

# PIPK I $\beta$ (D-19): sc-11778

## BACKGROUND

Phosphatidylinositol-4-phosphate-5-kinase (PIPK) synthesizes phosphatidylinositol-4,5-bisphosphate, which regulates various processes including cell proliferation, survival, membrane trafficking, and cytoskeletal organization. The PIPK family is divided into type I, type II and type III. Each type of the PIPK family phosphorylate distinct substrates and they contain an activation loop, which determines their enzymatic specificity and subcellular targeting. The phosphatidylinositol-4-phosphate-5-kinase type I consists of three members, PIPK I  $\alpha$ ,  $\beta$ , and  $\gamma$ , which are characterized by phosphorylating PI4P on the 5-hydroxyl. PIPK I  $\alpha$  (designated PIPK I  $\beta$  in mouse) is expressed in brain tissue. PIPK I  $\beta$ , designated PIPK I  $\alpha$  in mouse, is also called STM7. PIPK I  $\gamma$  has two variants produced by alternative splicing which are expressed in lung, brain, and kidneys.

## CHROMOSOMAL LOCATION

Genetic locus: PIP5K1B (human) mapping to 9q21.11; Pip5k1b (mouse) mapping to 19 B.

## SOURCE

PIPK I  $\beta$  (D-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PIPK I  $\beta$  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-11778 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

PIPK I  $\beta$  (D-19) is recommended for detection of PIPK I  $\beta$  (designated PIPK I  $\alpha$  in mouse) 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).

PIPK I  $\beta$  (D-19) is also recommended for detection of PIPK I  $\beta$  (designated PIPK I  $\alpha$  in mouse) in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for PIPK I  $\beta$  siRNA (h): sc-39135, PIPK I  $\beta$  siRNA (m): sc-39136, PIPK I  $\beta$  shRNA Plasmid (h): sc-39135-SH, PIPK I  $\beta$  shRNA Plasmid (m): sc-39136-SH, PIPK I  $\beta$  shRNA (h) Lentiviral Particles: sc-39135-V and PIPK I  $\beta$  shRNA (m) Lentiviral Particles: sc-39136-V.

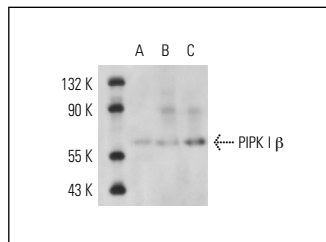
Molecular Weight of PIPK I  $\beta$ : 68 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, mouse brain extract: sc-2253 or mouse testis extract: sc-2405.

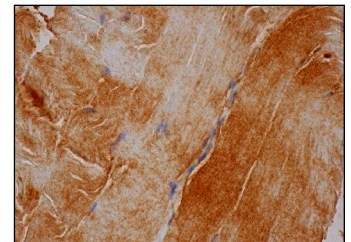
## RECOMMENDED SECONDARY REAGENTS

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™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 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™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



PIPK I  $\beta$  (D-19): sc-11778. Western blot analysis of PIPK I  $\beta$  expression in K-562 whole cell lysate (A) and mouse brain (B) and mouse testis (C) tissue extracts.



PIPK I  $\beta$  (D-19): sc-11778. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skeletal muscle tissue showing cytoplasmic staining of myocytes.

## SELECT PRODUCT CITATIONS

- Halstead, J.R., et al. 2009. Assaying endogenous phosphatidylinositol-4-phosphate 5-kinase (PIP5K) activities. *Methods Mol. Biol.* 462: 391-402.
- Volpicelli-Daley, L.A., et al. 2010. Phosphatidylinositol-4-phosphate 5-kinases and phosphatidylinositol 4,5-bisphosphate synthesis in the brain. *J. Biol. Chem.* 285: 28708-28714.

## 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.


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Try **PIPK I  $\beta$  (F-4): sc-514169**, our highly recommended monoclonal alternative to PIPK I  $\beta$  (D-19).