Data Sheet (Cat.No.TMPY-04455U)

TargetMol

PKC iota Protein, Human, Recombinant (GST)

General Information

Synonyms:	Protein kinase C iota type;aPKC-lambda/iota;nPKC-iota;PRKC-lambda/iota;DXS1179E;PRKCI
Protein Construction:	Recombinant full length human PKC iota was expressed by baculovirus in Sf9 insect cells using a N-terminal GST tag.
Species:	Human
Expression Host:	Baculovirus-Insect Cells
Accession:	AAH22016.3
Molecular Weight:	94 kDa (predicted); 110 kDa (reducing conditions)

QC Testing

Biological Activity:	The specific activity of PKC iota was determined to be 45 nmol /min/mg as per activity assay protocol.
Purity:	> 85% as determined by SDS-PAGE
Formulation:	Supplied as sterile 50 mM Tris-HCl, pH 7.5, 50-300 mM NaCl, 10 mM glutathione, 0.1 mM EDTA, 0.25-1.0 mM DTT, 0-0.1 mM PMSF, 10-25% glycerol.

Preparation and Storage

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

Proteins are shipped with blue ice.

Protein Background

Protein kinase C iota type, also known as Atypical protein kinase C-lambda/iota, aPKC-lambda/iota and PRKCI, is a cytoplasm, membrane and nucleus protein which belongs to the protein kinase superfamily, AGC Ser/Thr protein kinase family and PKC subfamily. PRKCI contains one AGC-kinase C-terminal domain, one OPR domain, one phorbol-ester/DAG-type zinc finger and one protein kinase domain. PRKCI is predominantly expressed in lung and brain, but also expressed at lower levels in many tissues including pancreatic islets. It is highly expressed in non-small cell lung cancers. PRKCI is a calcium-independent, phospholipid-dependent, serine- and threonine-specific kinase. It may play a role in the secretory response to nutrients. PRKCI is involved in cell polarization processes and the formation of epithelial tight junctions. It is implicated in the activation of several signaling pathways including Ras, c-Src and NF-kappa-B pathways. PRKCI functions in both pro- and anti-apoptotic pathways. It functions in the RAC1/ERK signaling required for transformed growth. PRKCI plays a role in microtubule dynamics through interaction with RAB2A and GAPDH and recruitment to vesicular tubular clusters (VTCs). PRKCI might be a target for

novel lipid activators that are elevated during nutrient-stimulated insulin secretion.

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