



cadherin-20 siRNA (h): sc-62052

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 primarily in fibroblasts, cadherin-20 plays a critical role in neuronal cell-cell connections in the brain. Through its ability to mediate cell-cell adhesion, cadherin-20 is thought to help the body respond to injury by regulating post-traumatic wound healing.

REFERENCES

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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 (human) mapping to 5q31.3.

PRODUCT

cadherin-20 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 cadherin-20 shRNA Plasmid (h): sc-62052-SH and cadherin-20 shRNA (h) Lentiviral Particles: sc-62052-V as alternate gene silencing products.

For independent verification of cadherin-20 (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-62052A, sc-62052B and sc-62052C.

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-20 siRNA (h) is recommended for the inhibition of cadherin-20 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 cadherin-20 gene expression knockdown using RT-PCR Primer: cadherin-20 (h)-PR: sc-62052-PR (20 μl). Annealing temperature for the primers should be $55-60^{\circ}\text{C}$ and the extension temperature should be $68-72^{\circ}\text{C}$.

PROTOCOLS

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