Technical Data Sheet

Purified Mouse Anti-Phospholipase Cγ1

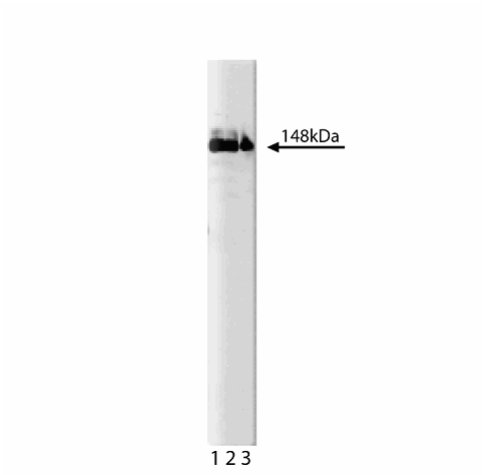
Product Information

Material Number:	**610028**
Size:	150 µg
Concentration:	250 µg/ml
Clone:	10/PLCgamma
Immunogen:	Cow PLCγ1 aa. 82-100
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human Tested in Development: Mouse, Rat, Dog, Chicken
Target MW:	148 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

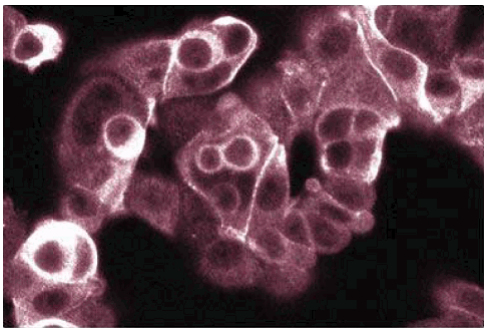
Description

The Phospholipase C (PLC) isozymes hydrolyze phosphatidyl inositol biphosphate to inositol triphosphate and diacylglycerol. The former causes release of calcium from the endoplasmic reticulum, while the latter is an activator of Protein Kinase C. Within the PLC family, PLCγ is the only member that contains SH2 and SH3 domains. These domains enable it to interact with receptor tyrosine kinases and become enzymatically activated via phosphorylation. It exists as two isoforms: 1) PLCγ1, which is ubiquitously expressed, and 2) PLCγ2, found primarily in the lymphoid system. PLCγ is essential for growth factor-induced cell motility and mitogenesis. PLCγ1 null mice exhibit retarded embryonic growth and lethality in midgestation. Overexpression of PLCγ is evident in several forms of cancer, and it has been identified as a key mediator of PDGF-dependent cellular transformation. Thus regulation of PLCγ activity by growth factors is involved in cell growth and transformation.

The 10/PLCgamma monoclonal antibody recognizes PLCγ1, regardless of phosphorylation status. It does not cross-react with PLCγ2.



Western blot analysis of Phospholipase Cγ1 on a A431 cell lysate (Human epithelial carcinoma; ATCC CRL-1555). *Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of the mouse anti-Phospholipase Cγ1 antibody.*



Immunofluorescence staining of MCF7 cells (Human breast adenocarcinoma; ATCC HTB-22).

Preparation and Storage

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

BD Biosciences

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Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development
Immunohistochemistry	Tested During Development
Immunoprecipitation	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
611447	A431 Cell Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Ig	0.5 mg	Polyclonal
558575	PE Mouse anti-PLCγ1	50 tests	10/PLCgamma
558566	Alexa Fluor® 488 Mouse anti-PLCγ1	50 tests	10/PLCgamma
558565	Alexa Fluor® 647 Mouse anti-PLCγ1	50 tests	10/PLCgamma

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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Dayanir V, Meyer RD, Lashkari K, Rahimi N. Identification of tyrosine residues in vascular endothelial growth factor receptor-2/FLK-1 involved in activation of phosphatidylinositol 3-kinase and cell proliferation. *J Biol Chem.* 2001; 276(21):17686-17692.(Biology: Immunoprecipitation, Western blot)

Harder T, Kuhn M. Selective accumulation of raft-associated membrane protein LAT in T cell receptor signaling assemblies. *J Cell Biol.* 2000; 151(2):199-208. (Biology: Western blot)

Obermeier A, Tinhofer I, Grunicke HH, Ullrich A. Transforming potentials of epidermal growth factor and nerve growth factor receptors inversely correlate with their phospholipase C gamma affinity and signal activation. *EMBO J.* 1996; 15(1):73-82.(Biology)

Vossmeyer D, Hofmann W, Loster K, Reutter W, Danker K. Phospholipase Cgamma binds alpha1beta1 integrin and modulates alpha1beta1 integrin-specific adhesion. *J Biol Chem.* 2002; 277(7):4636-4643.(Biology: Immunoprecipitation, Western blot)