

## Anti-PKC beta (pT641) Antibody

Rabbit polyclonal antibody to PKC beta (pT641) Catalog # AP60938

### **Specification**

## Anti-PKC beta (pT641) Antibody - Product Information

Application WB
Primary Accession P05771
Other Accession P68404

Reactivity Human, Mouse, Rat, Zebrafish, Bovine

Host Rabbit
Clonality Polyclonal
Calculated MW 76869

# Anti-PKC beta (pT641) Antibody - Additional Information

**Gene ID 5579** 

**Other Names** 

PRKCB; PKCB; PRKCB1; Protein kinase C beta type; PKC-B; PKC-beta

Target/Specificity

Recognizes endogenous levels of PKC beta (pT641) protein.

**Dilution** 

WB~~WB (1/500 - 1/1000)

#### **Format**

Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide.

# **Storage**

Store at -20 °C. Stable for 12 months from date of receipt

# Anti-PKC beta (pT641) 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



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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.upiprot.org/citations/11508012" target="http://www.upiprot.org/citations/11508012" target="http://www.upiprot.org/cit

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

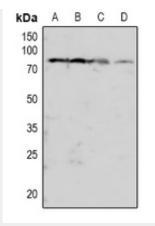
# Anti-PKC beta (pT641) Antibody - Protocols

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

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

# Anti-PKC beta (pT641) Antibody - Images





Western blot analysis of PKC beta (pT641) expression in Hela (A), HEK293T (B), mouse brain (C), rat brain (D) whole cell lysates.

# Anti-PKC beta (pT641) Antibody - Background

KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human PKC beta. The exact sequence is proprietary.