



Human Protein Kinase C Beta I (DAG263)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Product Overview	Recombinant Human Protein Kinase C (PKC) Beta I. Not enzymatically active.
Antigen Description	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. Alternatively spliced transcript variants encoding distinct isoforms have been reported. This gene could be associated with autism.
Species	Human
Conjugate	Unconjugated
Applications	Suitable for use as a standard in Western blot using enhanced chemiluminescence. Load 2-5 µl directly from vial (no dilution necessary). For blots using less sensitive substrates, such as alkaline phosphatase, larger amount of protein should be loaded onto the
Format	Purified, Liquid
Concentration	20 µg/ml
Buffer	Suspended in SDS/mercaptoethanol sample buffer with a bromophenol blue dye marker.
Preservative	None
Storage	2-8°C short term, -20°C long term

BACKGROUND

Introduction

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.

Keywords

PRKCB; protein kinase C, beta; Pkcb; Prkcb1; Prkcb2; PKC-Beta; A130082F03Rik; protein kinase C beta type; PKC-B; protein kinase C beta-II; protein kinase C, beta 1;