

# Anti-PLC $\gamma$ 1 (Tyr-775), phospho-specific

Cat. # **PP1491**  
Host **Rabbit Polyclonal**  
Size **100 $\mu$ l**

## **Background:**

Phosphoinositide-specific phospholipase C (PLC) plays a significant role in transmembrane signaling. In response to extracellular stimuli such as hormones, growth factors, and neurotransmitters, PLC hydrolyzes phosphatidylinositol 4,5-bisphosphate (PIP<sub>2</sub>) to generate two secondary messengers: inositol 1,4,5-triphosphate (IP<sub>3</sub>) and diacylglycerol (DAG). At least four families of PLCs have been identified: PLC $\beta$ , PLC $\gamma$ , PLC $\delta$ , and PLC $\epsilon$ . Phosphorylation is one of the key mechanisms that regulate the activity of PLC. PLC $\delta$  is activated by both receptor and nonreceptor tyrosine kinases. PLC $\gamma$ 1 forms a complex with EGF and PDGF receptors, which leads to phosphorylation at tyrosine 771, 783, and 1245. In addition, antigen receptor-induced activation of PLC $\gamma$ 1 leads to phosphorylation at both Tyr-775 and Tyr-783. These two sites are equally important for activation of enzymatic activity.

## **References:**

Obermeier, A. et al. (1996) EMBO J. 15:73.  
Chen, P. et al. (1996) J Cell. Biol. 134:689.  
Serrano, C.J. et al. (2005) J. Immunol. 174:6233.

## **Immunogen:**

PLC $\gamma$ 1 (Tyr-775) synthetic peptide (coupled to carrier protein) corresponding to amino acids around tyrosine 775 in human PLC $\gamma$ 1. This sequence has high homology to the conserved site in rat and mouse PLC $\gamma$ 1, and has low homology to PLC $\gamma$ 2.

## **Buffer and Storage:**

Rabbit polyclonal, affinity-purified antibody is supplied in 100 $\mu$ l phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at -20°C. Do not aliquot. Stable for 1 year.

## **Applications:**

Western blotting	1:1000 dilution <sup>†</sup>	Immunocytochemistry	1:100
ELISA	1:2000 dilution	Immunoprecipitation	5-10 $\mu$ l

End user should determine optimal dilution for their particular applications and experiments.

<sup>†</sup>Membrane was incubated with diluted antibody in 5% non-fat milk, PBS, 0.04% Tween20 for 1 hour at room temperature.

## **Specificity:**

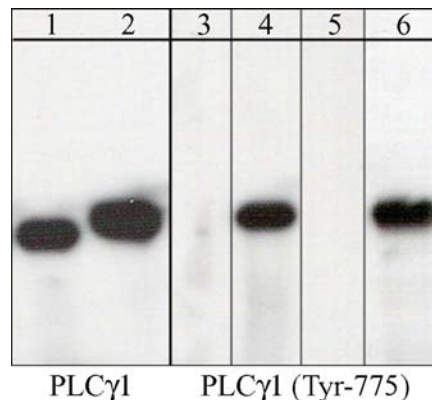
This antibody was cross-adsorbed to a non-specific phospho-tyrosine peptide then affinity-purified using phospho-PLC $\gamma$ 1 (Tyr-775) peptide. The antibody detects a 150 kDa\* protein in human Jurkat and A431 cells treated with pervanadate, but is not observed in untreated cells.

\*All molecular weights (MW) are confirmed by comparison to Bio-Rad Rainbow Markers and to western blot mobilities of known proteins with similar MW.

## **Related Products:**

PM1561 PLC $\gamma$ 1 (N-terminal region) Mouse Monoclonal

PX1495 phospho-PLC $\gamma$ 1 (Tyr-775) Peptide



Western blot analysis of PLC $\gamma$ 1 immunoprecipitates from human Jurkat cells untreated (lanes 1 & 3) or treated with pervanadate (1 mM) for 30 min (lanes 2, 4, 5 & 6). Immunoprecipitation was performed with monoclonal anti-PLC $\gamma$ 1 (PM1561). The blots were probed with anti-PLC $\gamma$ 1 (lanes 1 & 2) and anti-PLC $\gamma$ 1 (Tyr-775) (lanes 3-6). The latter antibody was used in the presence of phospho-PLC $\gamma$ 1 (Tyr-775) peptide (lane 5), or a non-specific phosphotyrosine peptide (lane 6).

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