Active PKCv

CATALOG #: 7746-5

LOT #: ----

SOURCE: Sf 9 cells

PURITY: 1 µg of PKC nu protein was subjected to SDS-PAGE and Coomassie blue staining. The scan of the blue gel showed >80% purity of the PKC nu protein product, and the band was at ~142 kDa

SPECIFIC ACTIVITY: 177 nmol/min/mg

MOLECULAR WEIGHT: ~142 kDa.

PHYSICAL APPEARENCE: 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, 25% glycerol).

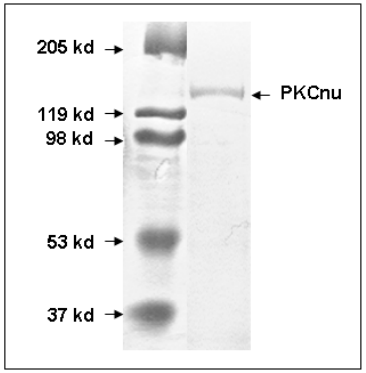
STORAGE CONDITIONS: Store product frozen at or below -70°C. Stable for 1 year at -70°C as undiluted stock. Aliquot to avoid repeated freeze/thaw.

BACKGROUND DESCRIPTION: PKC nu, also known as PKD3, is a member of the protein kinase C (PKC) family of serine/threonine kinases that play critical roles in the regulation of cellular differentiation and proliferation in many cell types. PKC nu is composed of 890 amino acid residues and the protein has 77.3% similarity to human PKC mu (PKC nu) and 77.4% similarity to mouse PKD (the mouse homolog of PKC nu). The PKC nu mRNA is ubiquitously expressed in various tissues and the gene is located between markers WI-9798 and D2S177 on chromosome 2p21 region.

PKC nu has two putative diacylglycerol binding C1 domains, suggesting that it may participate in a novel diacylglycerol-mediated signaling pathway. PKC nu is trans-located to the plasma membrane and activated by the diacylglycerol mimic phorbol 12-myristate 13-acetate. PKC nu is an important physiologic target of the B-cell receptor (BCR) and exhibits robust activation after BCR engagement. GPCR agonists induced a rapid activation of PKC nu by a protein kinase C (PKC)-dependent pathway that leads to the phosphorylation of the activation loop of PKC nu. PKC nu is present both in the nucleus and cytoplasm and this distribution of PKC nu results from its continuous shuttling between both compartments by a mechanism that requires a nuclear import receptor and a competent CRM1-nuclear export pathway. Cell stimulation with the GPCR agonist neurotensin induced a rapid and reversible plasma membrane translocation of PKC nu that is PKC-dependent.

Recombinant full length human PKC nu containing N-terminal GST tag was expressed by baculovirus in Sf 9 insect cells.

ACTIVITY: 177 nmol phosphate incorporated into CREBTIDE substrate peptide per minute per mg protein at 30°C for 15 minutes using a final concentration of 50 µM ATP (0.83 µCi/assay).



PKC nu protein gel

RELATED PRODUCTS:

- Active PKCa **(Cat. No. 7714-5)**
- Active PKCepsilon **(Cat. No. 7753-5)**
- Active PKCeta **(Cat. No. 7731-5)**
- Active PKCmu **(Cat. No. 7745-5)**
- Active PKCzeta **(Cat. No. 7718-5)**

FOR RESEARCH USE ONLY! Not to be used in humans.