

PKC iota Protein, Human, Recombinant (His)

General Information

Synonyms:	PKCI;nPKC-iota;protein kinase C, ι ;DXS1179E;nPKC- ι ;protein kinase C, iota;PKC ι
Protein Construction:	A DNA sequence encoding the human PKC λ (NP_002731.4) (Met 10-Val 596) was fused with the GST tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	P41743
Molecular Weight:	68.78 kDa (predicted); 90-110 kDa (reducing conditions)

QC Testing

Biological Activity:	Kinase activity untested
Purity:	> 95% as determined by Bis-Tris PAGE
Endotoxin:	< 1.0 EU/ μ g of the protein as determined by the LAL method.
Formulation:	Supplied as sterile 50 mM Tris, 100 mM NaCl, 0.5 mM GSH, 0.5 mM PMSF, 10% glycerol, pH 7.4.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store the product under sterile conditions at -20°C to -80°C. Samples are stable for up to 12 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.

Reference

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