SANTA CRUZ BIOTECHNOLOGY, INC.

cadherin-29 siRNA (m): sc-142811

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 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

1. Geiger, B., et al. 1991. The cytoplasmic domain of adherens-type junctions. Cell Motil. Cytoskeleton 20: 1-6.
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.
7. Darai, E., et al. 2005. Evolutionarily plastic regions at human 3p21.3 coincide with tumor breakpoints identified by the "elimination test". Genomics 86: 1-12.

CHROMOSOMAL LOCATION

Genetic locus: Cdh29 (mouse) mapping to 9 F2.

PRODUCT

cadherin-29 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-29 shRNA Plasmid (m): sc-142811-SH and cadherin-29 shRNA (m) Lentiviral Particles: sc-142811-V as alternate gene silencing products.

For independent verification of cadherin-29 (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-142811A, sc-142811B and sc-142811C.

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 (m) is recommended for the inhibition of cadherin-29 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-29 gene expression knockdown using RT-PCR Primer: cadherin-29 (m)-PR: sc-142811-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.

PROTOCOLS

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