SANTA CRUZ BIOTECHNOLOGY, INC.

INPP5F (A-6): sc-514657

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Inositol and phosphatidylinositol phosphates are important for numerous cellular processes, including neuronal survival and signal transductions from growth factors, neurotransmitters and G protein-coupled receptors. INPP5F (inositol polyphosphate 5-phosphatase F), also known as phosphatidylinositide phosphatase SAC2, is a 1,132 amino acid protein that exhibits 5-phosphatase activity specific for phosphatidylinositol 4,5-bisphosphate and phosphatidylinositol 3,4,5-triphosphate. INPP5F also modulates the Akt/GSK-3 pathway by decreasing Akt and GSK-3β phosphorylation. Containing one SAC domain, INPP5F is ubiquitously expressed, but especially abundant in brain, heart, skeletal muscle and kidney. Inositol polyphosphate 5-phosphatases usually have two conserved motifs that are essential for 5-phosphatase activity. However, INPP5F does not contain such motifs and phosphatase activity seems to exist in the SAC domain, suggesting a new type of phosphoinositide 5-phosphatase.

REFERENCES

1. Mochizuki, Y. and Takenawa, T. 1999. Novel inositol polyphosphate 5-phosphatase localizes at membrane ruffles. J. Biol. Chem. 274: 36790-36795.
2. Minagawa, T., et al. 2001. Identification and characterization of a sac domain-containing phosphoinositide 5-phosphatase. J. Biol. Chem. 276: 22011-22015.
3. Choi, J.D., et al. 2005. A novel variant of INPP5F is imprinted in brain, and its expression is correlated with differential methylation of an internal CpG island. Mol. Cell. Biol. 25: 5514-5522.
4. Astle, M.V., et al. 2006. Regulation of phosphoinositide signaling by the inositol polyphosphate 5-phosphatases. IUBMB Life 58: 451-456.

CHROMOSOMAL LOCATION

Genetic locus: INPP5F (human) mapping to 10q26.11; Inpp5f (mouse) mapping to 7 F3.

SOURCE

INPP5F (A-6) is a mouse monoclonal antibody raised against amino acids 1-145 mapping at the N-terminus of INPP5F of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

INPP5F (A-6) is available conjugated to agarose (sc-514657 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514657 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514657 PE), fluorescein (sc-514657 FITC), Alexa Fluor® 488 (sc-514657 AF488), Alexa Fluor® 546 (sc-514657 AF546), Alexa Fluor® 594 (sc-514657 AF594) or Alexa Fluor® 647 (sc-514657 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514657 AF680) or Alexa Fluor® 790 (sc-514657 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

INPP5F (A-6) is recommended for detection of INPP5F of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for INPP5F siRNA (h): sc-90442, INPP5F siRNA (m): sc-146242, INPP5F shRNA Plasmid (h): sc-90442-SH, INPP5F shRNA Plasmid (m): sc-146242-SH, INPP5F shRNA (h) Lentiviral Particles: sc-90442-V and INPP5F shRNA (m) Lentiviral Particles: sc-146242-V.

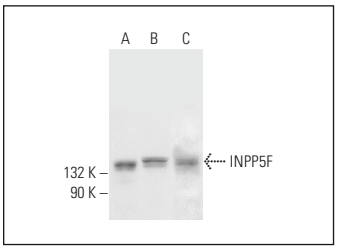
Molecular Weight of INPP5F isoforms 1/2/3: 128/44/25 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, WiDr cell lysate: sc-24779 or Jurkat whole cell lysate: sc-2204.

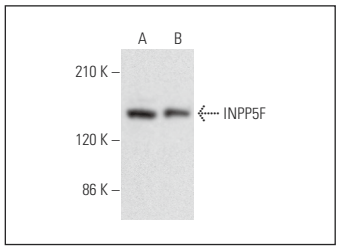
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



INPP5F (A-6): sc-514657. Western blot analysis of INPP5F expression in HeLa (**A**), WiDr (**B**) and Jurkat (**C**) whole cell lysates.



INPP5F (A-6): sc-514657. Western blot analysis of INPP5F expression in HeLa (**A**) and IMR-32 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Yuan, Y., et al. 2017. Palmatine attenuates isoproterenol-induced pathological hypertrophy via selectively inhibiting HDAC2 in rats. Int. J. Immunopathol. Pharmacol. 30: 406-412.

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.