SANTA CRUZ BIOTECHNOLOGY, INC.

ARMC10 siRNA (h): sc-89419

BACKGROUND

The armadillo (ARM) repeat family of proteins are related to the *Drosophila melanogaster* armadillo protein, a protein essential for wingless signal transduction. ARM proteins are involved in a variety of processes such as cell migration, cell proliferation, tissue maintenance and tumorigenesis, and they also function in signal transduction and the maintenance of overall cell structure. ARMC10 (armadillo repeat-containing protein 10), also known as PNAS-112 or SVH (splicing variant involved in hepatocarcinogenesis), is a 343 amino acid single-pass membrane protein that localizes to the endoplasmic reticulum and contains one ARM domain. Expressed ubiquitously with highest expression in brain, heart, liver, kidney and placenta, ARMC10 interacts with p53 and is thought to play a role in cell survival and cell growth. ARMC10 exists as four alternatively spliced isoforms, designated SVH-A, SVH-B, SVH-C and SVH-D. Depletion of the SVH-B isoform can lead to apoptosis, while overexpression of the SVH-B isoform can lead to accelerated cell growth and tumorigenesis.

REFERENCES

1. Maruyama, K., et al. 1994. Oligo-capping: a simple method to replace the cap structure of eukaryotic mRNAs with oligoribonucleotides. Gene 138: 171-174.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 611864. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Huang, R., et al. 2003. A specific splicing variant of SVH, a novel human armadillo repeat protein, is up-regulated in hepatocellular carcinomas. Cancer Res. 63: 3775-3782.
4. Otsuki, T., et al. 2005. Signal sequence and keyword trap in silico for selection of full-length human cDNAs encoding secretion or membrane proteins from oligo-capped cDNA libraries. DNA Res. 12: 117-126.
5. Zhou, X., et al. 2007. SVH-B interacts directly with p53 and suppresses the transcriptional activity of p53. FEBS Lett. 581: 4943-4948.
6. Han, G., et al. 2008. Large-scale phosphoproteome analysis of human liver tissue by enrichment and fractionation of phosphopeptides with strong anion exchange chromatography. Proteomics 8: 1346-1361.

CHROMOSOMAL LOCATION

Genetic locus: ARMC10 (human) mapping to 7q22.1.

PRODUCT

ARMC10 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 ARMC10 shRNA Plasmid (h): sc-89419-SH and ARMC10 shRNA (h) Lentiviral Particles: sc-89419-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

ARMC10 siRNA (h) is recommended for the inhibition of ARMC10 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 ARMC10 gene expression knockdown using RT-PCR Primer: ARMC10 (h)-PR: sc-89419-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.