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- Gefahrgutzuschlag
- Expressversand

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# PIPK I $\alpha$ (m): 293T Lysate: sc-122588

## 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.
3. Tolias, K.F., et al. 1998. Type I phosphatidylinositol-4-phosphate 5-kinases synthesize the novel lipids phosphatidylinositol 3,5-bisphosphate and phosphatidylinositol 5-phosphate. *J. Biol. Chem.* 273: 18040-18046.
4. Rao, V.D., et al. 1998. Structure of Type II  $\beta$  phosphatidylinositol phosphate kinase: a protein kinase fold flattened for interfacial phosphorylation. *Cell* 94: 829-839.
5. 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.
6. Kunz, J., et al. 2000. The activation loop of phosphatidylinositol phosphate kinases determines signaling specificity. *Mol. Cell* 5: 1-11.
7. Itoh, T., et al. 2000. Autophosphorylation of type I phosphatidylinositol phosphate kinase regulates its lipid kinase activity. *J. Biol. Chem.* 275: 19389-19394.

## CHROMOSOMAL LOCATION

Genetic locus: Pip5k1a (mouse) mapping to 3 F2.1.

## PRODUCT

PIPK I  $\alpha$  (m): 293T Lysate represents a lysate of mouse PIPK I  $\alpha$  transfected 293T cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

## STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## RESEARCH USE

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

## APPLICATIONS

PIPK I  $\alpha$  (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive PIPK I  $\alpha$  antibodies. Recommended use: 10-20  $\mu$ l per lane.

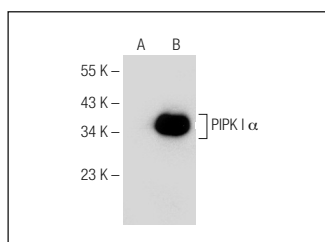
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

PIPK I  $\alpha$  (E-3): sc-376195 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse PIPK I  $\alpha$  expression in PIPK I  $\alpha$  transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:  
1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

## DATA



PIPK I  $\alpha$  (E-3): sc-376195. Western blot analysis of PIPK I  $\alpha$  expression in non-transfected: sc-117752 (A) and mouse PIPK I  $\alpha$  transfected: sc-122588 (B) 293T whole cell lysates.

## PROTOCOLS

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