

# PLC $\gamma$ 2 (K-18): sc-31752

## BACKGROUND

Phosphoinositide-specific phospholipase C (PLC) plays a critical role in the initiation of receptor mediated signal transduction through the generation of the two second messengers, inositol 1,4,5-triphosphate and diacylglycerol from phosphatidylinositol 4,5-bisphosphate. There are many mammalian PLC isozymes, including PLC  $\beta$ 1, PLC  $\beta$ 2, PLC  $\beta$ 3, PLC  $\beta$ 4, PLC  $\gamma$ 1, PLC  $\gamma$ 2, PLC  $\delta$ 1, PLC  $\delta$ 2 and PLC  $\epsilon$ . After stimulation of the collagen receptor glycoprotein VI in human platelets, PLC  $\gamma$ 2 associates with several tyrosine-phosphorylated proteins (Syk, SLP-76, Lyn, linker for activation of T cells (LAT) and the FcR  $\gamma$  chain), which bind to its C-terminal SH2 domain. PLC  $\gamma$ 1 associates with Syk in B cells, but PLC  $\gamma$ 2 does not associate with Syk in platelets. The C-terminal SH2 domain is involved in the regulation of PLC  $\gamma$ 2. In addition, Btk can induce PLC  $\gamma$ 2 tyrosine phosphorylation and initiate calcium mobilization in CD72-stimulated B lymphocytes.

## REFERENCES

- Suh, P., et al. 1988. Inositol phospholipid-specific phospholipase C: complete cDNA and protein sequences and sequence homology to tyrosine kinase-related oncogene products. *Proc. Natl. Acad. Sci. USA* 85: 5419-5423.
- Emori, Y., et al. 1989. A second type of rat phosphoinositide-specific phospholipase C containing a Src-related sequence not essential for phosphoinositide-hydrolyzing activity. *J. Biol. Chem.* 264: 21885-21890.
- Meldrum, E., et al. 1991. A second gene product of the inositol-phospholipid-specific phospholipase C  $\delta$  subclass. *Eur. J. Biochem.* 196: 159-165.
- Rhee, S.G., et al. 1992. Regulation of inositol phospholipid-specific phospholipase C isozymes. *J. Biol. Chem.* 267: 12393-12396.
- Kim, M.J., et al. 1993. Cloning of cDNA encoding rat phospholipase C  $\beta$ 4, a new member of the phospholipase C. *Biochem. Biophys. Res. Commun.* 194: 706-712.

## CHROMOSOMAL LOCATION

Genetic locus: PLCG2 (human) mapping to 16q23.3; Plcg2 (mouse) mapping to 8 E1.

## SOURCE

PLC  $\gamma$ 2 (K-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PLC  $\gamma$ 2 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-31752 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

PLC  $\gamma$ 2 (K-18) is recommended for detection of PLC  $\gamma$ 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

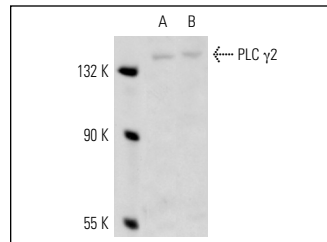
PLC  $\gamma$ 2 (K-18) is also recommended for detection of PLC  $\gamma$ 2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for PLC  $\gamma$ 2 siRNA (h): sc-36268, PLC  $\gamma$ 2 siRNA (m): sc-36269, PLC  $\gamma$ 2 shRNA Plasmid (h): sc-36268-SH, PLC  $\gamma$ 2 shRNA Plasmid (m): sc-36269-SH, PLC  $\gamma$ 2 shRNA (h) Lentiviral Particles: sc-36268-V and PLC  $\gamma$ 2 shRNA (m) Lentiviral Particles: sc-36269-V.

Molecular Weight of PLC  $\gamma$ 2: 155 kDa.

Positive Controls: GA-10 whole cell lysate: sc-364230, Ramos cell lysate: sc-2216 or U-937 cell lysate: sc-2239.

## DATA



PLC  $\gamma$ 2 (K-18): sc-31752. Western blot analysis of PLC  $\gamma$ 2 expression in GA-10 (A) and Ramos (B) whole cell lysates.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **PLC  $\gamma$ 2 (B-10): sc-5283** or **PLC  $\gamma$ 2 (A-3): sc-390389**, our highly recommended monoclonal alternatives to PLC  $\gamma$ 2 (K-18). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **PLC  $\gamma$ 2 (B-10): sc-5283**.