Revision 4

Store at -20C

#3860

PLCγ Antibody Sampler Kit

1 Kit (5 x 20 microliters)

Cell Signaling TECHNOLOGY®

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Product Includes	Product #	Quantity	Mol. Wt	Isotype/Source
Phospho-PLCγ2 (Tyr1217) Antibody	3871	20 µl	150 kDa	Rabbit
Phospho-PLCγ2 (Tyr759) (E9E9Y) Rabbit mAb	50535	20 µl	150 kDa	Rabbit IgG
PLCγ2 (E5U4T) Rabbit mAb	55512	20 µl	150 kDa	Rabbit IgG
Phospho-PLCγ1 (Tyr783) (D6M9S) Rabbit mAb	14008	20 µl	155 kDa	Rabbit IgG
PLCγ1 (D9H10) XP® Rabbit mAb	5690	20 µl	150 kDa	Rabbit IgG
Anti-rabbit IgG, HRP-linked Antibody	7074	100 µl		Goat

Please visit cellsignal.com for individual component applications, species cross-reactivity, dilutions, protocols, and additional product information.

Description

PLCγ Antibody Sampler Kit provides an economical means of analyzing phospho and total PLCγ levels. PLCγ Antibody Sampler Kit contains enough primary and secondary antibodies to perform two western blot experiments with each antibody.

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.

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: 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 PLCγ1 (4). PLCγ2 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 PLCγ2 activity (5,6).

Background References

1. Singer, W.D. et al. (1997) *Annu Rev Biochem* 66, 475-509.
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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.

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