



Layilin siRNA (h): sc-60923

BACKGROUND

The Actin cytoskeleton is crucial for cell shape and motility. The interactions between the cell membrane and actin filaments are important for many cellular processes. Layilin is a widely expressed integral membrane hyaluronan receptor that interacts with the ERM protein family of cytoskeletal membrane linker molecule members, including talin, ezrin, moesin, and radixin. Layilin plays an important role in cell adhesion and motility. Layilin is important for the maintenance of the cortical structure in the cell because it mediates signals from the extracellular matrix to the cytoskeleton. In spreading cells, Layilin acts as a membrane-binding site for talin in the peripheral ruffles, and it may play a role in the migration of cells to a wound site.

REFERENCES

1. Hirao, M., et al. 1996. Regulation mechanism of ERM (ezrin/radixin/moesin) protein/plasma membrane association: possible involvement of phosphatidylinositol turnover and Rho-dependent signaling pathway. *J. Cell Biol.* 135: 37-51.
2. Borowsky, M.L., et al. 1998. Layilin, a novel talin-binding transmembrane protein homologous with C-type lectins, is localized in membrane ruffles. *J. Cell Biol.* 143: 429-442.
3. Bono, P., et al. 2001. Layilin, a novel integral membrane protein, is a hyaluronan receptor. *Mol. Biol. Cell* 12: 891-900.
4. Weng, L., et al. 2002. Molecular cloning and characterization of human chondrolectin, a novel type I transmembrane protein homologous to C-type lectins. *Genomics* 80: 62-70.
5. Weng, L., et al. 2003. Isolation and characterization of chondrolectin (Chodl), a novel C-type lectin predominantly expressed in muscle cells. *Gene* 308: 21-29.
6. Bono, P., et al. 2005. Layilin, a cell surface hyaluronan receptor, interacts with merlin and radixin. *Exp. Cell Res.* 308: 177-187.

CHROMOSOMAL LOCATION

Genetic locus: LAYN (human) mapping to 11q23.1.

PRODUCT

Layilin 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 Layilin shRNA Plasmid (h): sc-60923-SH and Layilin shRNA (h) Lentiviral Particles: sc-60923-V as alternate gene silencing products.

For independent verification of Layilin (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-60923A, sc-60923B and sc-60923C.

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

Layilin siRNA (h) is recommended for the inhibition of Layilin 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.

GENE EXPRESSION MONITORING

Layilin (C-7): sc-377389 is recommended as a control antibody for monitoring of Layilin 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 Layilin gene expression knockdown using RT-PCR Primer: Layilin (h)-PR: sc-60923-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.