



INPP5J siRNA (h): sc-76130

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. INPP5J (inositol polyphosphate-5-phosphatase J), also known as phosphatidylinositol 4,5-bisphosphate 5-phosphatase A, PIPP (proline-rich inositol polyphosphate 5-phosphatase), PIB5PA or INPP5, is a 1,006 amino acid cytoplasmic protein that assists in the conversion of inositol 1,4-bisphosphate from inositol 1,4,5-trisphosphate. Expressed in lung, stomach, kidney, brain, small intestine and heart, INPP5J localizes to membrane ruffles, where it may also participate in modulating inositol and phosphatidylinositol polyphosphate-binding proteins. Encoded by a gene located on human chromosome 22, INPP5J undergoes alternative splicing to produce three isoforms.

REFERENCES

1. Mochizuki, Y. and Takenawa, T. 1999. Novel inositol polyphosphate 5-phosphatase localizes at membrane ruffles. *J. Biol. Chem.* 274: 36790-36795.
2. Krämer, J., et al. 1999. A novel isoform of the smooth muscle cell differentiation marker smoothelin. *J. Mol. Med.* 77: 294-298.
3. Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 606481. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Astle, M.V., et al. 2006. Regulation of phosphoinositide signaling by the inositol polyphosphate 5-phosphatases. *IUBMB Life* 58: 451-456.
5. Ooms, L.M., et al. 2006. The inositol polyphosphate 5-phosphatase, PIPP, is a novel regulator of phosphoinositide 3-kinase-dependent neurite elongation. *Mol. Biol. Cell* 17: 607-622.

CHROMOSOMAL LOCATION

Genetic locus: INPP5J (human) mapping to 22q12.2.

PRODUCT

INPP5J siRNA (h) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see INPP5J shRNA Plasmid (h): sc-76130-SH and INPP5J shRNA (h) Lentiviral Particles: sc-76130-V as alternate gene silencing products.

For independent verification of INPP5J (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-76130A, sc-76130B and sc-76130C.

RESEARCH USE

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

PROTOCOLS

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

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

INPP5J siRNA (h) is recommended for the inhibition of INPP5J expression in human cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 μ M in 66 μ l. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor INPP5J gene expression knockdown using RT-PCR Primer: INPP5J (h)-PR: sc-76130-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.