# PKC delta (Human), Active

## Full-length recombinant protein expressed in Sf9 cells

## Cat# CY-SPP64

**Lot No. M120-1**
**5 µg 0.1 µg/µl**

**Background:**

PKCδ (PKCdelta) is a member of the protein kinase C (PKC) family of serine-threonine kinases. It is a 79 kDa protein kinase that shows strict dependence on the presence of phospholipids, but shows no activation by Ca2+ (1). Phosphatidylinositol is the most potent activator of PKCδ. Northern blot analysis indicated that PKCδ is widely distributed in almost all the tissues and is a major isoform of PKC expressed in hemopoietic cells (2). PKCδ is involved in fundamental cellular functions regulated by diacylglycerols and mimicked by phorbol esters.

**Product Description:**

Recombinant full-length human PKCδ was expressed by baculovirus in Sf9 insect cells using a N-terminal GST tag. The gene accession number is NM_006254.

**Gene Aliases:**

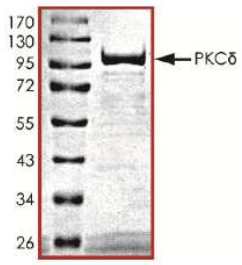
PRKCD

**Formulation:**

Recombinant protein stored in 50mM Tris-HCl, pH 7.5, 150mM NaCl, 0.25mM DTT, 0.1mM EGTA, 0.1mM EDTA, 0.1mM PMSF, 25% glycerol.

**Purity & Molecular Weight:**

The purity was determined to be >90% by densitometry. Approx. MW 104kDa.




**Storage:**

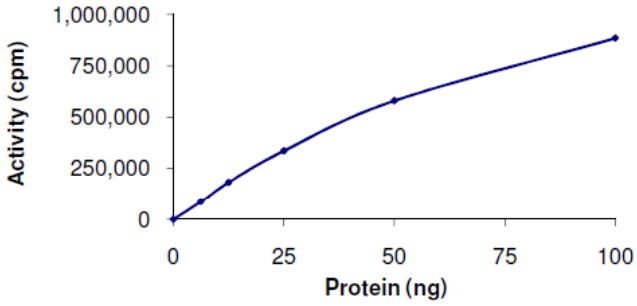
Store product at –70 °C. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.

**Stability:**

Unopened vial at –70 °C, 1 year from date of shipment.

**Specific Activity:**

The specific activity was determined to be 337 nmol/min/mg as per Activity Assay Protocol.




**Activity Assay Protocol:**

Assay activity of the kinase in a 25 µL reaction consisting of 5 µL of 5 X Kinase Assay Buffer, 7.5 µL of 1 mg/ml the Substrate Solution, 2.5 µL of lipid activator (0.5 mg/ml phosphatidylserine and 0.05 mg/ml diacylglycerol in 20 mM MOPS, pH 7.2, containing 1 mM $CaCl_2$), 5 µL of diluted kinase and 5 µL of 250 µM ATP solution containing [gamma $^{32}$P] ATP (0.167 µCi/µL). Start the reaction by adding the ATP solution. Incubate for 15 minutes at 30°C. Terminate the reaction by spotting 20 µL of the reaction mixture onto phosphocellulose P81 paper. Air-dry the P81 paper and sequentially wash 4 times for approximately 10 minutes each in 1% phosphoric acid with constant gentle stirring. Count the P81 paper in a liquid scintillation counter.

**Substrate Solution:**

CREBtide synthetic peptide substrate (KRREILSRRPSYR) diluted in distilled $H_2O$ to a final concentration of 1 mg/ml.

**5 X Kinase Assay Buffer:**

25mM MOPS, 12.5mM β-glycerol-phosphate, 25mM $MgC1_2$, 5mM EGTA, 2mM EDTA. Add 0.25mM DTT to Kinase Assay Buffer prior to use.

**References:**

1.Leibersperger, H. et al: Immunological demonstration of a calcium-unresponsive protein kinase C of the delta-type in different species and murine tissues. Predominance in epidermis. J Biol Chem. 1991 Aug 5;266(22):14778-84.

2.Mischak, H. et al: Mouse protein kinase C-delta, the major isoform expressed in mouse hemopoietic cells: sequence of the cDNA, expression patterns, and characterization of the protein. Biochemistry. 1991 Aug 13;30(32):7925-31.

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