

PKC iota Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP7022a**Specification**

PKC iota Antibody (N-term) Blocking Peptide - Product InformationPrimary Accession [P41743](#)**PKC iota Antibody (N-term) Blocking Peptide - Additional Information****Gene ID** 5584**Other Names**

Protein kinase C iota type, Atypical protein kinase C-lambda/iota, PRKC-lambda/iota, aPKC-lambda/iota, nPKC-iota, PRKCI, DXS1179E

Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP7022a](/product/products/AP7022a) was selected from the N-term region of human PKC iota . A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

PKC iota Antibody (N-term) Blocking Peptide - Protein Information**Name** PRKCI**Synonyms** DXS1179E**Function**

Calcium- and diacylglycerol-independent serine/ threonine- protein kinase that plays a general protective role against apoptotic stimuli, is involved in NF-kappa-B activation, cell survival, differentiation and polarity, and contributes to the regulation of microtubule dynamics in the early secretory pathway. Is necessary for BCR-ABL oncogene-mediated resistance to apoptotic drug in leukemia cells, protecting leukemia cells against drug-induced apoptosis. In cultured neurons, prevents amyloid beta protein-induced apoptosis by interrupting cell death process at a very early step. In glioblastoma cells, may function downstream of phosphatidylinositol 3-kinase (PI(3)K) and PDPK1 in the promotion of cell survival by phosphorylating and inhibiting the pro-apoptotic factor BAD. Can form a protein complex in non-small cell lung cancer (NSCLC) cells with PARD6A and

ECT2 and regulate ECT2 oncogenic activity by phosphorylation, which in turn promotes transformed growth and invasion. In response to nerve growth factor (NGF), acts downstream of SRC to phosphorylate and activate IRAK1, allowing the subsequent activation of NF-kappa-B and neuronal cell survival. Functions in the organization of the apical domain in epithelial cells by phosphorylating EZR. This step is crucial for activation and normal distribution of EZR at the early stages of intestinal epithelial cell differentiation. Forms a protein complex with LLGL1 and PARD6B independently of PARD3 to regulate epithelial cell polarity. Plays a role in microtubule dynamics in the early secretory pathway through interaction with RAB2A and GAPDH and recruitment to vesicular tubular clusters (VTCs). In human coronary artery endothelial cells (HCAEC), is activated by saturated fatty acids and mediates lipid-induced apoptosis. Involved in early synaptic long term potentiation phase in CA1 hippocampal cells and short term memory formation (By similarity).

Cellular Location

Cytoplasm. Membrane. Endosome Nucleus Note=Transported into the endosome through interaction with SQSTM1/p62 After phosphorylation by SRC, transported into the nucleus through interaction with KPNB1. Colocalizes with CDK7 in the cytoplasm and nucleus. Transported to vesicular tubular clusters (VTCs) through interaction with RAB2A.

Tissue Location

Predominantly expressed in lung and brain, but also expressed at lower levels in many tissues including pancreatic islets Highly expressed in non-small cell lung cancers

PKC iota Antibody (N-term) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

PKC iota Antibody (N-term) Blocking Peptide - Images

PKC iota Antibody (N-term) Blocking Peptide - Background

PKC iota belongs to the protein kinase C (PKC) family of serine/threonine protein kinases. The PKC family comprises at least eight members, which are differentially expressed and are involved in a wide variety of cellular processes. This protein kinase is calcium-independent and phospholipid-dependent. It is not activated by phorbol esters or diacylglycerol. This kinase can be recruited to vesicle tubular clusters (VTCs) by direct interaction with the small GTPase RAB2, where this kinase phosphorylates glyceraldehydes-3-phosphate dehydrogenase (GAPD/GAPDH) and plays a role in microtubule dynamics in the early secretory pathway. This kinase is found to be necessary for BCL-ABL-mediated resistance to drug-induced apoptosis and therefore protects leukemia cells against drug-induced apoptosis.

PKC iota Antibody (N-term) Blocking Peptide - References

Zhang, J., et al., J. Biol. Chem. 279(21):22118-22123 (2004). Roehrl, M.H., et al., J. Biomol. NMR 26(4):373-374 (2003). Tisdale, E.J., J. Biol. Chem. 278(52):52524-52530 (2003). Suzuki, A., et al., J. Biochem. 133(1):9-16 (2003). Acevedo-Duncan, M., et al., Cell Prolif. 35(1):23-36 (2002).