

p-PLC γ 1 (Tyr 783): sc-12943

BACKGROUND

Phospholipase C γ 1 (PLC γ 1) is an isozyme of the phosphoinositide-specific PLC family, which occupies a central role in hormonal signal transduction pathways and is a substrate for the epidermal growth factor receptor tyrosine kinase. Following activation of Trk B, PLC γ 1 is phosphorylated on Tyrosine 783, Tyrosine 771 and Tyrosine 1253. Tyrosine 783 lies just downstream of the kinase domain in a relatively short sequence motif characteristic of the Trk family of protein-tyrosine kinase receptors. The sequence around Tyrosine 783 fits a consensus sequence for binding PLC γ 1. PLC γ 1 also forms a complex with Trk B consistent with the possibility that one of the Trk B auto-phosphorylation sites provides a binding site for the PLC γ 1 SH2 domains, as is the case for other receptor protein-tyrosine kinases.

CHROMOSOMAL LOCATION

Genetic locus: PLCG1 (human) mapping to 20q12; Plcg1 (mouse) mapping to 2 H2.

SOURCE

p-PLC γ 1 (Tyr 783) is available as either goat (sc-12943) or rabbit (sc-12943-R) polyclonal affinity purified antibody raised against a short amino acid sequence containing Tyr 783 phosphorylated PLC γ 1 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-12943 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p-PLC γ 1 (Tyr 783) is recommended for detection of Tyr 783 phosphorylated PLC γ 1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

p-PLC γ 1 (Tyr 783) is also recommended for detection of correspondingly phosphorylated PLC γ 1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PLC γ 1 siRNA (h): sc-29452, PLC γ 1 siRNA (m): sc-36265, PLC γ 1 shRNA Plasmid (h): sc-29452-SH, PLC γ 1 shRNA Plasmid (m): sc-36265-SH, PLC γ 1 shRNA (h) Lentiviral Particles: sc-29452-V and PLC γ 1 shRNA (m) Lentiviral Particles: sc-36265-V.

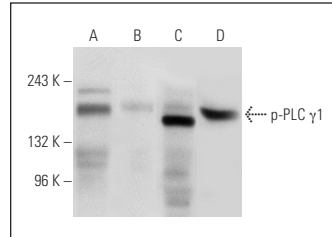
Molecular Weight of p-PLC γ 1: 155 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, NIH/3T3 + PMA cell lysate: sc-24748 or Jurkat whole cell lysate: sc-2204.

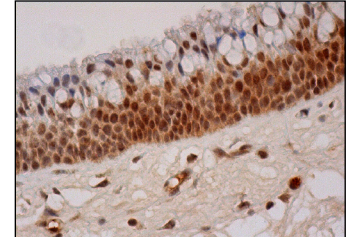
STORAGE

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

DATA



Western blot analysis of PLC γ 1 phosphorylation in untreated (**A, C**) and lambda protein phosphatase (sc-200312A) treated (**B, D**) NIH/3T3 whole cell lysates. Antibodies tested include p-PLC γ 1 (Tyr 783)-R: sc-12943-R (**A, B**) and PLC γ 1 (530): sc-426 (**C, D**).



p-PLC γ 1 (Tyr 783): sc-12943-R. Immunoperoxidase staining of formalin fixed, paraffin-embedded human nasopharynx tissue showing cytoplasmic and nuclear staining of respiratory epithelial cells.

SELECT PRODUCT CITATIONS

- Russo, S., et al. 2003. Platelet-activating factor mediates CD40-dependent angiogenesis and endothelial-smooth muscle cell interaction. *J. Immunol.* 171: 5489-5497.
- Gimborn, K., et al. 2005. SHIP down-regulates Fc ϵ R1-induced degranulation at supraoptimal IgE or antigen levels. *J. Immunol.* 174: 507-516.
- Mahon, E.S., et al. 2005. A-Raf associates with and regulates platelet-derived growth factor receptor signalling. *Cell. Signal.* 17: 857-868.
- Ignatiuk, A., et al. 2006. The smaller isoforms of Ankyrin-3 bind to the p85 subunit of phosphatidylinositol 3'-kinase and enhance platelet-derived growth factor receptor downregulation. *J. Biol. Chem.* 281: 5956-5964.
- David, A., et al. 2006. The engagement of activating Fc γ R3 inhibits primate lentivirus replication in human macrophages. *J. Immunol.* 177: 6291-6300.
- Garg, R., et al. 2006. Cutting edge: CD4 is the receptor for the tick saliva immunosuppressor, Salp15. *J. Immunol.* 177: 6579-6583.
- Caparros, E., et al. 2006. DC-SIGN ligation on dendritic cells results in ERK and PI3K activation and modulates cytokine production. *Blood* 107: 3950-3958.
- Lattanzio, R., et al. 2013. Overexpression of activated phospholipase C γ 1 is a risk factor for distant metastases in T1-T2, N0 breast cancer patients undergoing adjuvant chemotherapy. *Int. J. Cancer* 132: 1022-1031.

RESEARCH USE

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


 MONOS
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Try **p-PLC γ 1 (pY783.27): sc-136186**, our highly recommended monoclonal alternative to p-PLC γ 1 (Tyr 783).