



DCHS1 siRNA (m): sc-142896

BACKGROUND

The cadherins are a family of Ca^{2+} -dependent adhesion molecules that function to mediate cell-cell binding critical to the maintenance of structure and morphogenesis. Cadherins each contain a large extracellular domain at the N-terminus, which is characterized by a series of five homologous repeats, the most distal of which is thought to be responsible for binding specificity. DCHS1 (dachous 1), also known as CDH19, CDH25, FIB1, KIAA1773 or PCDH16, is a 3,298 amino acid single-pass type I membrane protein that contains 27 cadherin domains and belongs to the cadherin superfamily. Expressed specifically in fibroblasts, DCHS1 functions as a Ca^{2+} -dependent cell-cell (specifically fibroblast-fibroblast) adhesion protein that may be involved in wound healing. The gene encoding DCHS1 maps to human chromosome 11, which houses over 1,400 genes and comprises nearly 4% of the human genome.

REFERENCES

1. Matsuyoshi, N., et al. 1997. Multiple cadherins are expressed in human fibroblasts. *Biochem. Biophys. Res. Commun.* 235: 355-358.
2. Matsuyoshi, N., et al. 1997. Identification of novel cadherins expressed in human melanoma cells. *J. Invest. Dermatol.* 108: 908-913.
3. Nollet, F., et al. 2000. Phylogenetic analysis of the cadherin superfamily allows identification of six major subfamilies besides several solitary members. *J. Mol. Biol.* 299: 551-572.
4. Nakajima, D., et al. 2001. Identification of three novel non-classical cadherin genes through comprehensive analysis of large cDNAs. *Brain Res. Mol. Brain Res.* 94: 85-95.
5. Junghans, D., et al. 2005. Mammalian cadherins and protocadherins: about cell death, synapses and processing. *Curr. Opin. Cell Biol.* 17: 446-452.

CHROMOSOMAL LOCATION

Genetic locus: Dchs1 (mouse) mapping to 7 E3.

PRODUCT

DCHS1 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 μM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see DCHS1 shRNA Plasmid (m): sc-142896-SH and DCHS1 shRNA (m) Lentiviral Particles: sc-142896-V as alternate gene silencing products.

For independent verification of DCHS1 (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-142896A, sc-142896B and sc-142896C.

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

APPLICATIONS

DCHS1 siRNA (m) is recommended for the inhibition of DCHS1 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 μM in 66 μl . 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 DCHS1 gene expression knockdown using RT-PCR Primer: DCHS1 (m)-PR: sc-142896-PR (20 μl). Annealing temperature for the primers should be $55-60^{\circ}\text{C}$ and the extension temperature should be $68-72^{\circ}\text{C}$.