SANTA CRUZ BIOTECHNOLOGY, INC.

cadherin-20 siRNA (m): sc-62053

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-20, also known as protocadherin γ B4, is a member of the protocadherin γ gene cluster. Expressed primariy in fibroblasts, cadherin-20 plays a critical role in neuronal cell-cell connections in the brain. Through its ability to mediate cell-cell adhesion, caderin-20 is thought to help the body respond to injury by regulating post-traumatic wound healing.

REFERENCES

1. 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.
2. Wang, X., et al. 2002. Molecular mechanisms governing Pcdh-γ gene expression: evidence for a multiple promoter and *cis*-alternative splicing model. Genes Dev. 16: 1890-1905.
3. Moore, R., et al. 2004. Involvement of cadherins 7 and 20 in mouse embryogenesis and melanocyte transformation. Oncogene 23: 6726-6735.
4. Weiner, J.A., et al. 2005. γ protocadherins are required for synaptic development in the spinal cord. Proc. Natl. Acad. Sci. USA 102: 8-14.
5. Junghans, D., et al. 2005. Mammalian cadherins and protocadherins: about cell death, synapses and processing. Curr. Opin. Cell Biol. 17: 446-452.
6. Reiss, K., et al. 2006. Regulated ADAM10-dependent ectodomain shedding of γ-protocadherin C3 modulates cell-cell adhesion. J. Biol. Chem. 281: 21735-21744.
7. Sjöblom, T., et al. 2006. The consensus coding sequences of human breast and colorectal cancers. Science 314: 268-274.

CHROMOSOMAL LOCATION

Genetic locus: Pcdhgb4 (mouse) mapping to 18 B3.

PRODUCT

cadherin-20 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-20 shRNA Plasmid (m): sc-62053-SH and cadherin-20 shRNA (m) Lentiviral Particles: sc-62053-V as alternate gene silencing products.

For independent verification of cadherin-20 (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-62053A, sc-62053B and sc-62053C.

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

cadherin-20 siRNA (m) is recommended for the inhibition of cadherin-20 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-20 gene expression knockdown using RT-PCR Primer: cadherin-20 (m)-PR: sc-62053-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.