

Recombinant Human PKC nu/PRKD3 Protein (GST Tag)

Catalog No. PKSH030402

Note: Centrifuge before opening to ensure complete recovery of vial contents.

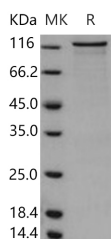
Description

Synonyms	EPK2;nPKC-NU;PKC-NU;PKD3;PRKCN
Species	Human
Expression Host	Baculovirus-Insect Cells
Sequence	Met 1-Pro 890
Accession	NP_005804.1
Calculated Molecular Weight	126.7 kDa
Observed molecular weight	126.7 kDa
Tag	N-GST
Bioactivity	Not validated for activity

Properties

Purity	> 85 % as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per µg of the protein as determined by the LAL method.
Storage	Store at < -20°C, stable for 6 months. Please minimize freeze-thaw cycles.
Shipping	This product is provided as liquid. It is shipped at frozen temperature with blue ice/gel packs. Upon receipt, store it immediately at < -20°C.
Formulation	Supplied as sterile solution of 20mM Tris, 500mM NaCl, 10mM Reduced Glutathione, pH 7.4
Reconstitution	Not Applicable

Data



> 85 % as determined by reducing SDS-PAGE.

Background

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 phosphor-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. They also serve as major receptors for phorbol

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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.