SANTA CRUZ BIOTECHNOLOGY, INC.

DCHS2 siRNA (h): sc-88994

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. DCHS2 (dachsous 2), also known as CDH27, CDHJ, PCDH23, PCDHJ or FLJ20047, is a 2,916 amino acid single-pass membrane protein that contains 22 cadherin domains and belongs to the cadherin superfamily. DCHS2 is present at high levels in cerebral cortex and testis and is expressed as three isoforms produced by alternative splicing events. The gene that encodes DCHS2 maps to human chromosome 4q31.3, which represents approximately 6% of the human genome and contains nearly 900 genes.

REFERENCES

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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. Höng, J.C., et al. 2004. Identification of new human cadherin genes using a combination of protein motif search and gene finding methods. J. Mol. Biol. 337: 307-317.
6. Junghans, D., et al. 2005. Mammalian cadherins and protocadherins: about cell death, synapses and processing. Curr. Opin. Cell Biol. 17: 446-452.
7. Kimura, K., et al. 2006. Diversification of transcriptional modulation: large-scale identification and characterization of putative alternative promoters of human genes. Genome Res. 16: 55-65.

CHROMOSOMAL LOCATION

Genetic locus: DCHS2 (human) mapping to 4q31.3.

PRODUCT

DCHS2 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see DCHS2 shRNA Plasmid (h): sc-88994-SH and DCHS2 shRNA (h) Lentiviral Particles: sc-88994-V as alternate gene silencing products.

For independent verification of DCHS2 (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-88994A, sc-88994B and sc-88994C.

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

DCHS2 siRNA (h) is recommended for the inhibition of DCHS2 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 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 DCHS2 gene expression knockdown using RT-PCR Primer: DCHS2 (h)-PR: sc-88994-PR (20 µl). 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.