

INPP5F (S-12): sc-138354

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-3 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

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2. Minagawa, T., Ijuin, T., Mochizuki, Y. and Takenawa, T. 2001. Identification and characterization of a sac domain-containing phosphoinositide 5-phosphatase. *J. Biol. Chem.* 276: 22011-22015.
3. Choi, J.D., Underkoffler, L.A., Wood, A.J., Collins, J.N., Williams, P.T., Golden, J.A., Schuster, E.F., Loomes, K.M. and Oakey, R.J. 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., Seaton, G., Davies, E.M., Fedele, C.G., Rahman, P., Arsalan, L. and Mitchell, C.A. 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 (S-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of INPP5F 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-138354 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

INPP5F (S-12) is recommended for detection of INPP5F isoforms 1-3 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with INPP5B or INPP5E.

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.

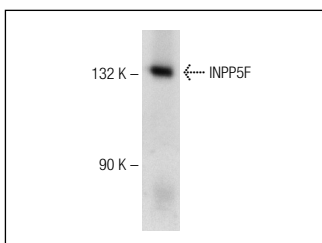
Molecular Weight of INPP5F isoforms 1/2/3: 128/44/25 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409.

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



INPP5F (S-12): sc-138354. Western blot analysis of INPP5F expression in IMR-32 whole cell lysate.

RESEARCH USE

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

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Try **INPP5F (A-6): sc-514657**, our highly recommended monoclonal alternative to INPP5F (S-12).