

## PKCzeta, Active recombinant protein

PKC, PKC, Protein kinase C zeta Catalog # PBV11294r

## **Specification**

### PKCzeta, Active recombinant protein - Product info

Primary Accession O05513
Concentration 0.1

Calculated MW 93.0 kDa KDa

# PKCzeta, Active recombinant protein - Additional Info

Gene ID 5590
Gene Symbol PKCZ

**Other Names** 

PKC, PKC, Protein kinase C zeta

Source Baculovirus (Sf9 insect cells)

Assay&Purity SDS-PAGE; ≥90%

Assay2&Purity2 HPLC; Recombinant Yes

Format Liquid

#### Storage

-80°C; Recombinant proteins in storage buffer (50 mM Tris-HCl, pH 7.5, 150 mM NaCl, 0.25 mM DTT, 0.1 mM EGTA, 0.1 mM EDTA, 0.1 mM PMSF, 30% glycerol).

## PKCzeta, Active recombinant protein - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- <u>Immunohistochemistry</u>
- <u>Immunofluorescence</u>
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

# PKCzeta, Active recombinant protein - Images

## PKCzeta, Active recombinant protein - Background

PKCζ (PKC zeta) is an atypical isoform of the PKC family. PKCζ is found in both particulate and soluble fractions and cannot be activated by phorbol ester. Treatment of cells with phorbol ester which activates PKC $\alpha$ ,  $\gamma$ ,  $\delta$ , and  $\epsilon$  isoforms in NIH3T3 cells significantly reduced proliferation of cells. Overexpression of PKC $\zeta$  and subsequent phorbol ester treatment abolished phorbol ester-induced





reduction in cell proliferation (1). Overexpression of PKC $\zeta$  also potentiated phorbol ester-induced mitogen-activated protein (MAP) kinase activation in a PKC-dependent manner. The effects of PKC $\zeta$  overexpression on proliferation and MAP kinase activation are proportional to the levels of PKC $\zeta$  expression.

PKCζ as an upstream modulator of p70S6K, an important regulator of cell proliferation (2). Kinase-inactive PKCζ mutant antagonized activation of p70S6K by epidermal growth factor, PDK-1, and activated Cdc42 and PI3-K. Overexpression of a constitutively active PKCζ mutant (myristoylated PKCζ [myr-PKCzeta]) only modestly activated p70S6K but this mutant cooperated with PDK-1 for the activation of p70S6K. PDK-1-induced activation of a C-terminal truncation mutant of p70S6K was also enhanced by myr-PKCζ. p70S6K can associate with both PDK-1 and PKCz in vivo in a growth factor-independent manner, while PDK-1 and PKCζ can also associate with each other, suggesting the existence of a multimeric PI3-K signalling complex.

## PKCzeta, Active recombinant protein - References

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