

INSC siRNA (m): sc-146243

BACKGROUND

INSC (protein inscuteable homolog) is a 579 amino acid protein that interacts with PAR-3, AGS3, nucleobindin and PARD3B. INSC may function as an adapter linking the Par3 complex to the AGS3/nucleobindin complex. Involved in spindle orientation during mitosis, INSC may also regulate differentiation and cell proliferation in the developing nervous system, play a role in the asymmetric division of fibroblasts and participate in the process of stratification of the squamous epithelium. Localized to the cytoplasm, INSC is expressed in fetal cochlea and exists as five isoforms due to alternative splicing events. Isoform 1 is expressed in various tissues, with stronger expression in liver, kidney and small intestine, while isoform 2 is abundantly expressed in small intestine, with lower levels in lung and pancreas.

REFERENCES

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2. Katoh, M., et al. 2003. Identification and characterization of human inscuteable gene in silico. *Int. J. Mol. Med.* 11: 111-116.
3. Zigman, M., et al. 2005. Mammalian inscuteable regulates spindle orientation and cell fate in the developing retina. *Neuron.* 48: 539-545.
4. Izaki, T., et al. 2006. Two forms of human inscuteable-related protein that links Par3 to the Pins homologues LGN and AGS3. *Biochem. Biophys. Res. Commun.* 341: 1001-1006.
5. Online Mendelian Inheritance in Man, OMIM[™]. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 610668. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Vural, A., et al. 2010. Distribution of activator of G-protein signaling 3 within the aggresomal pathway: role of specific residues in the tetratricopeptide repeat domain and differential regulation by the AGS3 binding partners G β_1 and mammalian inscuteable. *Mol. Cell. Biol.* 30: 1528-1540.

CHROMOSOMAL LOCATION

Genetic locus: Insc (mouse) mapping to 7 F1.

PRODUCT

INSC siRNA (m) 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 INSC shRNA Plasmid (m): sc-146243-SH and INSC shRNA (m) Lentiviral Particles: sc-146243-V as alternate gene silencing products.

For independent verification of INSC (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-146243A, sc-146243B and sc-146243C.

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

INSC siRNA (m) is recommended for the inhibition of INSC expression in mouse 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.

GENE EXPRESSION MONITORING

INSC (G-6): sc-514398 is recommended as a control antibody for monitoring of INSC gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor INSC gene expression knockdown using RT-PCR Primer: INSC (m)-PR: sc-146243-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

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