Technical Data Sheet

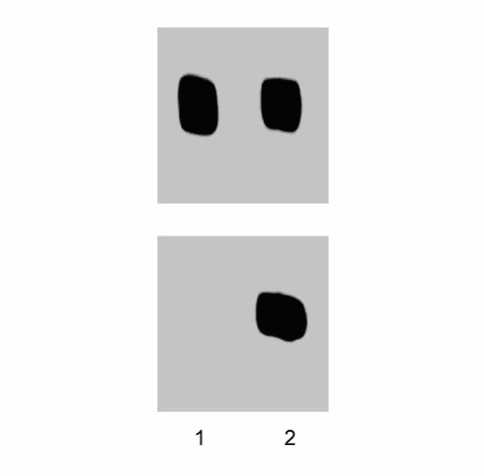
Purified Mouse Anti-Phospholipase Cγ (pY783)

Product Information

Material Number:	**612465**
Alternate Name:	PLCγ (pY783)
Size:	150 µg
Concentration:	250 µg/ml
Clone:	27/Phospholipase Cγ (pY783)
Immunogen:	Human Phosphorylated PLCγ1 Peptide
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human Tested in Development: Mouse, Rat
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 phosphate 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. In addition, PDGF stimulation leads to phosphorylation of PLCγ at Tyr 783, and activation of hydrolyzing activity. 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.



Western blot analysis for Phospholipase Cγ (pY783). *Jurkat cells (Human T-cell leukemia; ATCC TIB-152) were either left untreated (lane 1) or treated (lane 2) with 1 mM pervanadate, a general inhibitor of protein tyrosine phosphatases, for 15 min at 37°C. The top panel was probed with a mouse anti-Phospholipase Cγ antibody (MN 610027) and the bottom panel was probed with the mouse anti-Phospholipase Cγ (pY783) antibody at a 1:1000 dilution.*

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

Recommended Assay Procedure:

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

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Suggested Companion Products

Catalog Number	Name	Size	Clone
611755	Jurkat + Pervanadate Lysate	500 µg	(none)
611451	Jurkat Cell Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
610027	Purified Mouse Anti-Phospholipase Cγ1	50 µg	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

Chen P, Murphy-Ullrich JE, Wells A. A role for gelsolin in actuating epidermal growth factor receptor-mediated cell motility. *J Cell Biol.* 1996; 134(3):689-698. (Biology)

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)

Yu H, Fukami K, Itoh T, Takenawa T. Phosphorylation of phospholipase Cgamma1 on tyrosine residue 783 by platelet-derived growth factor regulates reorganization of the cytoskeleton. *Exp Cell Res.* 1998; 243(1):113-122.(Biology)