Technical Data Sheet

Alexa Fluor® 647 Mouse anti-PLCγ1

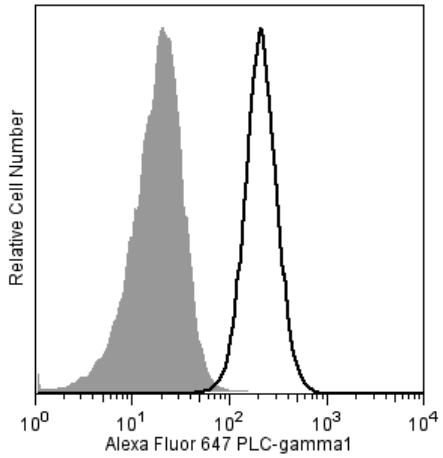
Product Information

Material Number:	**558565**
Size:	50 tests
Vol. per Test:	20 µl
Clone:	10/PLCgamma
Immunogen:	Cow PLCγ1 N-terminal region Peptide
Isotype:	Mouse IgG1
Reactivity:	Confirmed by flow cytometry: Human Confirmed by western blot using purified antibody (Cat. No. 610027 or 610028): Chicken, Dog, Human, Mouse, Rat
Storage Buffer:	Aqueous buffered solution containing BSA 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.



Analysis of PLCγ1 in human T leukemia cell lines. *Jurkat (ATCC TIB-152, open histogram) and J.gamma1 (PLCγ1-deficient Jurkat, ATCC CRL-2678, shaded histogram) were fixed with pre-warmed BD Cytofix™ buffer (Cat. No. 554655) for 10 minutes at 37ºC, permeabilized with BD™ Phosflow Perm Buffer III (Cat. No. 558050) on ice for at least 30 minutes, and then stained with Alexa Fluor® 647 Mouse anti-PLCγ1. Flow cytometry was performed on a BD™ FACSCalibur flow cytometry system.*

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.
The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
The antibody was conjugated to Alexa Fluor® 647 under optimum conditions, and unreacted Alexa Fluor® 647 was removed.

Application Notes

Application

Intracellular staining (flow cytometry)	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
558050	Perm Buffer III	125 ml	(none)
554655	Fixation Buffer	100 ml	(none)

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Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1 × 10^6 cells in a 100-µl experimental sample (a test).
2. Alexa Fluor® 647 fluorochrome emission is collected at the same instrument settings as for allophycocyanin (APC).
3. Alexa Fluor is a registered trademark of Molecular Probes, Inc., Eugene, OR.
4. The Alexa Fluor®, Pacific Blue™, and Cascade Blue® dye antibody conjugates in this product are sold under license from Molecular Probes, Inc. for research use only, excluding use in combination with microarrays, or as analyte specific reagents. The Alexa Fluor® dyes (except for Alexa Fluor® 430), Pacific Blue™ dye, and Cascade Blue® dye are covered by pending and issued patents.
5. 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.
6. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
7. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
8. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.

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)