SANTA CRUZ BIOTECHNOLOGY, INC.

cadherin-19 siRNA (m): sc-141972

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. Cadherin-19, also known as CDH19, CDH7 or CDH7L2, is a 772 amino acid single-pass type I membrane protein that contains five cadherin domains. Expressed in a variety of tissues, cadherin-19 functions as a Ca^{2+}-dependent cell-cell adhesion glycoprotein that is thought to be involved in the sorting of heterogeneous cell types. The gene encoding cadherin-19 maps to a cadherin cluster on human chromosome 18, a chromosome which houses over 300 protein-coding genes and contains nearly 76 million bases.

REFERENCES

1. Kremmidiotis, G., et al. 1998. Localization of human cadherin genes to chromosome regions exhibiting cancer-related loss of heterozygosity. Genomics 49: 467-471.
2. Shimoyama, Y., et al. 2000. Identification of three human type-II classic cadherins and frequent heterophilic interactions between different subclasses of type-II classic cadherins. Biochem. J. 349: 159-167.
3. Kools, P.,et al. 2000. Characterization of three novel human cadherin genes (CDH7, CDH19, and CDH20) clustered on chromosome 18q22-q23 and with high homology to chicken cadherin-7. Genomics 68: 283-295.
4. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 603016. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Hajra, K.M., et al. 2002. Cadherin and catenin alterations in human cancer. Genes Chromosomes Cancer 34: 255-268.
6. Takahashi, M., et al. 2005. Identification of a novel type II classical cadherin: rat cadherin19 is expressed in the cranial ganglia and Schwann cell precursors during development. Dev. Dyn. 232: 200-208.

CHROMOSOMAL LOCATION

Genetic locus: Cdh19 (mouse) mapping to 1 E2.1.

PRODUCT

cadherin-19 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 cadherin-19 shRNA Plasmid (m): sc-141972-SH and cadherin-19 shRNA (m) Lentiviral Particles: sc-141972-V as alternate gene silencing products.

For independent verification of cadherin-19 (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-141972A, sc-141972B and sc-141972C.

RESEARCH USE

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

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

cadherin-19 siRNA (m) is recommended for the inhibition of cadherin-19 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 cadherin-19 gene expression knockdown using RT-PCR Primer: cadherin-19 (m)-PR: sc-141972-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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