Technical Data Sheet

Purified Mouse Anti-PKCι

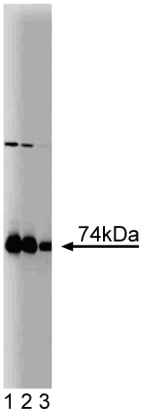
Product Information

Material Number:	**610175**
Size:	50 µg
Concentration:	250 µg/ml
Clone:	23/PKCι
Immunogen:	Human PKCι aa. 404-587
Isotype:	Mouse IgG2b
Reactivity:	QC Testing: Rat Tested in Development: Chicken, Dog, Human, Mouse
Target MW:	74 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

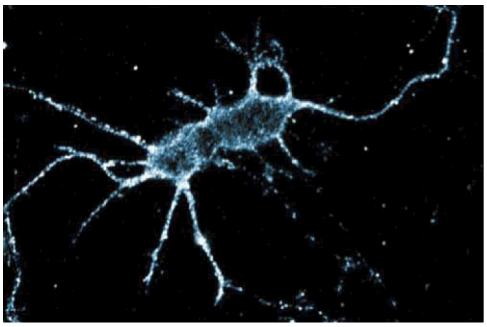
Description

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 (δ, ε, η, and θ isoforms) and the atypical PKC (aPKC) subfamily members (ζ, ι, and λ 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. PKCι 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. PKCι shows the most similarity to PKCζ , 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 PKCι has a role in the secretory response to nutrients.

This antibody is routinely tested by western blot analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.



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



Immunofluoresence staining of rat neurons.

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Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at -20° C.

Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development
Immunohistochemistry	Tested During Development
Immunoprecipitation	Tested During Development

Suggested Companion Products

Catalog Number	Name	Size	Clone
611463	Rat Cerebrum Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Igs	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Igs	0.5 mg	Polyclonal

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols 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.

References

Lu Y, Jamieson L, Brasier AR, Fields AP. NF-kappaB/RelA transactivation is required for atypical protein kinase C iota-mediated cell survival. *Oncogene.* 2001; 20(35):4777-4792.(Biology: Western blot)

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Selbie LA, Schmitz-Peiffer C, Sheng Y, Biden TJ. Molecular cloning and characterization of PKC iota, an atypical isoform of protein kinase C derived from insulin-secreting cells. *J Biol Chem.* 1993; 268(32):24296-24302.(Biology)

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