

Anti-PKC Iota Picoband Antibody

Catalog # ABO12012

Product Information

Application	WB, IHC-P
Primary Accession	P41743
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Protein kinase C iota type(PRKCI) detection. Tested with WB, IHC-P in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	5584
Other Names	Protein kinase C iota type, 2.7.11.13, Atypical protein kinase C-lambda/iota, PRKC-lambda/iota, aPKC-lambda/iota, nPKC-iota, PRKCI, DXS1179E
Calculated MW	68262
Application Details	Immunohistochemistry(Paraffin-embedded Section), 0.5-1 μ g/ml, Human, Mouse, Rat, By Heat Western blot, 0.1-0.5 μ g/ml, Human, Mouse, Rat
Subcellular Localization	Cytoplasm. Membrane. Endosome. Nucleus. 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 Specificity	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. .
Source	Eukaryota
Protein Name	Protein kinase C iota type
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
Immunogen	E.coli-derived human PKC iota recombinant protein (Position: D21-Q214). Human PKC iota shares 96% and 97% amino acid (aa) sequence identity with mouse and rat PKC iota, respectively.

Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins
Storage	At -20° C for one year. After r° Constitution, at 4° C for one month. It° Can also be aliquotted and stored frozen at -20° C for a longer time.Avoid repeated freezing and thawing.
Sequence Similarities	Belongs to the protein kinase superfamily. AGC Ser/Thr protein kinase family. PKC subfamily.

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

Background

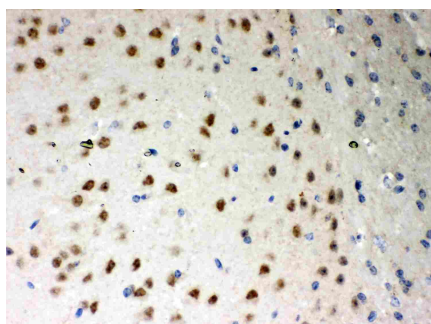
Protein kinase C iota type, also called PKCI, is an enzyme that in humans is encoded by the PRKCI gene. This

gene encodes a member of the protein kinase C (PKC) family of serine/threonine protein kinases. 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 glyceraldehyde-3-phosphate dehydrogenase (GAPD/GAPDH) and plays a role in microtubule dynamics in the early secretory pathway. PRKCI is found to be necessary for BCL-ABL-mediated resistance to drug-induced apoptosis and therefore protects leukemia cells against drug-induced apoptosis. PRKCI is also a hedgehog target gene that forms a positive feedback loop with GLI and exists at increased levels in basal cell carcinomas.

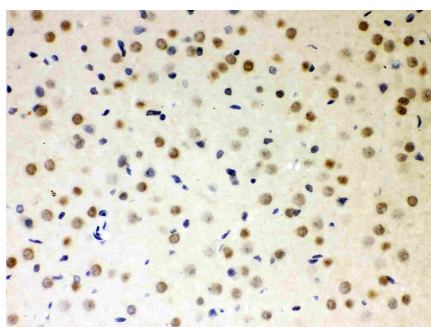
Images



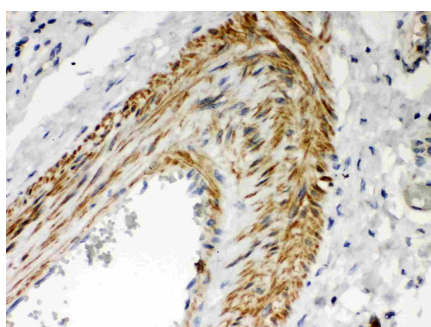
Anti- PKC iota Picoband antibody, ABO12012, Western blotting
All lanes: Anti PKC iota (ABO12012) at 0.5ug/ml
Lane 1: SHG Whole Cell Lysate at 40ug
Lane 2: A549 Whole Cell Lysate at 40ug
Lane 3: U87 Whole Cell Lysate at 40ug
Lane 4: 293T Whole Cell Lysate at 40ug
Lane 5: HELA Whole Cell Lysate at 40ug
Lane 6: JURKAT Whole Cell Lysate at 40ug
Predicted bind size: 68KD
Observed bind size: 68KD



Anti- PKC iota Picoband antibody, ABO12012, IHC(P)
IHC(P): Mouse Brain Tissue



Anti- PKC iota Picoband antibody, ABO12012, IHC(P)
IHC(P): Rat Brain Tissue



Anti- PKC iota Picoband antibody, ABO12012, IHC(P)
IHC(P): Human Lung Cancer Tissue