

PKC beta 1(Phospho-Thr500) Antibody

Catalog No: #62088

Package Size: #62088 100ul

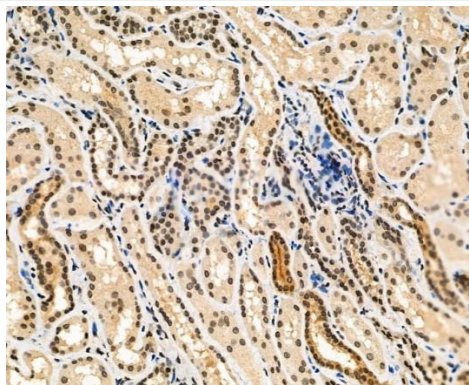
Description

Product Name	PKC beta 1(Phospho-Thr500) Antibody
Host Species	Rabbit
Clonality	Polyclonal
Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.
Applications	WB;IHC;IF
Species Reactivity	Human; Mouse; Rat
Specificity	The antibody detects endogenous level of PKC beta 1 only when phosphorylated at threonine 500.
Immunogen Type	Peptide
Immunogen Description	Peptide sequence around phosphorylation site of threonine 500 (T-K-T(p)-F-C) derived from Human PKC beta 1.
Conjugates	Unconjugated
Target Name	PRKCB
Calculated MW	77kDa
Concentration	1mg/ml
Formulation	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Storage	Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.

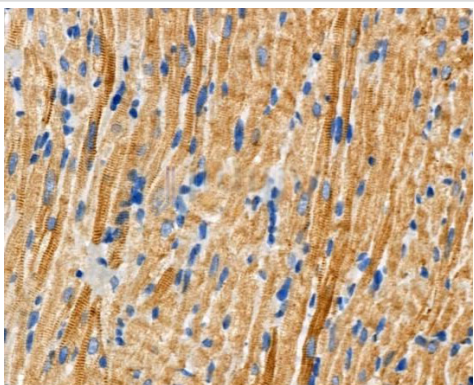
Application Details

WB 1:1000-3000, IF/ICC 1:100-1:500, IHC 1:50-1:200

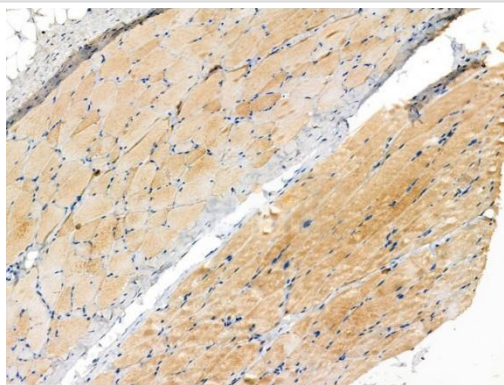
Images



Formalin-fixed, paraffin-embedded Human kidney cancer and adjacent normal tissues stained for PKC beta 1 (Phospho-Thr500) at 1/100 dilution in immunohistochemical analysis.



Formalin-fixed, paraffin-embedded Rat heart tissue stained for PKC beta 1 (Phospho-Thr500) at 1/100 dilution in immunohistochemical analysis.



Formalin-fixed, paraffin-embedded Rat skin tissue stained for PKC beta 1 (Phospho-Thr500) at 1/100 dilution in immunohistochemical analysis.

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 (By similarity). Phosphorylates ATF2 which promotes cooperation between ATF2 and JUN, activating transcription.

Note: This product is for in vitro research use only and is not intended for use in humans or animals.