

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Phospho-PLC- γ 2 (Y759) in direct ELISAs and Western blots.
Source	Monoclonal Mouse IgG ₁ Clone # 744757
Purification	Protein A or G purified from ascites
Immunogen	Phosphopeptide containing the human PLC- γ 2 Y759 site Accession # P16885
Formulation	Lyophilized from a 0.2 μ m filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μ m filtered solution in PBS.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	0.2 μ g/mL	See Below
Immunocytochemistry	8-25 μ g/mL	See Below

DATA

Western Blot

Detection of Human Phospho-PLC- γ 2 (Y759) by Western Blot. Western blot shows lysates of Ramos human Burkitt's lymphoma cell line untreated (-) or treated (+) with 100 μ M Pervanadate (PV) for 10 minutes or 10 μ g/mL Goat Anti-Human IgM μ Chain Antigen Affinity-purified Polyclonal Antibody (Catalog # G-105-C) for 2 minutes. PVDF membrane was probed with 0.2 μ g/mL of Mouse Anti-Human Phospho-PLC- γ 2 (Y759) Monoclonal Antibody (Catalog # MAB7377) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for Phospho-PLC- γ 2 (Y759) at approximately 130 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunocytochemistry

Phospho-PLC- γ 2 (Y759) in Ramos Human Cell Line. PLC- γ 2 phosphorylated at Y759 was detected in immersion fixed Ramos human Burkitt's lymphoma cell line treated (upper panel) or untreated (lower panel) with pervanadate for 5 minutes using Mouse Anti-Human Phospho-PLC- γ 2 (Y759) Monoclonal Antibody (Catalog # MAB7377) at 10 μ g/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). View our protocol for [Fluorescent ICC Staining of Non-adherent Cells](#).

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

The Phospholipase C family consists of 13 isozymes within six subfamilies, PLC- δ , - β , - γ , - ϵ , - ζ , and - η . PLC- γ 2 (Phospholipase C gamma-2) contains 2 SH2 and 1 SH3 domains and is primarily limited to cells of hematopoietic lineage. PLC- γ 2 is activated by receptor tyrosine kinases in response to growth factors, neurotransmitters, and hormones, and downstream through Lck kinase-dependent phosphorylation at Y753 and Y759. Activated PLC- γ 2 catalyzes the hydrolysis of phosphatidylinositol 4, 5-bisphosphate to produce the second messengers inositol 1, 4, 5-triphosphate (IP3) and diacylglycerol (DAG). IP3 mobilizes the release of calcium while DAG activates protein kinase C. PLC- γ 2 is involved in collagen induced signaling in platelets and antigen-dependent signaling in B-lymphocytes. Human PLC- γ 2 shares 94% and 95% sequence identity overall with mouse and rat PLC- γ 2, respectively, and 100% sequence identity within the peptide immunogen.