

PLC δ 4 (H-250): sc-30063

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 (IP3) and diacylglycerol (DAG) from phosphatidylinositol 4,5-bisphosphate. There are several mammalian PLC proteins, including PLC β 1, PLC β 2, PLC β 3, PLC β 4, PLC γ 1, PLC γ 2, PLC δ 1, PLC δ 3, PLC δ 4 and PLC ϵ . PLC δ 1, a calcium signal amplifier, is activated by an atypical GTP-binding protein and functions as an effector for GTP-binding protein transglutaminase II-mediated oxytocin receptor and α 1B-adrenoreceptor signaling. PLC δ 1 is highly expressed in brain, heart, lung and testis and is abnormally accumulated in autopsied brains with Alzheimer's disease (AD), suggesting that it may play a role in the pathology of AD. Both PLC δ 3 and PLC δ 4 contain several functional domains through which they bind calcium as a cofactor and catalyze the creation of DAG and IP3, playing an essential role in signal transduction. PLC δ 4 is highly expressed in skeletal muscle and kidney tissue, as well as in corneal epithelial cells, suggesting a role in the regulation of kidney and ocular function.

CHROMOSOMAL LOCATION

Genetic locus: PLCD4 (human) mapping to 2q35; Plcd4 (mouse) mapping to 1 C3.

SOURCE

PLC δ 4 (H-250) is a rabbit polyclonal antibody raised against amino acids 1-250 mapping at the N-terminus of PLC δ 4 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.

APPLICATIONS

PLC δ 4 (H-250) is recommended for detection of PLC δ 4 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).

Suitable for use as control antibody for PLC δ 4 siRNA (h): sc-45853, PLC δ 4 siRNA (m): sc-45854, PLC δ 4 shRNA Plasmid (h): sc-45853-SH, PLC δ 4 shRNA Plasmid (m): sc-45854-SH, PLC δ 4 shRNA (h) Lentiviral Particles: sc-45853-V and PLC δ 4 shRNA (m) Lentiviral Particles: sc-45854-V.

Molecular Weight of PLC δ 4: 90 kDa.

Molecular Weight of PLC δ 4 testis specific form: 93 kDa.

Positive Controls: PLC δ 4 (h2): 293T Lysate: sc-173517, rat testis extract: sc-2400 or rat skeletal muscle extract: sc-364810.

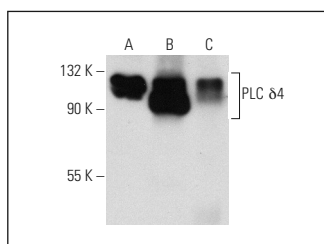
RESEARCH USE

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

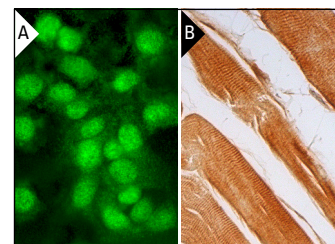
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz[™]: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



PLC δ 4 (H-250): sc-30063. Western blot analysis of PLC δ 4 expression in non-transfected: sc-117752 (A) and human PLC δ 4 transfected: sc-173517 (B) 293T whole cell lysates and rat testis tissue extract (C).



PLC δ 4 (H-250): sc-30063. Immunofluorescence staining of formalin-fixed HepG2 cells showing cytoplasmic and nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human skeletal muscle tissue showing cytoplasmic and nuclear staining of myocytes (B).

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

MONOS
Satisfaction
Guaranteed

Try **PLC δ 4 (B-2): sc-373875**, our highly recommended monoclonal alternative to PLC δ 4 (H-250).