Datasheet for ABIN967795

anti-PKC iota antibody (AA 404-587)

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Overview

Quantity:	150 µg
Target:	PKC iota (PRKCI)
Binding Specificity:	AA 404-587
Reactivity:	Human, Mouse, Rat, Dog, Chicken
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This PKC iota antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), Immunoprecipitation (IP), Immunofluorescence (IF)

Product Details

Immunogen:	Human PKCι aa. 404-587
Clone:	23-PKCι
Isotype:	IgG2b
Cross-Reactivity:	Rat (Rattus), Chicken, Dog (Canine), Mouse (Murine)
Characteristics:	1. Since applications vary, each investigator should titrate the reagent to obtain optimal results. 2. Please refer to us for technical protocols. 3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing. 4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

Product Details

Purification:	The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Target Details

Target:	PKC iota (PRKCI)
Alternative Name:	PKC iota (PRKCI Products)
Background:	The Protein Kinase C (PKC) family of homologous serine/threonine protein kinases is involved in a number of processes such as growth, differentiation, and cytokine secretion. At least eleven isozymes have been described. These proteins are products of multiple genes and alternative splicing. PKC consists of a single polypeptide chain containing four conserved regions (C) and five variable regions(V). The N-terminal half containing C1, C2, V1, and V2 constitutes the regulatory domain and interacts with the PKC activators Ca 2+, phospholipid, diacylglycerol, or phorbol ester. However, the novel PKC (nPKC) subfamily members (delta, epsilon, eta, and theta isoforms) and the atypical PKC (aPKC) subfamily members (zeta, iota, and lambda isoforms) are Ca2+ independent and lack the C2 domain. The aPKC members are unique in that their activity is independent of diacylglycerols and phorbol esters. They also lack one repeat of the cysteine-rich sequences that are conserved in cPKC and nPKC. The C-terminal region of PKC contains the catalytic domain. The PKC pathway represents a major signal transduction system that is activated following ligand-stimulation of transmembrane receptors by hormones, neurotransmitters, and growth factors. PKCiota was isolated from a human kidney cDNA library. It is highly expressed in brain and lung, but it is also seen in many other tissues at lower levels. PKCiota shows the most similarity to PKCzeta , 72% overall identity. These two enzymes share a highly conserved pseudosubstrate sequence, the absence of a Ca2+-binding region, and the presence of only one zinc finger-like domain. It is thought that PKCiota has a role in the secretory response to nutrients. This antibody is routinely tested by western blot analysis.
Molecular Weight:	74 kDa
Pathways:	Neurotrophin Signaling Pathway, Cell-Cell Junction Organization, Tube Formation

Application Details

Comment:	Related Products: ABIN968545, ABIN967389
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	250 µg/mL
Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09 % sodium azide.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C
Storage Comment:	Store undiluted at -20° C.

Publications

Product cited in:

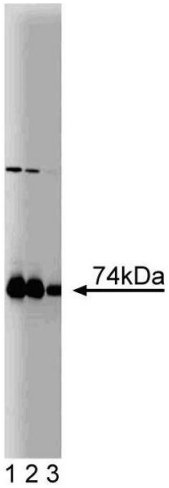
Shum, Melendez, Jeffrey: "Serotonin-induced MMP-13 production is mediated via phospholipase C, protein kinase C, and ERK1/2 in rat uterine smooth muscle cells." in: **The Journal of biological chemistry**, Vol. 277, Issue 45, pp. 42830-40, (2002) (PubMed).

Lu, Jamieson, Brasier, Fields: "NF-kappaB/RelA transactivation is required for atypical protein kinase C iota-mediated cell survival." in: **Oncogene**, Vol. 20, Issue 35, pp. 4777-92, (2001) (PubMed).

Santhamma, Sen: "Specific cellular proteins associate with angiotensin-converting enzyme and regulate its intracellular transport and cleavage-secretion." in: **The Journal of biological chemistry**, Vol. 275, Issue 30, pp. 23253-8, (2000) (PubMed).

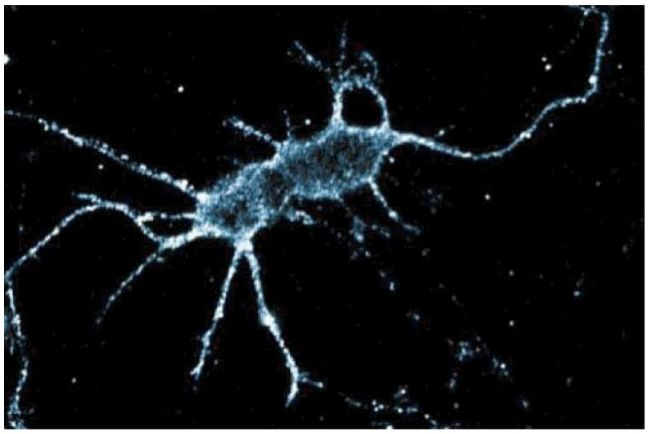
Zhu, Fang, Narla, Uckun: "A requirement for protein kinase C inhibition for calcium-triggered apoptosis in acute lymphoblastic leukemia cells." in: **Clinical cancer research : an official journal of the American Association for Cancer Research**, Vol. 5, Issue 2, pp. 355-60, (1999) (PubMed).

Selbie, Schmitz-Peiffer, Sheng, Biden: "Molecular cloning and characterization of PKC iota, an atypical isoform of protein kinase C derived from insulin-secreting cells." in: **The Journal of biological chemistry**, Vol. 268, Issue 32, pp. 24296-302, (1993) (PubMed).



Western Blotting

Image 1. Western blot analysis of PKCiota on a rat cerebrum lysate. Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of the anti- PKCiota antibody.



Immunofluorescence

Image 2. Immunofluorescence staining of rat neurons.

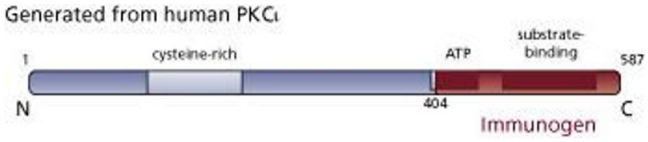


Image 3.

Please check the product details page for more images. Overall 4 images are available for ABIN967795.

