SANTA CRUZ BIOTECHNOLOGY, INC.

cadherin-28 siRNA (h): sc-89844

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-28, also known as Cadherin-related family member 3, is a 885 amino acid single-pass type I membrane protein that has six cadherin domains. There are two isoforms of cadherin-28 that are produced as a result of alternative splicing events. The gene encoding cadherin-28 maps to human chromosome 7, which houses over 1,000 genes and comprises nearly 5% of the human genome. Defects in some of the genes localized to chromosome 7 have been linked to Osteogenesis imperfecta, Williams-Beuren syndrome, Pendred syndrome, Lissencephaly, Citrullinemia and Shwachman-Diamond syndrome.

REFERENCES

1. Gumbiner, B.M., et al. 1993. Catenins as mediators of the cytoplasmic functions of cadherins. J. Cell Sci. Suppl. 17: 155-158.
2. Kemler, R. 1993. From cadherins to catenins: cytoplasmic protein interactions and regulation of cell adhesion. Trends Genet. 9: 317-321.
3. Aberle, H., et al. 1996. Cadherin-catenin complex: protein interactions and their implications for cadherin function. J. Cell. Biochem. 61: 514-523.
4. Kowalczyk, A.P., et al. 1996. Analysis of desmosomal cadherin-adhesive function and stoichiometry of desmosomal cadherin-plakoglobin complexes. J. Invest. Dermatol. 107: 293-300.
5. Scherer, S.W., et al. 2003. Human chromosome 7: DNA sequence and biology. Science 300: 767-772.
6. 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.

CHROMOSOMAL LOCATION

Genetic locus: CDHR3 (human) mapping to 7q22.3.

PRODUCT

cadherin-28 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-28 shRNA Plasmid (h): sc-89844-SH and cadherin-28 shRNA (h) Lentiviral Particles: sc-89844-V as alternate gene silencing products.

For independent verification of cadherin-28 (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-89844A, sc-89844B and sc-89844C.

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-28 siRNA (h) is recommended for the inhibition of cadherin-28 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-28 gene expression knockdown using RT-PCR Primer: cadherin-28 (h)-PR: sc-89844-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.