

Pinin siRNA (m): sc-76143

BACKGROUND

Pinin is a desmosomal associated protein involved with the maintenance of cell to cell adhesion of the epithelium. Pinin is a widespread protein and has been shown to play an important role in cell adhesion through its interaction with nuclear complexes. Pinin is also involved in pre-mRNA splicing through its interactions with a C-terminal RS domain of Cyclophilin G, a Moca type nuclear cyclophilin. Pinin becomes nuclear during the early stages of embryonic development and remains so throughout the entire period. Defects or lack of Pinin can be lethal at perinatal stages and causes defects in the cardiac outflow tract, axial skeleton, palate and dorsal dermis.

REFERENCES

1. Ouyang, P. and Sugrue, S.P. 1996. Characterization of Pinin, a novel protein associated with the desmosome-intermediate filament complex. *J. Cell Biol.* 135: 1027-1042.
2. Brandner, J.M., Reidenbach, S. and Franke, W.W. 1997. Evidence that "Pinin", reportedly a differentiation-specific desmosomal protein, is actually a widespread nuclear protein. *Differentiation* 62: 119-127.
3. Ouyang, P. 1999. Antibodies differentiate desmosome-form and nucleus-form Pinin: evidence that Pinin is a moonlighting protein with dual location at the desmosome and within the nucleus. *Biochem. Biophys. Res. Commun.* 263: 192-200.
4. Shi, Y., Tabesh, M. and Sugrue, S.P. 2000. Role of cell adhesion-associated protein, Pinin (DRS/memA), in corneal epithelial migration. *Invest. Ophthalmol. Vis. Sci.* 41: 1337-1345.
5. Shi, Y., Ouyang, P. and Sugrue, S.P. 2000. Characterization of the gene encoding Pinin/DRS/memA and evidence for its potential tumor suppressor function. *Oncogene* 19: 289-297.
6. Joo, J.H., Alpatov, R., Munguba, G.C., Jackson, M.R., Hunt, M.E. and Sugrue, S.P. 2005. Reduction of PNN by RNAi induces loss of cell-cell adhesion between human corneal epithelial cells. *Mol. Vis.* 11: 133-142.
7. Leu, S. and Ouyang, P. 2006. Spatial and temporal expression profile of Pinin during mouse development. *Gene Expr. Patterns* 6: 620-631.

CHROMOSOMAL LOCATION

Genetic locus: Pnn (mouse) mapping to 12 C1.

PRODUCT

Pinin 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 Pinin shRNA Plasmid (m): sc-76143-SH and Pinin shRNA (m) Lentiviral Particles: sc-76143-V as alternate gene silencing products.

For independent verification of Pinin (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-76143A, sc-76143B and sc-76143C.

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

Pinin siRNA (m) is recommended for the inhibition of Pinin 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

Pinin (4FQ): sc-101127 is recommended as a control antibody for monitoring of Pinin 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 MarkerTM 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 Pinin gene expression knockdown using RT-PCR Primer: Pinin (m)-PR: sc-76143-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.

PROTOCOLS

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