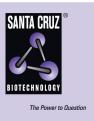
# SANTA CRUZ BIOTECHNOLOGY, INC.

# PLC γ1 (790-850): sc-4054



### 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 β1, PLC β2, PLC β3, PLC β4, PLC γ1, PLC γ2, PLC  $\delta 1,$  PLC  $\delta 2$  and PLC  $\epsilon.$  PLC  $\gamma 1$  is widely distributed in bronchiolar epithelium, type I and II pneumocytes and fibroblasts of the interstitial tissue. Actin-regulatory protein Villin is tyrosine phosphorylated and associates with PLC y1 in the brush border of intestinal epithelial cells. Villin regulates PLC y1 activity by modifying its own ability to bind phosphatidylinositol 4,5-biphosphate. PLC  $\gamma$ 1 binds Integrin  $\alpha$ 1/ $\beta$ 1 and modulates Integrin  $\alpha$ 1/ $\beta$ -specific adhesion. PLC  $\gamma 1$  and Ca2+ play a direct role in VEGF-regulated endothelial growth, how-ever this signaling pathway is not linked to FGF-mediated effects in primary endothelial cells. PLC y1 is rapidly activated in response to growth factor stimulation and plays an important role in regulating cell proliferation and differentiation. It may also have a protective function during cellular response to oxidative stress.

### REFERENCES

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# SOURCE

PLC  $\gamma$ 1 (790-850) is expressed in *E. coli* as a 31 kDa tagged fusion protein corresponding to amino acids 790-850 of PLC  $\gamma$ 1 of human origin.

## PRODUCT

PLC  $\gamma$ 1 (790-850) is purified from bacterial lysates (>98%) by glutathione agarose affinity chromatography; supplied as 50 µg purified protein in PBS containing 5mM DTT and 50% glycerol.

Also available in agarose conjugate form: PLC  $\gamma 1$  (790-850) AC: sc-4054 AC; supplied as 100  $\mu$ g protein conjugated to 0.1 ml agarose in PBS containing 0.1% azide, 0.1% BSA and 10% glycerol.

#### **APPLICATIONS**

PLC  $\gamma$ 1(790-850) is recommended for the enrichment of PLC  $\gamma$ 1 associated proteins when used in combination with Glutathione-Agarose (sc-2009).

Agarose conjugate form, sc-4054 AC, is recommended for direct precipitation of target proteins.

#### **STORAGE**

Store PLC  $\gamma$ 1 (790-850): sc-4054 at -20° C and store PLC  $\gamma$ 1 (790-850) AC: sc-4054 AC at 4° C; stable for one year from the date of shipment.

## **RESEARCH USE**

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