

# PLC $\gamma$ 1 (N-terminal region)

Mouse Monoclonal IgG1

Cat. # PM1561

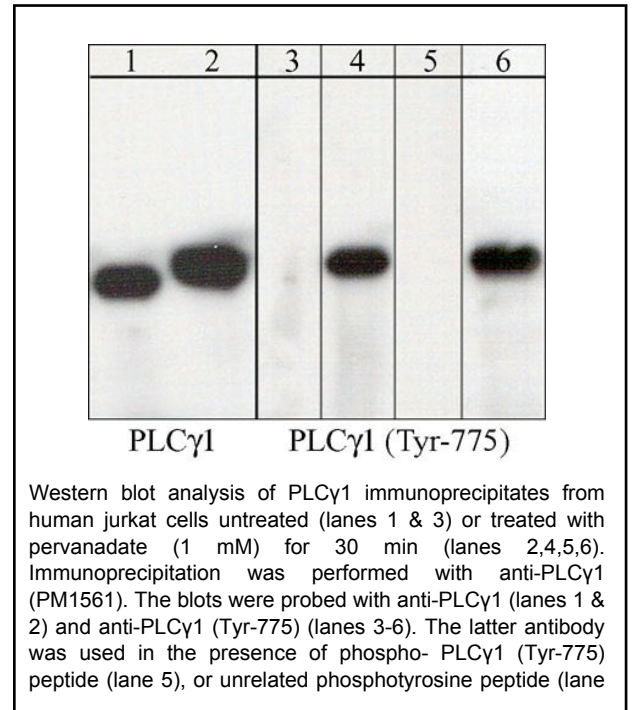
Size 100  $\mu$ l

## 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, Ck

## Specificity

The antibody detects a 150 kDa\* protein in human A431, Hct116, and Jurkat cells, as well as in mouse brain.

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

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.

## Immunogen

Clone (M156) was generated from a synthetic peptide corresponding to amino acids in the N-terminal region of human PLC $\gamma$ 1. This sequence is highly conserved in rat and mouse PLC $\gamma$ 1, and has low homology to PLC $\gamma$ 2.

## Buffer and Storage

Mouse monoclonal antibody purified with protein A chromatography 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

PP1491 PLC $\gamma$ 1 (Tyr-775), phospho-specific Rabbit Polyclonal  
PK6140 p38 MAPK Phospho-Regulation Antibody Sampler Kit  
MK6050 MAP Kinase Activation Antibody Sampler Kit  
EK6440 ERK1/2 Phospho-Regulation Antibody Sampler Kit  
AK6340 Akt Phospho-Regulation Antibody Sampler Kit

## Product References

Carrizosa, E. et al. (2009) J Immunol. 183:7352.  
WB, ICC: mouse T-cells

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www.ecmbiosciences.com  
telephone: 859-879-2075  
toll-free: 1-800-859-8202  
info@ecmbiosciences.com

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