

# Goat anti-PRKCB, Biotinylated Antibody

Peptide-affinity purified goat antibody

Catalog # AF4483a

## Product Information

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| <b>Application</b>       | WB, Pep-ELISA               |
| <b>Primary Accession</b> | <a href="#">P05771</a>      |
| <b>Other Accession</b>   | <a href="#">NP_997700.1</a> |
| <b>Reactivity</b>        | Human, Rat, Dog             |
| <b>Host</b>              | Goat                        |
| <b>Clonality</b>         | Polyclonal                  |
| <b>Clone Names</b>       | PRKCB                       |
| <b>Calculated MW</b>     | 76869                       |

## Additional Information

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| <b>Gene ID</b>     | 5579   |
| <b>Other Names</b> | PRKCB; protein kinase C, beta; MGC41878; PKC-beta; PKCB; PRKCB1; PRKCB2; OTTHUMP00000162377; OTTHUMP00000162378; PKC-B; protein kinase C beta type; protein kinase C, beta 1 polypeptide |
| <b>Dilution</b>    | WB~~1:1000 Pep-ELISA~~N/A  |
| <b>Format</b>      | Supplied at 0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin. Aliquot and store at -20°C. Minimize freezing and thawing.                               |
| <b>Immunogen</b>   | This antibody is expected to recognize isoform 1 (NP_997700.1) only.   |
| <b>Storage</b>     | Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.   |
| <b>Precautions</b> | Goat anti-PRKCB, Biotinylated Antibody is for research use only and not for use in diagnostic or therapeutic procedures.   |

## Protein Information

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| <b>Name</b>     | PRKCB  |
| <b>Synonyms</b> | PKCB, PRKCB1   |
| <b>Function</b> | 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:[11598012](#)). 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:[20228790](#)). 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:[25982116](#)). 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:[19176525](#)). Phosphorylates KLHL3 in response to angiotensin II signaling, decreasing the interaction between KLHL3 and WNK4 (PubMed:[25313067](#)). Phosphorylates and activates LRRK1, which phosphorylates RAB proteins involved in intracellular trafficking (PubMed:[36040231](#)).

## Cellular Location

Cytoplasm. Nucleus. Membrane; Peripheral membrane protein

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.