

Human PKC nu / PRKD3 Protein (GST Tag)

Catalog Number: 10665-H09B



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

EPK2; nPKC-NU; PKC-NU; PKD3; PRKCN

Protein Construction:

A DNA sequence encoding the full length of human PRKD3 (NP_005804.1) (Met 1-Pro 890) was expressed with the GST tag at the N-terminus.

Source: Human

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 85 % as determined by SDS-PAGE

Bio Activity:

Kinase activity untested

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Met

Molecular Mass:

The recombinant human PRKD3/GST chimera consists of 1114 amino acids and predicts a molecular mass of 126.7 kDa as estimated in SDS-PAGE under reducing conditions.

Formulation:

Supplied as sterile 20mM Tris, 500mM NaCl, 10mM Reduced Glutathione, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

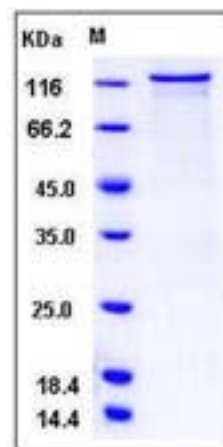
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Serine/threonine-protein kinase D3, also known as Protein kinase C nu type, Protein kinase EPK2, PRKD3, EPK2 and PRKCN, is a cytoplasm and membrane protein which belongs to the protein kinase superfamily, CAMK Ser/Thr protein kinase family and PKD subfamily. PRKD3 / PRKCN contains one PH domain, two phorbol-ester/DAG-type zinc fingers and one protein kinase domain. Protein kinase C (PKC) is a family of serine- and threonine-specific protein kinases that can be activated by calcium and the second messenger diacylglycerol. PKC family members phosphorylate a wide variety of protein targets and are known to be involved in diverse cellular signaling pathways. They also serve as major receptors for phorbol esters, a class of tumor promoters. Each member of the PKC family has a specific expression profile and is believed to play a distinct role. PRKD3 / PRKCN converts transient diacylglycerol (DAG) signals into prolonged physiological effects, downstream of PKC. It is involved in resistance to oxidative stress. PRKD3 / PRKCN is activated by DAG and phorbol esters. Phorbol-ester/DAG-type domains 1 and 2 bind both DAG and phorbol ester with high affinity and mediate translocation to the cell membrane. Autophosphorylation of Ser-735 and phosphorylation of Ser-731 by PKC relieves auto-inhibition by the PH domain. PRKD3 / PRKCN can be activated rapidly by the agonists of G protein-coupled receptors. It resides in both cytoplasm and nucleus, and its nuclear accumulation is found to be dramatically enhanced in response to its activation. PRKD3 / PRKCN can also be activated after B-cell antigen receptor (BCR) engagement, which requires intact phospholipase C gamma and the involvement of other PKC family members.

References

1.Schultz SJ, et al.,1994, Cell Growth Differ. 4 (10): 821-30. 2.Hayashi A, et al., 1999, Biochim Biophys Acta 1450 (1): 99-106. 3.Mayne M, et al., 2000, J. Immunol. 164 (12): 6538-42.

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