

PRKCB / PKC-Beta Antibody (aa621-670) Rabbit Polyclonal Antibody

Catalog # ALS16927

Specification

PRKCB / PKC-Beta Antibody (aa621-670) - Product Information

Application Primary Accession Other Accession Reactivity Host Clonality Calculated MW IHC, WB <u>P05771</u> <u>5579</u> Human, Mouse, Rat Rabbit Polyclonal 76869

PRKCB / PKC-Beta Antibody (aa621-670) - Additional Information

Gene ID 5579

Other Names PRKCB, PKC beta 2, Pkc betall, PRKCB2, Protein kinase c beta, Protein kinase c beta 2, Protein kinase c beta i, Protein kinase C beta type, Protein kinase C, beta, Protein kinase C, beta 1, PRKCB1, Pkc betal, PKC-beta, PKCB, Pkcbeta, Pkcbetal, PKC-B, ...

Target/Specificity Human PKC Beta

Reconstitution & Storage PBS, pH 7.2, 15 mM sodium azide. Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze-thaw cycles.

Precautions PRKCB / PKC-Beta Antibody (aa621-670) is for research use only and not for use in diagnostic or therapeutic procedures.

PRKCB / PKC-Beta Antibody (aa621-670) - 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: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).

Cellular Location Cytoplasm. Nucleus. Membrane; Peripheral membrane protein

Volume 50 μl

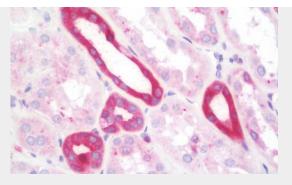
PRKCB / PKC-Beta Antibody (aa621-670) - Protocols

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

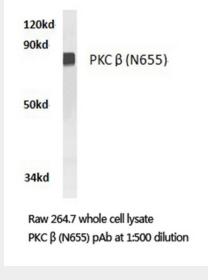
- <u>Western Blot</u>
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- <u>Cell Culture</u>

PRKCB / PKC-Beta Antibody (aa621-670) - Images





Anti-PRKCB / PKC-Beta antibody IHC staining of human kidney.



Western blot of PKC (N655) pAb in extracts from RAW264.7 cells.

PRKCB / PKC-Beta Antibody (aa621-670) - Background

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PRKCB / PKC-Beta Antibody (aa621-670) - References

Coussens L.,et al.Science 233:859-866(1986). Kubo K.,et al.FEBS Lett. 223:138-142(1987). Loftus B.J.,et al.Genomics 60:295-308(1999). Mural R.J.,et al.Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases. Mahajna J.,et al.DNA Cell Biol. 14:213-222(1995).