

# PLC $\beta$ 2 (Q-15): sc-206

## 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  $\beta$ s are the only PLC isoforms that are regulated by G protein subunits and are activated by a heterotrimeric GTP-binding protein linked to various cell surface receptors. Two alternatively spliced forms (1,181 and 1,166 amino acids) of PLC  $\beta$ 2 are generated in haematopoietic cells that differ in the carboxyl-terminal sequence implicated in interaction of PLC  $\beta$  enzymes with G $_{\alpha q}$ . The Pleckstrin homology domain of PLC  $\beta$ 2 is required for its targeting to the membrane and for substrate hydrolysis and its linker region exerts an inhibitory effect on basal PLC  $\beta$ 2 activity. PLC  $\beta$ 2 plays a major role in platelet activation and is mainly expressed in the periphery of the islet and acinar cells in rat pancreas.

## CHROMOSOMAL LOCATION

Genetic locus: PLCB2 (human) mapping to 15q15; Plcb2 (mouse) mapping to 2 E5.

## SOURCE

PLC  $\beta$ 2 (Q-15) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of PLC  $\beta$ 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-206 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

PLC  $\beta$ 2 (Q-15) is recommended for detection of PLC  $\beta$ 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), 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  $\beta$ 2 siRNA (h): sc-36270, PLC  $\beta$ 2 siRNA (m): sc-36271, PLC  $\beta$ 2 shRNA Plasmid (h): sc-36270-SH, PLC  $\beta$ 2 shRNA Plasmid (m): sc-36271-SH, PLC  $\beta$ 2 shRNA (h) Lentiviral Particles: sc-36270-V and PLC  $\beta$ 2 shRNA (m) Lentiviral Particles: sc-36271-V.

Molecular Weight of PLC  $\beta$ 2: 140 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211, HeLa whole cell lysate: sc-2200 or Ramos cell lysate: sc-2216.

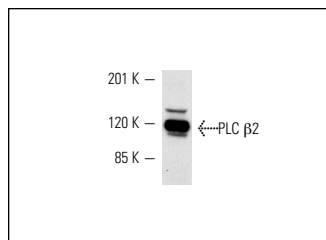
## STORAGE

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

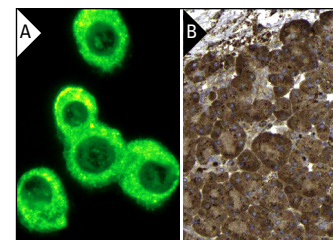
## RESEARCH USE

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

## DATA



PLC  $\beta$ 2 (Q-15): sc-206. Western blot analysis of PLC  $\beta$ 2 expression in RAW 264.7 whole cell lysate.



PLC  $\beta$ 2 (Q-15): sc-206. Immunofluorescence staining of methanol-fixed RAW 264.7 cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of exocrine pancreas and islet cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (B).

## SELECT PRODUCT CITATIONS

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