

PLC γ 1 (D9H10) XP[®] Rabbit mAb (Biotinylated)

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For Research Use Only. Not for Use in Diagnostic Procedures.

| Applications: | Reactivity: | Sensitivity: | MW (kDa): | Source/Isotype: | UniProt ID: | Entrez-Gene Id: |
|---------------|-------------|--------------|-----------|-----------------|-------------|-----------------|
| W | H M R Mk | Endogenous | 150 | Rabbit IgG | #P19174 | 5335 |

Product Usage Information**Application**

Western Blotting

Dilution

1:1000

Storage

Supplied in 140 mM NaCl, 3 mM KCl, 10 mM sodium phosphate (pH 7.4) dibasic, 2 mM potassium phosphate monobasic, 2 mg/mL BSA, and 50% glycerol. Store at -20°C. *Do not aliquot the antibody.*

Specificity/Sensitivity

PLC γ 1 (D9H10) XP[®] Rabbit mAb recognizes endogenous levels of total PLC γ 1 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu1220 of human PLC γ 1 protein.

Description

This Cell Signaling Technology antibody is conjugated to biotin under optimal conditions. The biotinylated antibody is expected to exhibit the same species cross-reactivity as the unconjugated PLC γ 1 (D9H10) XP[®] Rabbit mAb #5690.

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 (PIP₂) to generate two secondary messengers: inositol 1,4,5-triphosphate (IP₃) 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

1. Singer, W.D. et al. (1997) *Annu Rev Biochem* 66, 475-509.
2. Margolis, B. et al. (1989) *Cell* 57, 1101-7.
3. Kim, H.K. et al. (1991) *Cell* 65, 435-41.
4. Wang, Z. et al. (1998) *Mol Cell Biol* 18, 590-7.
5. Watanabe, D. et al. (2001) *J Biol Chem* 276, 38595-601.
6. Ozdener, F. et al. (2002) *Mol Pharmacol* 62, 672-9.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween@ 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

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