

## Product Name: PKC $\beta$ Rabbit Polyclonal Antibody

### Catalog #: APRab16200

For research use only.

## Summary

<b>Description</b>	Rabbit polyclonal Antibody
<b>Host</b>	Rabbit
<b>Application</b>	WB,ICC/IF,ELISA
<b>Reactivity</b>	Human,Mouse,Rat
<b>Conjugation</b>	Unconjugated
<b>Modification</b>	Unmodified
<b>Isotype</b>	IgG
<b>Clonality</b>	Polyclonal
<b>Form</b>	Liquid
<b>Concentration</b>	1mg/ml
<b>Storage</b>	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
<b>Shipping</b>	Ice bags
<b>Buffer</b>	Liquid in PBS containing 50% glycerol, 0.5% protective protein and 0.02% New type preservative N.
<b>Purification</b>	Affinity purification

## Application

<b>Dilution Ratio</b>	WB 1:500-1:2000,ICC/IF 1:50-1:200,ELISA 1:20000-1:40000
<b>Molecular Weight</b>	77kDa

## Antigen Information

<b>Gene Name</b>	PRKCB
<b>Alternative Names</b>	PRKCB; PKCB; PRKCB1; Protein kinase C beta type; PKC-B; PKC-beta
<b>Gene ID</b>	5579.0
<b>SwissProt ID</b>	P05771
<b>Immunogen</b>	The antiserum was produced against synthesized peptide derived from human PKCB. AA range:622-671

## Background

Protein kinase C (PKC) is a family of serine- and threonine-specific protein kinases that can be activated by calcium and second

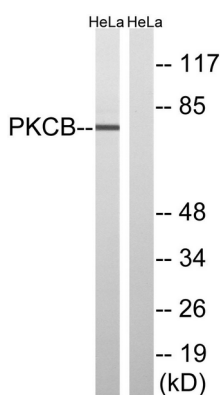
messenger diacylglycerol. PKC family members phosphorylate a wide variety of protein targets and are known to be involved in diverse cellular signaling pathways. PKC family members also serve as major receptors for phorbol esters, a class of tumor promoters. Each member of the PKC family has a specific expression profile and is believed to play a distinct role in cells. The protein encoded by this gene is one of the PKC family members. This protein kinase has been reported to be involved in many different cellular functions, such as B cell activation, apoptosis induction, endothelial cell proliferation, and intestinal sugar absorption. Studies in mice also suggest that this kinase may also regulate neuronal functions and correlate fear-induced conflict behavior after stress.

**Catalytic activity:** ATP + a protein = ADP + a phosphoprotein.  
**cofactor:** Binds 3 calcium ions per subunit. The ions are bound to the C2 domain.  
**function:** This is a calcium-activated, phospholipid-dependent, serine- and threonine-specific enzyme. PKC is activated by diacylglycerol which in turn phosphorylates a range of cellular proteins. PKC also serves as the receptor for phorbol esters, a class of tumor promoters. May be considered as a novel component of the NF-kappa-B signaling axis responsible for the survival and activation of B-cells after BCR cross-linking.  
**PTM:** Phosphorylation on Thr-500 of isoform beta-I, within the activation loop, renders it competent to autophosphorylate. Subsequent autophosphorylation of Thr-642 maintains catalytic competence, and autophosphorylation on Ser-661 appears to release the kinase into the cytosol. Similarly, isoform beta-II is autophosphorylated on 'Thr-640' and 'Ser-659', subsequent to phosphorylation on Thr-500. Autophosphorylated on other sites i.e. in the N-terminal and hinge regions have no effect on PKC activity.  
**similarity:** Belongs to the protein kinase superfamily. AGC Ser/Thr protein kinase family. PKC subfamily.  
**similarity:** Contains 1 AGC-kinase C-terminal domain.  
**similarity:** Contains 1 C2 domain.  
**similarity:** Contains 1 protein kinase domain.  
**similarity:** Contains 2 phorbol-ester/DAG-type zinc fingers.  
**subunit:** Interacts with PDK1 (By similarity). Interacts in vitro with PRKCBP1.

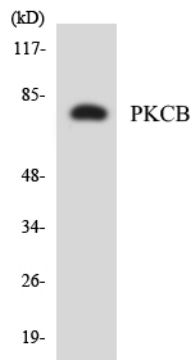
## Research Area

Regulation\_Microtubule; Regulation of Actin Dynamics; Stem cell pathway; Insulin Receptor; ErbB/HER; MAPK\_ERK\_Growth; MAPK\_G\_Protein; WNT; WNT-T CELL;  $\beta$ -Catenin; B Cell Receptor; NF\_kappaB; mTOR; AMPK

## Image Data



Western blot analysis of lysates from HeLa cells, using PKCB Antibody. The lane on the right is blocked with the synthesized peptide.



Western blot analysis of the lysates from HepG2 cells using PKCB antibody.