SANTA CRUZ BIOTECHNOLOGY, INC.

cadherin-24 siRNA (h): sc-92216

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-24 is a 819 amino acid single-pass type I membrane protein that shares 57% sequence similarity with cadherin-11, a cadherin that is expressed in breast cancer cell lines and osteobalsts. Through association with α E-catenin, β-catenin and p120, cadherin-24 mediates strong cell-cell adhesion. There are three isoforms of cadherin-24 that are produced as a result of alternative splicing events.

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. Gottardi, C.J., et al. 2001. Adhesion signaling: how β-catenin interacts with its partners. Curr. Biol. 11: R792-R794.
5. Katafiasz, B.J., et al. 2003. Characterization of cadherin-24, a novel alternatively spliced type II cadherin. J. Biol. Chem. 278: 27513-27519.
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: CDH24 (human) mapping to 14q11.2.

PRODUCT

cadherin-24 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-24 shRNA Plasmid (h): sc-92216-SH and cadherin-24 shRNA (h) Lentiviral Particles: sc-92216-V as alternate gene silencing products.

For independent verification of cadherin-24 (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-92216A, sc-92216B and sc-92216C.

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.

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-24 siRNA (h) is recommended for the inhibition of cadherin-24 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-24 gene expression knockdown using RT-PCR Primer: cadherin-24 (h)-PR: sc-92216-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.