

**Protein Kinase C (661-671)**  
**Synthetic Peptide**  
**Catalog # SP3175b****Specification**

---

**Protein Kinase C (661-671) - Product Information**

Primary Accession [P05771](#)  
Other Accession [P68404](#), [P05772](#), [P68403](#), [P05126](#)  
Sequence [NH2-SYTNPEFVINV-COOH](#)

**Protein Kinase C (661-671) - Additional Information**

**Gene ID** 5579

**Other Names**

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

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**Protein Kinase C (661-671) - 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>).

**Cellular Location**

Cytoplasm. Nucleus. Membrane; Peripheral membrane protein

**Protein Kinase C (661-671) - Images**