SANTA CRUZ BIOTECHNOLOGY, INC.

PIPK I α (C-17): sc-11774

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

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 phosphatidy- linositol-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 expressed in lung, brain, and kidneys.

CHROMOSOMAL LOCATION

Genetic locus: PIP5K1A (human) mapping to 1q21.3; Pip5k1a (mouse) mapping to 3 F2.1.

SOURCE

PIPK I α (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of PIPK I α of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-11774 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PIPK I α (C-17) is recommended for detection of all PIPK I α isoforms (designated PIPK I β in mouse) of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 PIPK I α siRNA (h): sc-36232, PIPK I α siRNA (m): sc-36233, PIPK I α shRNA Plasmid (h): sc-36232-SH, PIPK I α shRNA Plasmid (m): sc-36233-SH, PIPK I α shRNA (h) Lentiviral Particles: sc-36232-V and PIPK I α shRNA (m) Lentiviral Particles: sc-36233-V.

Molecular Weight of PIPK I α: 68 kDa.

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

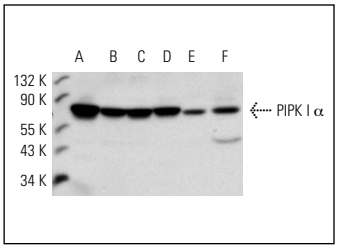
STORAGE

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

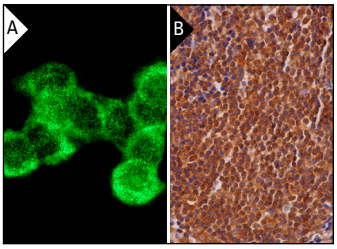
RESEARCH USE

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

DATA



PIPK I α (C-17): sc-11774. Western blot analysis of PIPK I α expression in HeLa (**A**), K-562 (**B**), THP-1 (**C**), SK-N-SH (**D**) and NIH/3T3 (**E**) whole cell lysates and mouse brain extract (**E**).



PIPK I α (C-17): sc-11774. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic staining (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing cytoplasmic and nuclear staining of cells in germinal and non-germinal centers (**B**).

SELECT PRODUCT CITATIONS

1. Galandrini, R., et al. 2005. ARF6: a new player in Fcγ RIIIA lymphocyte-mediated cytotoxicity. Blood 106: 577-583.
2. Micucci, F., et al. 2008. PI5KI-dependent signals are critical regulators of the cytolytic secretory pathway. Blood 111: 4165-4172.
3. Barrero-Villar, M., et al. 2008. PI4P5-kinase I α is required for efficient HIV-1 entry and infection of T cells. J. Immunol. 181: 6882-6888.
4. 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.
5. Muscolini, M., et al. 2013. Phosphatidylinositol 4-phosphate 5-kinase α activation critically contributes to CD28-dependent signaling responses. J. Immunol. 190: 5279-5286.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.