BCL10-MALT1 complex as well as MAP3K7/TAK1, which then activates IKK complex, resulting in nuclear translocation and activation of NFKB1. Plays a direct role in the negative feedback regulation of the BCR signaling, by down-modulating BTK function via direct phosphorylation of BTK at 'Ser-180', which results in the alteration of BTK plasma membrane localization and in turn inhibition of BTK activity. Involved in apoptosis following oxidative damage: in case of oxidative conditions, specifically phosphorylates 'Ser-36' of isoform p66Shc of SHC1, leading to mitochondrial accumulation of p66Shc, where p66Shc acts as a reactive oxygen species producer. Acts as a coactivator of androgen receptor (ANDR)-dependent transcription, by being recruited to ANDR target genes and specifically mediating phosphorylation of 'Thr-6' of histone H3 (H3T6ph), a specific tag for epigenetic transcriptional activation that prevents demethylation of histone H3 'Lys-4' (H3K4me) by LSD1/KDM1A. In insulin signaling, may function downstream of IRS1 in muscle cells and mediate insulin-dependent DNA synthesis through the RAF1-MAPK/ERK signaling cascade. Participates in the regulation of glucose transport in adipocytes by negatively modulating the insulin- stimulated translocation of the glucose transporter SLC2A4/GLUT4. Phosphorylates SLC2A1/GLUT1, promoting glucose uptake by SLC2A1/GLUT1. Under high glucose in pancreatic beta-cells, is probably involved in the inhibition of the insulin gene transcription, via regulation of MYC expression. In endothelial cells, activation of PRKCB induces increased phosphorylation of RB1, increased VEGFA-induced cell proliferation, and inhibits PI3K/AKT-dependent nitric oxide synthase (NOS3/eNOS) regulation by insulin, which causes endothelial dysfunction. Also involved in triglyceride homeostasis. Phosphorylates ATF2 which promotes cooperation between ATF2 and JUN, activating transcription (By similarity). Phosphorylates KLHL3 in response to angiotensin II signaling, decreasing the interaction between KLHL3 and WNK4 (By similarity).

### Cellular Location

Cytoplasm. Nucleus. Membrane; Peripheral membrane protein

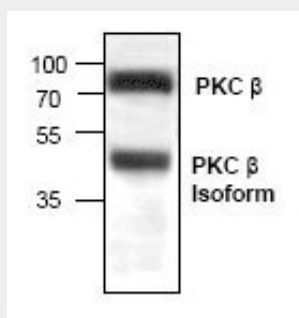
## PKC Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)

- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### PKC Antibody - Images



Western blot analysis of PKC expression in rat kidney tissue lysate.

### PKC Antibody - Background

PKC (Protein kinase C) is a calcium-dependent and phospholipid-dependent enzyme that is activated *in vivo* by the lipid diacylglycerol. PKC has been shown to be involved in signal transduction and various aspects of neoplastic transformation. PKC contains an amino terminal regulatory domain and a carboxy terminal catalytic domain joined by a hinge region. Cleavage of protein kinase C *in vitro* results in the generation of two functional fragments corresponding to these two domains.