



## PKC nu (Human), Active

### Full-length recombinant protein expressed in Sf9 cells

Cat# CY-SPP73

Lot No. A010-1  
5 µg 0.1 µg/µl

#### Background:

PKC  $\nu$  (PKCnu), also known as PKD3, is a members 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  $\mu$  (PKCmu) and 77.4% similarity to mouse PKD (1). 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.

#### Product Description:

Recombinant full-length human PKC  $\nu$  was expressed by baculovirus in Sf9 insect cells using a N-terminal GST tag. The gene accession number is NM\_005813.

#### Gene Aliases:

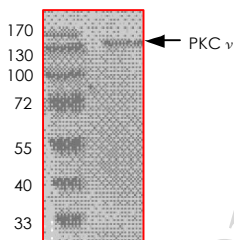
EPK2; PRKCN

#### 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 >80% by densitometry. Approx. MW ~142kDa.



#### Storage:

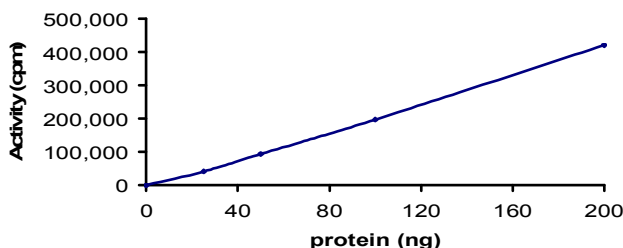
Store product at  $-70^{\circ}\text{C}$ . For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.

#### Stability:

Unopened vial at  $-70^{\circ}\text{C}$ , 1 year from date of shipment.

**Specific Activity:**

The specific activity was determined to be 94 nmol/min/mg as per Activity Assay Protocol.



**Activity Assay Protocol:**

Assay activity of the kinase in a 25  $\mu$ L reaction consisting of 5  $\mu$ L of 5 X Kinase Assay Buffer, 10  $\mu$ L of 1mg/ml the Substrate Solution, 5  $\mu$ L of diluted kinase and 5  $\mu$ L of 250  $\mu$ M ATP solution containing [ $\gamma$   $^{32}$ P] ATP (0.167  $\mu$ Ci/ $\mu$ L). Start the reaction by adding the ATP solution. Incubate for 15 minutes at 30°C. Terminate the reaction by spotting 20  $\mu$ L 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<sub>2</sub>O to a final concentration of 1 mg/ml.

**5 X Kinase Assay Buffer:**

25mM MOPS, 12.5mM  $\beta$ -glycerol-phosphate, 25mM MgCl<sub>2</sub>, 5mM EGTA, 2mM EDTA. Add 0.25mM DTT to Kinase Assay Buffer prior to use.

**References:**

1.Hayashi,A. et al: PKCnu, a new member of the protein kinase C family, composes a fourth subfamily with PKCmu. Biochim Biophys Acta. 1999 May 6;1450(1):99-106.

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