Technical Data Sheet

Purified Mouse Anti-Phospholipase Cβ1

Product Information

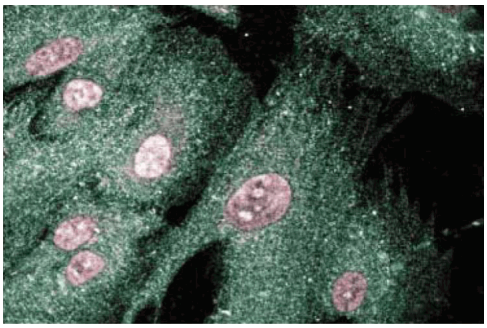
Material Number:	**610924**
Alternate Name:	PLCβ1
Size:	50 µg
Concentration:	250 µg/ml
Clone:	16/Phospholipase Cβ1
Immunogen:	Rat Phospholipase Cβ1 aa. 4-159
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Rat Tested in Development: Human, Mouse
Target MW:	150 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

Phospholipase C (PLC) hydrolyzes inositol phospholipids into diacylglycerol (DAG) and inositol 1,4,5-trisphosphate (IP3). The former causes release of Ca2+ from intracellular stores, while the latter is an activator of PKC. At least three isozymes are known: PLCβ, PLCγ, and PLCδ. They recognize phosphatidylinositol (PI), phosphatidylinositol 4-phosphate (PIP2), and phospatidylinositol 4,5 bisphosphate (PIP2) and carry out the Ca2+-dependent hydrolysis of these inositol phospholipids. All three classes contain two highly conserved regions, designated "X" and "Y", whose structural integrity is essential for a functional catalytic core. The PLCβ subfamily has been reported to contain at least four members: β1, β2, β3 and β4. PLCβ1 has been reported to have been identified and cloned from brain tissue where the PLCβ1 gene encodes for two different mRNAs. The resulting protein products, PLCβ1a (121 aa) and PLCβ1b (1173 aa) differ only at their C-termini. Although PLCγ activity is induced by receptor tyrosine kinase phosphorylation, PLCβ is regulated by G protein α subunits or βγ subunits. In particular, Gαq has been reported to activate PLCβ1.

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

Western blot analysis of Phospholipase Cβ1 on a rat cerebrum lysate. *Lane 1: 1: 1000, lane 2: 1:2000, lane 3: 1: 4000 dilution of the mouse anti-phospholipase Cβ1 antibody.*



Immunofluorescence staining of human intestinal smooth muscle cells (HISM).

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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

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)
554001	FITC Goat Anti-Mouse Ig	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

Avazeri N, Courtot AM, Pesty A, Duquenne C, Lefevre B. Cytoplasmic and nuclear phospholipase C-beta 1 relocation: role in resumption of meiosis in the mouse oocyte. *Mol Biol Cell.* 2000; 11(12):4369-4380.(Biology: Western blot)

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Rhee SG, Choi KD. Regulation of inositol phospholipid-specific phospholipase C isozymes. *J Biol Chem.* 1992; 267(18):12393-12396.(Biology)

Suh PG, Ryu SH, Moon KH, Suh HW, Rhee SG. Cloning and sequence of multiple forms of phospholipase C. *Cell.* 1988; 54(2):161-169.(Biology)