

# PLC $\eta$ 1 (K-12): sc-103119

## 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. PLC isozymes are divided into subclasses based on structure and activation mechanisms. PLC  $\eta$ 1 (1-phosphatidylinositol-4,5-bisphosphate phosphodiesterase eta-1), also known as Phospholipase C-like protein 3 (PLC-L3) is a 1693 amino acid protein that is closely related to PLC  $\delta$  isozymes. Mostly expressed in brain, PLC  $\eta$ 1 is especially found in areas of the cerebellum, spinal cord and cerebrum. PLC  $\eta$ 1 contains a C2 domain, a PH domain, a PI-PLC X-box domain, a PI-PLC Y-box domain and two EF-hand domains through which it binds calcium to serve as a cofactor. There are four isoforms of PLC  $\eta$ 1 that are produced as a result of alternative splicing events.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: PLCH1 (human) mapping to 3q25.31; Plch1 (mouse) mapping to 3 E1.

## RESEARCH USE

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

## SOURCE

PLC h1 (K-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of PLC 1 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-103119 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

PLC  $\eta$ 1 (K-12) is recommended for detection of PLC  $\eta$ 1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other PLC family members.

Suitable for use as control antibody for PLC  $\eta$ 1 siRNA (h): sc-77989, PLC  $\eta$ 1 siRNA (m): sc-152302, PLC  $\eta$ 1 shRNA Plasmid (h): sc-77989-SH, PLC  $\eta$ 1 shRNA Plasmid (m): sc-152302-SH, PLC  $\eta$ 1 shRNA (h) Lentiviral Particles: sc-77989-V and PLC  $\eta$ 1 shRNA (m) Lentiviral Particles: sc-152302-V.

Molecular Weight of PLC  $\eta$ 1: 189 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.