Technical Data Sheet

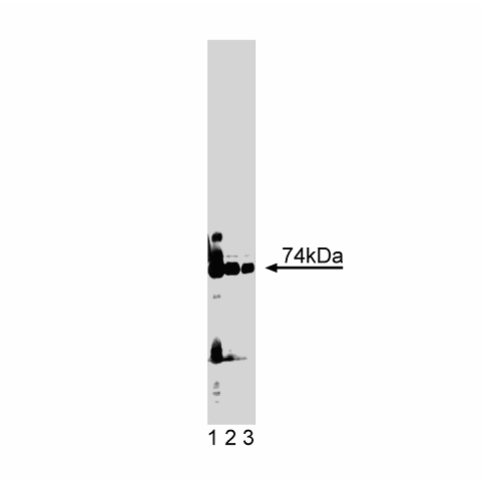
Purified Mouse Anti-PKCλ

Product Information

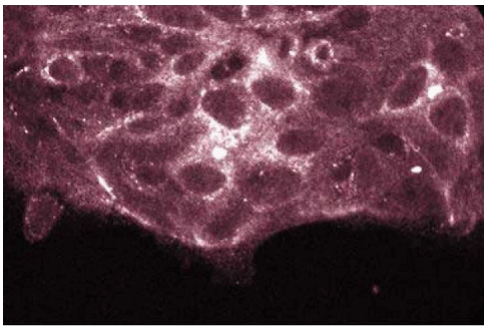
Material Number:	**610207**
Size:	50 µg
Concentration:	250 µg/ml
Clone:	41/PKCλ
Immunogen:	Human PKCλ aa. 397-558
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Rat Tested in Development: Human, Dog, Mouse, Chicken
Target MW:	74 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤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 Ca2+, 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, Í, 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. PKCλ shows the highest degree of amino acid homology with PKCζ (72%) and *PKCλ* mRNA is expressed in a variety of cells and tissues. The PKCλ protein kinase is capable of autophosphorylation and can be activated by phosphatidylserine, but not by other PKC activators such as diacylglycerols, Ca2+, or phorbol esters.



Western blot analysis of PKCλ on rat brain lysate. *Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of PKCλ.*



Immunofluorescence staining of HCT-8 cells.

Preparation and Storage

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

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Application Notes

Application

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

Suggested Companion Products

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

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

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Jain N, Zhang T, Kee WH, Li W, Cao X. Protein kinase C delta associates with and phosphorylates Stat3 in an interleukin-6-dependent manner. *J Biol Chem.* 1999; 274(34):24392-24400.(Clone-specific: Immunoprecipitation, Western blot)

Pauken CM, Capco DG. The expression and stage-specific localization of protein kinase C isotypes during mouse preimplantation development. *Dev Biol.* 2000; 223(2):411-421.(Clone-specific: Immunofluorescence, Western blot)

Trauzold A, Wermann H, Arlt A. CD95 and TRAIL receptor-mediated activation of protein kinase C and NF-kappaB contributes to apoptosis resistance in ductal pancreatic adenocarcinoma cells. *Oncogene.* 2001; 20(31):4258-4269.(Clone-specific: Western blot)

Uberall F, Giselbrecht S, Hellbert K. Conventional PKC-alpha, novel PKC-epsilon and PKC-theta, but not atypical PKC-lambda are MARCKS kinases in intact NIH 3T3 fibroblasts. *J Biol Chem.* 1997; 272(7):4072-4078.(Clone-specific: In vitro kinase assay)