

PIPK I (E-16): sc-11783

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 phosphorylates distinct substrates. 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 α , β and γ , which are characterized by phosphorylating PI4P on the 5-hydroxyl. PIPK I α , designated PIPK I β in mouse, is expressed in brain tissue. PIPK I β , designated PIPK I α in mouse, is also called STM7. PIPK I γ has two variants produced by alternative splicing which are 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. and Anderson, R.A. 1996. Type I phosphatidylinositol-4-phosphate-5-kinases are distinct members of this novel lipid kinase family. *J. Biol. Chem.* 271: 32937-32943.
3. Ishihara, H., et al. 1998. Type I phosphatidylinositol-4-phosphate-5-kinases. Cloning of the third isoform and deletion/substitution analysis of members of this novel lipid kinase family. *J. Biol. Chem.* 273: 8741-8748.

CHROMOSOMAL LOCATION

Genetic locus: PIP5K1C (human) mapping to 19p13.3; Pip5k1c (mouse) mapping to 10 C1.

SOURCE

PIPK I (E-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of PIPK I γ 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.

Blocking peptide available for competition studies, sc-11783 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PIPK I (E-16) is recommended for detection of PIPK I α , β and γ 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

PIPK I (E-16) is also recommended for detection of PIPK I α , β and γ in additional species, including equine, canine, bovine, porcine and avian.

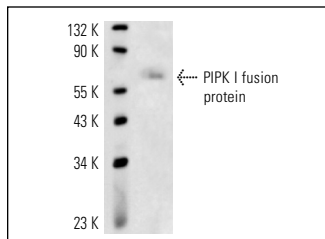
Molecular Weight of PIPK I: 68 kDa.

Positive Controls: mouse brain extract: sc-2253 or rat testis extract: sc-2400.

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 (E-16): sc-11783. Western blot analysis of human recombinant PIPK I.

SELECT PRODUCT CITATIONS

1. Hong, K.U., et al. 2007. Functional importance of the anaphase-promoting complex-Cdh1-mediated degradation of TMAP/CKAP2 in regulation of spindle function and cytokinesis. *Mol. Cell. Biol.* 27: 3667-3681.
2. Barrero-Villar, M., et al. 2008. PI4P5-kinase α is required for efficient HIV-1 entry and infection of T cells. *J. Immunol.* 181: 6882-6888.

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 or our catalog for detailed protocols and support products.



Try **PIPK I (D-12): sc-365238** or **PIPK I α (D-12): sc-377021**, our highly recommended monoclonal alternatives to PIPK I (E-16).