SANTA CRUZ BIOTECHNOLOGY, INC.

DENR siRNA (h): sc-95769

BACKGROUND

DENR (density-regulated protein), also designated DRP or smooth muscle cell-associated protein 3 (SMAP-3), is a 198 amino acid protein whose expression increases when cells are present in high densities. It has also been shown that DENR expression does not increase during growth arrest. DENR is found in a variety of tissues with highest levels present in skeletal and cardiac muscle. DENR was also found at higher levels in cells expressing the neu proto-oncogene. DENR contains one SUI1 domain and interacts with MCTS1. The SUI1 domain contains sequence similarity to the budding yeast protein SUI1, which is a translation-initiation factor that directs the ribosome to the appropriate translation start site.

REFERENCES

1. Deyo, J.E., Chiao, P.J. and Tainsky, M.A. 1998. drp, a novel protein expressed at high cell density but not during growth arrest. DNA Cell Biol. 17: 437-447.
2. Oh, J.J., Grosshans, D.R., Wong, S.G. and Slamon, D.J. 1999. Identification of differentially expressed genes associated with HER-2/neu overexpression in human breast cancer cells. Nucleic Acids Res. 27: 4008-4017.
3. Online Mendelian Inheritance in Man, OMIM™. 2000. Johns Hopkins University, Baltimore, MD. MIM Number: 604550. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Reinert, L.S., Shi, B., Nandi, S., Mazan-Mamczarz, K., Vitolo, M., Bachman, K.E., He, H. and Gartenhaus, R.B. 2006. MCT-1 protein interacts with the cap complex and modulates messenger RNA translational profiles. Cancer Res. 66: 8994-9001.
5. Mazan-Mamczarz, K. and Gartenhaus, R.B. 2007. Post-transcriptional control of the MCT-1-associated protein DENR/DRP by RNA-binding protein AUF1. Cancer Genomics Proteomics 4: 233-239.

CHROMOSOMAL LOCATION

Genetic locus: DENR (human) mapping to 12q24.31.

PRODUCT

DENR 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 DENR shRNA Plasmid (h): sc-95769-SH and DENR shRNA (h) Lentiviral Particles: sc-95769-V as alternate gene silencing products.

For independent verification of DENR (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-95769A, sc-95769B and sc-95769C.

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

DENR siRNA (h) is recommended for the inhibition of DENR 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.

GENE EXPRESSION MONITORING

DENR (22): sc-136254 is recommended as a control antibody for monitoring of DENR gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor DENR gene expression knockdown using RT-PCR Primer: DENR (h)-PR: sc-95769-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.