

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

Cat. # PP1491

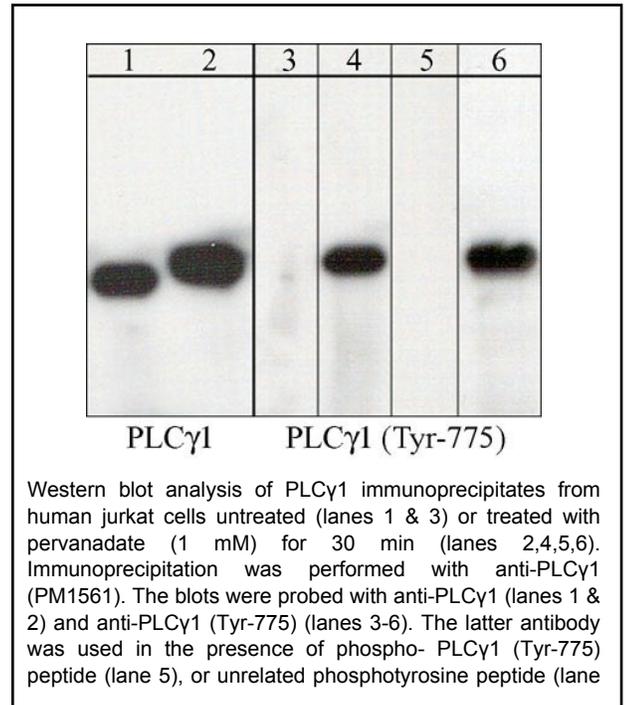
Size 100  $\mu$ l

## 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 regulates 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.

## Background References

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



## Applications

WB	1:1000
ELISA	1:2000
ICC	1:100
IP	1:100

## Species Reactivity

Hu, Rt, Ms

## 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.

End user should determine optimal dilution for their particular applications and experiments.  
Western blot membranes were incubated with diluted antibody in 5% non-fat milk, PBS, 0.04% Tween20 for 1 hour at room temperature.

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

## 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. Stable for 1 year.

## Related Products

- PM1561 PLC $\gamma$ 1 (N-terminal region) Mouse Monoclonal  
PX1495 phospho-PLC $\gamma$ 1 (Tyr-775) Blocking Peptide  
AK6340 Akt Phospho-Regulation Antibody Sampler Kit  
EK6440 ERK1/2 Phospho-Regulation Antibody Sampler Kit  
MK6050 MAP Kinase Activation Antibody Sampler Kit

## Product References

- Fan, K. et al. (2012) J Gen Virol. 93(5):987.  
WB: Jukat cells  
Ayuso-Sacido, A. et al. (2010) J Neuroonc. 97:323.  
WB: mouse neural stem cells

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