



Protein Kinase C, iota, lambda (PKC ι , PKC, Atypical Protein Kinase C lambda/iota, aPKC lambda iota, PRKCL, DXS1179E, MGC26534)

Catalog number

P9103-70C

Supplier

United States Biological

Protein kinase C ('PKC', EC 2.7.11.13) is a cyclic nucleotide-independent enzyme that phosphorylates serine and threonine residues in many target proteins. The PKC family has been divided into three groups by the enzymes' cofactor requirements: conventional (c)PKC isoforms (comprising α , β I (also known as β 1), β II (also known as β 2) and γ), that require diacylglycerol (DAG), Ca^{2+} , and phospholipid for activation; novel (n)PKC isoforms (comprising δ , ϵ , η (also known as PKC-L), θ and μ (the mouse homolog of human PKC μ , known as PKD)) that require DAG but not Ca^{2+} ; and atypical (a)PKC isoforms, namely ζ , ι , and λ (the mouse homolog of human PKC ι) that require neither Ca^{2+} nor DAG. A new PKC member has recently been discovered and is referred to as PKC ν .

PKC family members phosphorylate a wide variety of protein targets and are known to be involved in diverse cellular signaling pathways. PKC family members 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 in cells.

PKC ι/λ (nPKC-iota, aPKC-lambda/iota) may play a role in the secretory response to nutrients and is involved in cell polarization processes and the formation of epithelial tight junctions. PKC ι/λ is implicated in the activation of several signaling pathways including Ras, c-Src and NF-kappa-B pathways. PKC ι/λ functions in both pro- and anti-apoptotic pathways.

Applications

Suitable for use in ELISA and Western Blot. Other applications not tested.

Recommended Dilution

ELISA: 0.05-0.2ug/ml

Western Blot: 0.5-2ug/ml

Optimal dilutions to be determined by the researcher.

Storage and Stability

For long-term storage, aliquot and store at -20°C . Aliquots are stable for at least 12 months at -20°C . For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap. Further dilutions can be made in assay buffer.

Immunogen

Synthetic peptide (KLH). derived from human PKC ι/λ

Formulation

Supplied as a liquid in PBS, pH 7.4, 0.02% sodium azide, 30% glycerol.

Purity

Purified by immunoaffinity chromatography.

**Specificity**

Recognizes human PKC ι /λ. No cross-reactivity to other PKC isoforms are detected.

Product Type

Pab

Source

human

Isotype

IgG

Grade

Affinity Purified

Applications

E WB

Crossreactivity

Hu

Storage

-20°C

Reference

1. Mellor H. et al. (1998) Biochem. J. 332: 281-292
2. Nishizuka Y. et al. (1995) FASEB J. 9 (7): 484-96
3. Way K.J. et al. (2000) Trends in Pharmacological Sciences. 21 (5): 181-187