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PKC iota Rabbit pAb

Catalog # AP99846

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	P41743
Other Accession	P41743
Reactivity	Human, Mouse
Predicted	Rat, Pig, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	68262
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human PKC iota/PKCI
Epitope Specificity	181-280/596
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the protein kinase superfamily. AGC Ser/Thr protein kinase family. PKC subfamily. Contains 1 AGC-kinase C-terminal domain. Contains 1 OPR domain. Contains 1 phorbol-ester/DAG-type zinc finger. Contains 1 protein kinase domain.
Post-translational modifications	On neuronal growth factor (NGF) stimulation, phosphorylated by Src on Tyr-265, Tyr-280 and Tyr-334. Phosphorylation on Tyr-265 facilitates binding to KPNB1/importin-beta regulating entry of PRKCI into the nucleus. Phosphorylation on Tyr-334 is important for NF-kappa-B stimulation.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	This gene encodes a member of 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 phorbolesters or diacylglycerol. This kinase can be recruited to vesicle tubular clusters (VTCs) by direct interaction with the small GTPase RAB2, where this kinase phosphorylates glyceraldehyde-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. There is a single exon pseudogene mapped on chromosome X. [provided by RefSeq, Jul 2008]

Additional Information

Gene ID	5584
Other Names	DXS1179E; PKCI; nPKC-iota; 2310021H13Rik; PKClambda; Pkcl; Prkcl;

	aPKClambda; mKIAA4165; XELAEV_18027593mg; PKCiota; apkc; pkc-iota; prkci; PKC-delta1; PKC-delta2; KPCI_HUMAN; Atypical protein kinase C-lambda/iota (PRKC-lambda/iota | aPKC-lambda/iota); 2.7.11.13; KPCI_MOUSE; Atypical protein kinase C-lambda/iota (aPKC-lambda/iota); protein kinase C iota; protein kinase C, iota
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

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

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