

#13349 Store at +4°C

Phospho-PLC γ 1 (Ser1248) (D25A9) Rabbit mAb (PE Conjugate)



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Applications: FC-FP	Reactivity: H M Mk	Sensitivity: Endogenous	Source/Isotype: Rabbit IgG	UniProt ID: #P19174	Entrez-Gene Id: 5335
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Product Usage Information	Application Flow Cytometry (Fixed/Permeabilized)	Dilution 1:50
Storage	Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. Do not aliquot the antibodies. Protect from light. Do not freeze.	
Specificity / Sensitivity	Phospho-PLC γ 1 (Ser1248) (D25A9) Rabbit mAb (PE Conjugate) recognizes endogenous levels of PLC γ 1 protein only when phosphorylated at Ser1248.	
Species predicted to react based on 100% sequence homology:	Rat	
Source / Purification	Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ser1248 of human PLC γ 1 protein.	
Product Description	This Cell Signaling Technology antibody is conjugated to phycoerythrin (PE) and tested in-house for direct flow cytometry analysis in human cells. The antibody is expected to exhibit the same species cross-reactivity as the unconjugated Phospho-PLC γ 1 (Ser1248) (D25A9) Rabbit mAb #8713.	
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 ₂) to generate two secondary messengers: inositol 1,4,5-triphosphate (IP ₃) and diacylglycerol (DAG) (1). At least four families of PLCs have been identified: PLC β , PLC γ , PLC δ , and PLC ϵ . Phosphorylation is one of the key mechanisms that regulate the activity of PLC. PLC γ is activated by both receptor and non-receptor tyrosine kinases (2). PLC γ forms a complex with EGF and PDGF receptors, which leads to the phosphorylation of PLC γ at Tyr771, 783, and 1248 (3). Phosphorylation by Syk at Tyr783 activates the enzymatic activity of PLC γ 1 (4). PLC γ 2 is engaged in antigen-dependent signaling in B cells and collagen-dependent signaling in platelets. Phosphorylation by Btk or Lck at Tyr753, 759, 1197, and 1217 is correlated with PLC γ 2 activity (5,6).	
Background References	<ol style="list-style-type: none"> 1. Singer, W.D. et al. (1997) <i>Annu Rev Biochem</i> 66, 475-509. 2. Margolis, B. et al. (1989) <i>Cell</i> 57, 1101-7. 3. Kim, H.K. et al. (1991) <i>Cell</i> 65, 435-41. 4. Wang, Z. et al. (1998) <i>Mol Cell Biol</i> 18, 590-7. 5. Watanabe, D. et al. (2001) <i>J Biol Chem</i> 276, 38595-601. 6. Ozdener, F. et al. (2002) <i>Mol Pharmacol</i> 62, 672-9. 	

Species Reactivity	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
Applications Key	FC-FP: Flow Cytometry (Fixed/Permeabilized)
Cross-Reactivity Key	H: human M: mouse R: rat Hm: hamster Mk: monkey Vir: virus Mi: mink C: chicken Dm: D. melanogaster X: Xenopus Z: zebrafish B: bovine Dg: dog Pg: pig Sc: S. cerevisiae Ce: C. elegans Hr: horse GP: Guinea Pig Rab: rabbit All: all species expected

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