Anti-PRKCB Polyclonal Antibody

Cat: K110175P

Summary:

【**Product name**】: Anti-PRKCB Antibody

【**Source**】: Rabbit

【**Isotype**】: IgG

【**Species reactivity**】: Human Mouse Rat

【**Swiss Prot**】: P05771

【**Gene ID**】: 5579

【**Calculated**】: MW:77kDa

【**Observed**】: MW:69kDa

【**Purification**】: Affinity purification

【**Tested applications**】: WB IHC

【**Recommended dilution**】: WB 1:1000-3000. IHC 1:50-200.

【**WB Positive sample**】: Mouse brain,Mouse liver,Rat brain

【**IHC Positive sample**】: Human breast cancer

【**Subcellular location**】: Nucleus

【**Immunogen**】: A synthetic peptide of human PRKCB

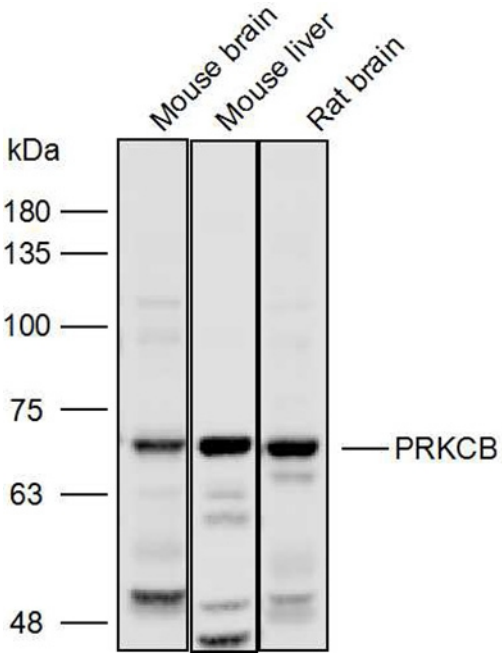
【**Storage**】: Shipped at 4°C. Upon delivery aliquot and store at -20°C

Background:

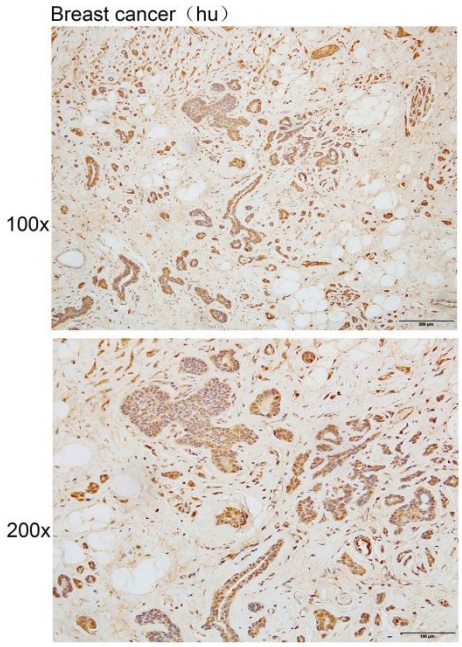
Calcium-activated, phospholipid- and diacylglycerol (DAG)-dependent serine/threonine-protein kinase involved in various cellular processes such as regulation of the B-cell receptor (BCR) signalosome, oxidative stress-induced apoptosis, androgen receptor-dependent transcription regulation, insulin signaling 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. 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 (ANDR)-dependent transcription, by being recruited to ANDR 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. 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. 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. Phosphorylates ATF2 which promotes cooperation between ATF2 and JUN, activating transcription.

Verified picture



Western blot analysis with PRKCB antibody diluted at 1:2000;Lane: Mouse brain,Mouse liver,Rat brain



Immunohistochemistry of paraffin-embedded Human breast cancer using PRKCB antibody diluted at 1:100