PKC mu (Human), Active

Full-length recombinant protein expressed in Sf9 cells

Cat# CY-SPP72

Lot No. K349-2
5 µg 0.1 µg/µl

Background:

PKC μ (PKCmu) is a member of the protein kinase C (PKC) family that differs from the other PKC isoenzymes in structural and enzymatic properties. PKC μ is a ubiquitous in nature with the highest expression in the thymus, lung and peripheral blood mononuclear cells (1). PKC μ forms a complex in vivo with a phosphatidylinositol 4-kinase and a phosphatidylinositol-4-phosphate 5-kinase. A region of PKC μ between the amino-terminal transmembrane domain and the pleckstrin homology domain is shown to be involved in the association with the lipid kinases (2).

Product Description:

Recombinant full-length human PKC μ was expressed by baculovirus in Sf9 insect cells using a N-terminal GST tag. The gene accession number is X75756.

Gene Aliases:

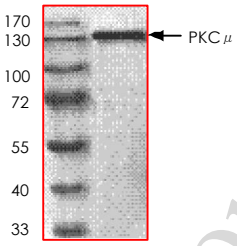
PKD; PKCM; PRKCM

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 131kDa.



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:

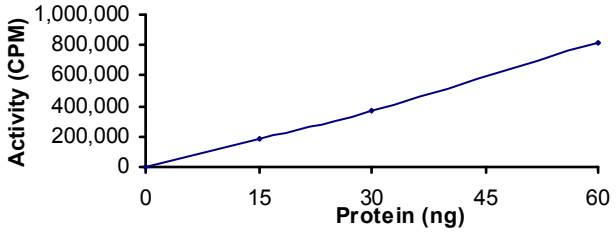
Unopened vial at –70 °C, 1 year from date of shipment.

For Reference Purpose Only!

For Research Use Only, Not for use in diagnostic procedures

Specific Activity:

The specific activity was determined to be 680 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, 10 µL of 1 mg/ml the Substrate Solution, 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 $MgCl_2$, 5mM EGTA, 2mM EDTA. Add 0.25mM DTT to Kinase Assay Buffer prior to use.

References:

1.Rennecke, J. et al: Immunological demonstration of protein kinase C mu in murine tissues and various cell lines. Eur J Biochem. 1996 Dec 1;242(2):428-32.

2.Nishikawa, K. et al: Association of protein kinase Cmu with type II phosphatidylinositol 4-kinase and type phosphatidylinositol-4-phosphate 5-kinase. J Biol Chem. 1998 Sep 4;273(36):23126-33.

CycLex Co., Ltd
1063-103 Tera-Sawaoka, Ina, Nagano, Japan 396-0002
Fax: 81-265-76-7618
e-mail: info@cyclex.co.jp
URL: http://www.cyclex.co.jp

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