



cadherin-29 siRNA (h): sc-78524

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-29, also known as cadherin-related family member 4, is a 788 amino acid single-pass type I membrane protein that has four cadherin domains. There are two isoforms of cadherin-29 that are produced as a result of alternative splicing events. The gene encoding cadherin-29 maps to human chromosome 3, which is made up of about 214 million bases encoding over 1,100 genes. Notably, there is a chemokine receptor gene cluster and a variety of human cancer related loci on chromosome 3. Particular regions of the chromosome 3 short arm are deleted in many types of cancer cells.

REFERENCES

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2. Gumbiner, B.M., et al. 1993. Catenins as mediators of the cytoplasmic functions of cadherins. *J. Cell Sci. Suppl.* 17: 155-158.
3. Aberle, H., et al. 1996. Cadherin-catenin complex: protein interactions and their implications for cadherin function. *J. Cell. Biochem.* 61: 514-523.
4. Braga, E.A., et al. 2003. New tumor suppressor genes in hot spots of human chromosome 3: new methods of identification. *Mol. Biol.* 37: 194-211.
5. Gooding, J.M., et al. 2004. The cadherin-catenin complex as a focal point of cell adhesion and signalling: new insights from three-dimensional structures. *Bioessays* 26: 497-511.
6. Tsend-Ayush, E., et al. 2004. Plasticity of human chromosome 3 during primate evolution. *Genomics* 83: 193-202.
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CHROMOSOMAL LOCATION

Genetic locus: CDHR4 (human) mapping to 3p21.31.

PRODUCT

cadherin-29 siRNA (h) is a target-specific 19-25 nt siRNA 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-29 shRNA Plasmid (h): sc-78524-SH and cadherin-29 shRNA (h) Lentiviral Particles: sc-78524-V as alternate gene silencing products.

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-29 siRNA (h) is recommended for the inhibition of cadherin-29 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-29 gene expression knockdown using RT-PCR Primer: cadherin-29 (h)-PR: sc-78524-PR (20 μl). Annealing temperature for the primers should be $55-60^{\circ}\text{C}$ and the extension temperature should be $68-72^{\circ}\text{C}$.

RESEARCH USE

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