



# SZABO SCANDIC

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- Gefahrgutzuschlag
- Expressversand

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# PLC $\delta$ 1 (m): 293T Lysate: sc-122626

## BACKGROUND

Phosphoinositide-specific phospholipase C (PLC) plays a crucial 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  $\epsilon$ . PLC $\delta$  exists as four different isoforms. PLC  $\delta$ 1, a calcium signal amplifier, is activated by an atypical GTP-binding protein. In addition, PLC  $\delta$ 1 is an effector for GTP-binding protein transglutaminase II-mediated oxytocin receptor and  $\alpha$ 1 $\beta$ -adrenoreceptor signaling. Mouse PLC  $\delta$ 1 is highly expressed in brain, heart, lung and testis. PLC  $\delta$  is abnormally accumulated in autopsied brains with Alzheimer's disease (AD), suggesting that it may play a role in the pathology of AD. PLC  $\delta$ 2 is markedly expressed in type II intestinal metaplasia and adenocarcinoma. When PLC  $\delta$ 2 is expressed in type I intestinal metaplasia, the metaplasia is generally considered benign, yet evolves toward neoplastic transformation. Thus, PLC  $\delta$ 2 expression may be a possible marker of gastric malignant transformation.

## REFERENCES

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2. 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.
3. Meldrum, E., et al. 1991. A second gene product of the inositol-phospholipid-specific phospholipase C $\delta$  subclass. *Eur. J. Biochem.* 196: 159-165.
4. Rhee, S.G., et al. 1992. Regulation of inositol phospholipid-specific phospholipase C isozymes. *J. Biol. Chem.* 267: 12393-12396.
5. 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.
6. Jhon, D., et al. 1993. Cloning, sequencing, purification and G $_q$ -dependent activation of phospholipase C- $\beta$ 3. *J. Biol. Chem.* 268: 6654-6661
7. Matsushima, H., et al. 1995. Changes in platelet phospholipase C protein level and activity in Alzheimer's disease. *Neurobiol. Aging* 16: 895-900.
8. Park, E.S., et al. 1998. Phospholipase C- $\delta$ 1 and oxytocin receptor signalling: evidence of its role as an effector. *Biochem. J.* 331: 283-289.
9. Lee, W.K., et al. 1999. Molecular cloning and expression analysis of a mouse phospholipase C- $\delta$ 1. *Biochem. Biophys. Res. Commun.* 261: 393-399.

## CHROMOSOMAL LOCATION

Genetic locus: Plcd1 (mouse) mapping to 9 F3.

## PRODUCT

PLC  $\delta$ 1 (m): 293T Lysate represents a lysate of mouse PLC  $\delta$ 1 transfected 293T cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

## APPLICATIONS

PLC  $\delta$ 1 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive PLC  $\delta$ 1 antibodies. Recommended use: 10-20  $\mu$ l per lane.

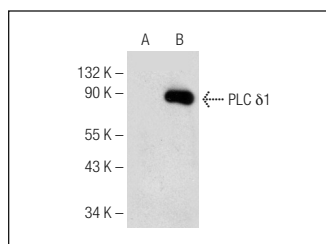
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

PLC  $\delta$ 1 (B-9): sc-376058 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse PLC  $\delta$ 1 expression in PLC  $\delta$ 1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

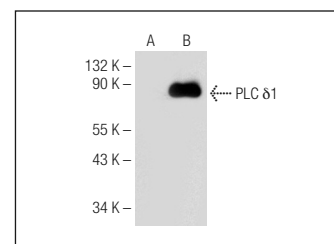
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:  
1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

## DATA



PLC  $\delta$ 1 (B-9): sc-376058. Western blot analysis of PLC  $\delta$ 1 expression in non-transfected: sc-117752 (A) and mouse PLC  $\delta$ 1 transfected: sc-122626 (B) 293T whole cell lysates.



PLC  $\delta$ 1 (D-10): sc-374329. Western blot analysis of PLC  $\delta$ 1 expression in non-transfected: sc-117752 (A) and mouse PLC  $\delta$ 1 transfected: sc-122626 (B) 293T whole cell lysates.

## STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## 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) for detailed protocols and support products.