

# PIPK I $\alpha$ (N-20): sc-11771

## 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 expressed in lung, brain, and kidneys.

## REFERENCES

1. Divecha, N., et al. 1995. The cloning and sequence of the C isoform of PtdIns4P 5-kinase. *Biochem. J.* 309: 715-719.
2. Loijens, J.C., et al. 1996. Type I phosphatidylinositol-4-phosphate 5-kinases are distinct members of this novel lipid kinase family. *J. Biol. Chem.* 271: 32937-32943.

## CHROMOSOMAL LOCATION

Genetic locus: PIP5K1A (human) mapping to 1q21.3.

## SOURCE

PIPK I  $\alpha$  (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of PIPK I  $\alpha$  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-11771 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

PIPK I  $\alpha$  (N-20) is recommended for detection of PIPK I  $\alpha$  of 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PIPK I  $\alpha$  siRNA (h): sc-36232, PIPK I  $\alpha$  shRNA Plasmid (h): sc-36232-SH and PIPK I  $\alpha$  shRNA (h) Lentiviral Particles: sc-36232-V.

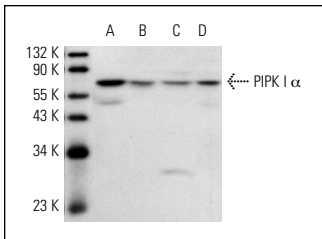
Molecular Weight of PIPK I  $\alpha$ : 68 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, K-562 whole cell lysate: sc-2203 or THP-1 cell lysate: sc-2238.

## 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.

## DATA



PIPK I  $\alpha$  (N-20): sc-11771. Western blot analysis of PIPK I  $\alpha$  expression in HeLa (A), K-562 (B), THP-1 (C) and SK-N-SH (D) whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Galandrini, R., et al. 2005. ARF6: a new player in Fc $\gamma$  RIIIA lymphocyte-mediated cytotoxicity. *Blood* 106: 577-583.
2. Muscolini, M., et al. 2013. Phosphatidylinositol 4-phosphate 5-kinase  $\alpha$  activation critically contributes to CD28-dependent signaling responses. *J. Immunol.* 190: 5279-5286.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.


 MONOS  
Satisfaction  
Guaranteed

Try PIPK I  $\alpha$  (D-12): sc-377021 or PIPK I  $\alpha$  (D-4): sc-515416, our highly recommended monoclonal alternatives to PIPK I  $\alpha$  (N-20).