

INPP1 (K-16): sc-107640

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. INPP1 (inositol polyphosphate 1-phosphatase) is a 399 amino acid protein that is ubiquitously expressed, with highest levels in pancreas and kidney. Belonging to the inositol monophosphatase family, INPP1 is involved in the phosphatidylinositol signaling pathway. INPP1 removes the phosphate group at position one of the inositol ring from the polyphosphates inositol 1,4-bisphosphate and inositol 1,3,4-trisphosphate. It is suggested that overexpressed INPP1 reduces ANP (atrial natriuretic peptide) and MLC2 (myosin light chain 2) responses associated with contraction-induced hypertrophy. Defects of INPP1 may be associated with autism and manic-depressive illness.

REFERENCES

- Okabe, I. and Nussbaum, R.L. 1995. Identification and chromosomal mapping of the mouse inositol polyphosphate 1-phosphatase gene. *Genomics* 30: 358-360.
- Steen, V.M., et al. 1998. The polymorphic inositol polyphosphate 1-phosphatase gene as a candidate for pharmacogenetic prediction of lithium-responsive manic-depressive illness. *Pharmacogenetics* 8: 259-268.
- Lovlie, R., et al. 1999. Genomic structure and sequence analysis of a human inositol polyphosphate 1-phosphatase gene (INPP1). *Pharmacogenetics* 9: 517-528.
- Li, S.R., et al. 2000. Transcription of the inositol polyphosphate 1-phosphatase gene (INPP1) is upregulated in human colorectal cancer. *Mol. Carcinog.* 27: 322-329.
- Woodcock, E.A., et al. 2002. Inositol polyphosphate 1-phosphatase is a novel antihypertrophic factor. *J. Biol. Chem.* 277: 22734-22742.
- Serretti, A. 2002. Lithium long-term treatment in mood disorders: clinical and genetic predictors. *Pharmacogenomics* 3: 117-129.

CHROMOSOMAL LOCATION

Genetic locus: INPP1 (human) mapping to 2q32.2; Inpp1 (mouse) mapping to 1 C1.1.

SOURCE

INPP1 (K-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of INPP1 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-107640 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

INPP1 (K-16) is recommended for detection of INPP1 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).

INPP1 (K-16) is also recommended for detection of INPP1 in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for INPP1 siRNA (h): sc-94459, INPP1 siRNA (m): sc-146240, INPP1 shRNA Plasmid (h): sc-94459-SH, INPP1 shRNA Plasmid (m): sc-146240-SH, INPP1 shRNA (h) Lentiviral Particles: sc-94459-V and INPP1 shRNA (m) Lentiviral Particles: sc-146240-V.

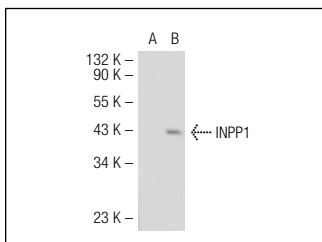
Molecular Weight of INPP1: 44 kDa.

Positive Controls: INPP1 (h2): 293 Lysate: sc-112783.

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



INPP1 (K-16): sc-107640. Western blot analysis of INPP1 expression in non-transfected: sc-110760 (A) and human INPP1 transfected: sc-112783 (B) 293 whole cell lysates.

RESEARCH USE

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



Try **INPP1 (F-9): sc-393584** or **INPP1 (F-8): sc-271687**, our highly recommended monoclonal alternatives to INPP1 (K-16).