Technical Data Sheet

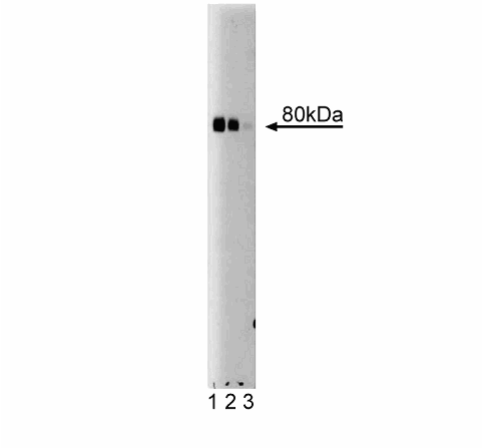
Purified Mouse Anti-PKCβ

Product Information

Material Number:	**610127**
Size:	50 µg
Concentration:	250 µg/ml
Clone:	36/PKCβ
Immunogen:	Human PKCβ aa. 126-324
Isotype:	Mouse IgG2a
Reactivity:	QC Testing: Rat Tested in Development: Human, Mouse, Chicken
Target MW:	80kDa
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, 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. PKCβ is highly expressed in brain and hematopoietic cells. Autophosphorylation of PKCβ occurs at the N- and C-terminal regions, as well as within the hinge region. However, only the COOH- terminal autophosphorylation sites are essential for PKCβ's function and subcellular localization. PKCβ is critical for the proliferation of K562 cells, as well as being an important regulator of human melanogenesis.



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

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	Not Recommended
Immunohistochemistry	Not Recommended

Recommended Assay Procedure:

Western blot: Please refer to http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml.

Suggested Companion Products

Catalog Number	Name	Size	Clone
611463	Rat Cerebrum Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(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. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
4. 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.

References

Bell RM, Burns DJ. Lipid activation of protein kinase C. *J Biol Chem.* 1991; 266(8):4661-4664.(Biology)

Masur K, Lang K, Niggemann B, Zanker KS, Entschladen F. High PKC alpha and low E-cadherin expression contribute to high migratory activity of colon carcinoma cells. *Mol Biol Cell.* 2001; 12(7):1973-1982.(Clone-specific: Western blot)

Nishizuka Y. The molecular heterogeneity of protein kinase C and its implications for cellular regulation. *Nature.* 1988; 334(6184):661-665.(Biology)

Soderling TR. Protein kinases. Regulation by autoinhibitory domains. *J Biol Chem.* 1990; 265(4):1823-1826.(Biology)

Stebbins EG, Mochly-Rosen D. Binding specificity for RACK1 resides in the V5 region of beta II protein kinase C. *J Biol Chem.* 2001; 276(32):29644-29650.(Clone-specific: Immunofluorescence, Western blot)