

#5690 Store at -20°C

PLCy1 (D9H10) XP® Rabbit mAb


Cell Signaling
TECHNOLOGY®

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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:
WB, W-S, IP, IHC-P	H M R Mk	Endogenous	150	Rabbit IgG	#P19174	5335

Product Usage Information

Application

 Western Blotting
Simple Western™
Immunoprecipitation
Immunohistochemistry (Paraffin)

Dilution

 1:1000
1:10 - 1:50
1:50
1:50 - 1:200

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

For a carrier free (BSA and azide free) version of this product see product #10607.

Specificity / Sensitivity

PLCy1 (D9H10) XP® Rabbit mAb recognizes endogenous levels of total PLCy1 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu1220 of human PLCy1 protein.

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-trisphosphate (IP₃) and diacylglycerol (DAG) (1). At least four families of PLCs have been identified: PLCβ, PLCγ, PLCδ, and PLCε. Phosphorylation is one of the key mechanisms that regulate the activity of PLC. PLCγ is activated by both receptor and non-receptor tyrosine kinases (2). PLCγ forms a complex with EGF and PDGF receptors, which leads to the phosphorylation of PLCγ at Tyr771, 783, and 1248 (3). Phosphorylation by Syk at Tyr783 activates the enzymatic activity of PLCy1 (4). PLCy2 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 PLCy2 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

WB: Western Blotting **W-S:** Simple Western™ **IP:** Immunoprecipitation
IHC-P: Immunohistochemistry (Paraffin)

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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