SANTA CRUZ BIOTECHNOLOGY, INC.

CDH20 siRNA (m): sc-142223

BACKGROUND

The cadherins are a family of calcium-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. CDH20 (cadherin 20, type 2), also known as Cdh7 or CDH7L3, is an 801 amino acid single-pass type I membrane protein that contains five cadherin domains and belongs to the cadherin superfamily. Expressed in both adult and fetal brain, as well as in placenta, CDH20 functions as a calcium-dependent cell adhesion protein that is thought to participate in the sorting of heterogeneous cell types.

REFERENCES

1. Pouliot, Y. 1992. Phylogenetic analysis of the cadherin superfamily. Bioessays 14: 743-748.
2. 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.
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. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 605807. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Moore, R., et al. 2004. Involvement of cadherins 7 and 20 in mouse embryogenesis and melanocyte transformation. Oncogene 23: 6726-6735.
6. Junghans, D., et al. 2005. Mammalian cadherins and protocadherins: about cell death, synapses and processing. Curr. Opin. Cell Biol. 17: 446-452.
7. Wiech, T., et al. 2009. Genome-wide analysis of genetic alterations in Barrett's adenocarcinoma using single nucleotide polymorphism arrays. Lab. Invest. 89: 385-397.

CHROMOSOMAL LOCATION

Genetic locus: Cdh20 (mouse) mapping to 1 E2.1.

PRODUCT

CDH20 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 CDH20 shRNA Plasmid (m): sc-142223-SH and CDH20 shRNA (m) Lentiviral Particles: sc-142223-V as alternate gene silencing products.

For independent verification of CDH20 (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-142223A, sc-142223B and sc-142223C.

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

CDH20 siRNA (m) is recommended for the inhibition of CDH20 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 CDH20 gene expression knockdown using RT-PCR Primer: CDH20 (m)-PR: sc-142223-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.