

## Anti-PKC beta 1 Rabbit Monoclonal Antibody

**Catalog # ABO15222** 

## **Specification**

## Anti-PKC beta 1 Rabbit Monoclonal Antibody - Product Information

Application WB, IHC, IF, ICC, FC

Primary Accession
Host
Rabbit
Isotype
IgG

Reactivity Rat, Human, Mouse

Clonality Monoclonal Format Liquid

Description

Anti-PKC beta 1 Rabbit Monoclonal Antibody . Tested in WB, IHC, ICC/IF, Flow Cytometry applications. This antibody reacts with Human, Mouse, Rat.

# Anti-PKC beta 1 Rabbit Monoclonal Antibody - Additional Information

**Gene ID 5579** 

**Other Names** 

Protein kinase C beta type, PKC-B, PKC-beta, 2.7.11.13, PRKCB, PKCB, PRKCB1

**Application Details** 

WB 1:500-1:2000<br>IHC 1:50-1:200<br>ICC/IF 1:50-1:200<br>FC 1:100

Contents

Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

**Immunogen** 

A synthesized peptide derived from human PKC beta 1

**Purification** 

Affinity-chromatography

Storage Store at -20°C for one year. For short term

storage and frequent use, store at 4°C for

up to one month. Avoid repeated

freeze-thaw cycles.

# **Anti-PKC beta 1 Rabbit Monoclonal 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 (PubMed:<a

href="http://www.uniprot.org/citations/11598012" target=" blank">11598012</a>). 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 (AR)-dependent transcription, by being recruited to AR 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 (PubMed:<a href="http://www.uniprot.org/citations/20228790" target=" blank">20228790</a>). 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 (PubMed:<a href="http://www.uniprot.org/citations/25982116" target=" blank">25982116</a>). 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 (By similarity). Phosphorylates ATF2 which promotes cooperation between ATF2 and JUN, activating transcription (PubMed:<a

href="http://www.uniprot.org/citations/19176525" target="\_blank">19176525</a>). Phosphorylates KLHL3 in response to angiotensin II signaling, decreasing the interaction between KLHL3 and WNK4 (PubMed:<a href="http://www.uniprot.org/citations/25313067" target="\_blank">25313067</a>). Phosphorylates and activates LRRK1, which phosphorylates RAB proteins involved in intracellular trafficking (PubMed:<a href="http://www.uniprot.org/citations/36040231" target=" blank">36040231</a>).

#### **Cellular Location**

Cytoplasm. Nucleus. Membrane; Peripheral membrane protein

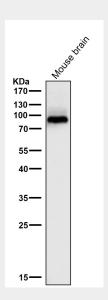
#### Anti-PKC beta 1 Rabbit Monoclonal Antibody - Protocols

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

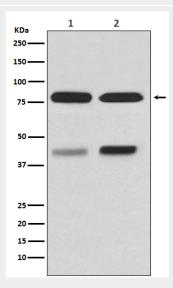
- Western Blot
- Blocking Peptides
- Dot Blot
- <u>Immunohistochemistry</u>
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

#### Anti-PKC beta 1 Rabbit Monoclonal Antibody - Images

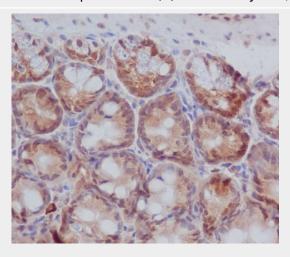




All lanes use the Antibody at 1:1W dilution for 1 hour at room temperature.



Western blot analysis of PKC beta 1 expression in (1) HeLa cell lysate; (2) NIH/3T3 cell lysate.



Immunohistochemical analysis of paraffin-embedded mouse colon, using PKC beta 1 Antibody.