

Recombinant human PKC beta 1 protein ab60840

[2 References](#) [6 Images](#)

Description

Product name	Recombinant human PKC beta 1 protein
Biological activity	Specific Activity: 283 nmol/min/mg
Purity	> 90 % Densitometry. Purity: >90% as determined by densitometry. Affinity purified.
Expression system	Baculovirus infected Sf9 cells
Protein length	Full length protein
Animal free	No
Nature	Recombinant
Species	Human
Tags	GST tag N-Terminus

Specifications

Our **Abpromise guarantee** covers the use of **ab60840** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	Functional Studies SDS-PAGE Western blot
Form	Liquid
Additional notes	ab204875 (PKC epsilon peptide) can be utilized as a substrate for assessing kinase activity

Preparation and Storage

Stability and Storage	Shipped on dry ice. Upon delivery aliquot and store at -80°C. Avoid freeze / thaw cycles. pH: 7.50 Constituents: 0.0038% EGTA, 0.00174% PMSF, 0.00385% DTT, 0.79% Tris HCl, 0.00292% EDTA, 25% Glycerol (glycerin, glycerine), 0.87% Sodium chloride This product is an active protein and may elicit a biological response in vivo, handle with caution.
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General Info

Function

Calcium-activated and phospholipid-dependent serine/threonine-protein kinase involved in various processes such as regulation of the B-cell receptor (BCR) signalosome, apoptosis and transcription regulation. Plays a key role in B-cell activation and function by regulating BCR-induced NF-kappa-B activation and B-cell survival. Required for recruitment and activation of the IKK kinase to lipid rafts and mediates phosphorylation of CARD11/CARMA1 at 'Ser-559', 'Ser-644' and 'Ser-652', leading to activate the NF-kappa-B signaling. 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. Also involved in triglyceride homeostasis. Serves as the receptor for phorbol esters, a class of tumor promoters.

Sequence similarities

Belongs to the protein kinase superfamily. AGC Ser/Thr protein kinase family. PKC subfamily. Contains 1 AGC-kinase C-terminal domain. Contains 1 C2 domain. Contains 2 phorbol-ester/DAG-type zinc fingers. Contains 1 protein kinase domain.

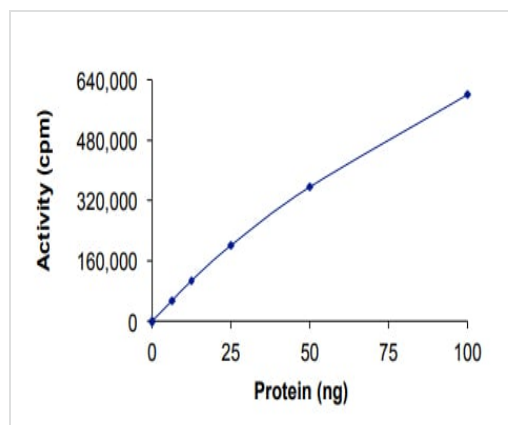
Post-translational modifications

Phosphorylation on Thr-500 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. Autophosphorylation on other sites i.e. in the N-terminal and hinge regions have no effect on enzyme activity.

Cellular localization

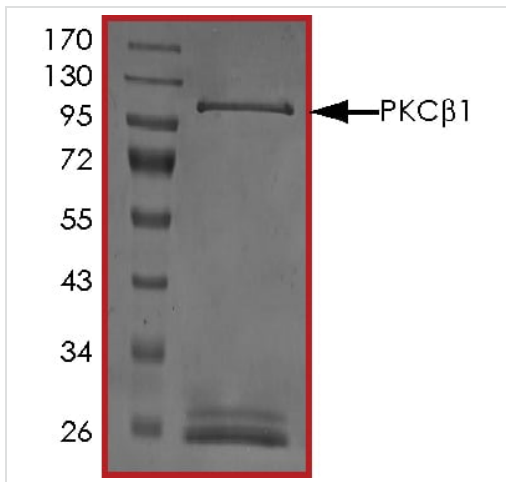
Cytoplasm. Nucleus. Membrane.

Images



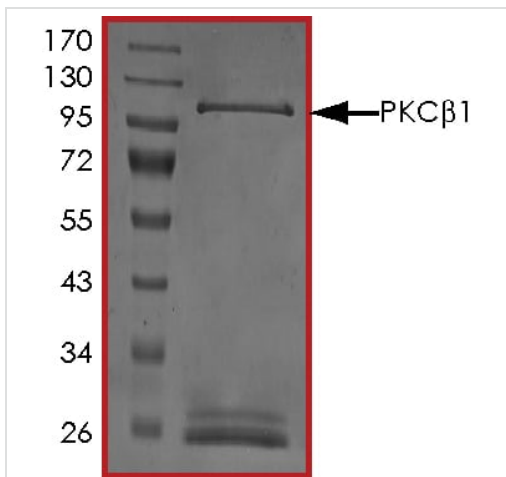
The specific activity of PKC beta 1 (ab60840) was determined to be 325 nmol/min/mg as per activity assay protocol

Functional Studies - Recombinant human PKC beta 1 protein (ab60840)



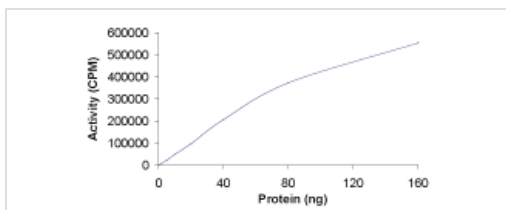
SDS PAGE analysis of ab60840

SDS-PAGE - Recombinant human PKC beta 1 protein (ab60840)



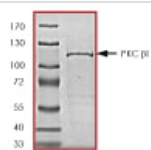
SDS PAGE analysis of ab60840

SDS-PAGE - Recombinant human PKC beta 1 protein (ab60840)



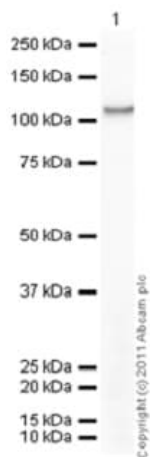
Sample Kinase Activity Plot.

Functional Studies - Recombinant human PKC beta 1 protein (ab60840)



ab60840 on SDS-PAGE, MW ~102 kDa.

SDS-PAGE - Recombinant human PKC beta 1
protein (ab60840)



Western blot - Recombinant human PKC beta 1
protein (ab60840)

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