SANTA CRUZ BIOTECHNOLOGY, INC.

ARMCX3 siRNA (h): sc-91193

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. They are intracellular proteins and function in signal transduction and cell structure. ARMCX3 (armadillo repeat containing, X-linked 3), also known as ALEX3 (ARM protein lost in epithelial cancers on chromosome X 3), is a single pass membrane protein belonging to the armadillo repeat family of proteins. ARMCX3 contains three ARM repeats and shares 60% sequence similarity with the related proteins, ARMCX1 and ARMCX2. ARMCX3 is believed to play a role in embryonic development and tissue maintenance and may also function as a tumor suppressor.

REFERENCES

1. Kurochkin, I.V., et al. 2001. ALEX1, a novel human armadillo repeat protein that is expressed differentially in normal tissues and carcinomas. Biochem. Biophys. Res. Commun. 280: 340-347.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 300364. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Hsia, N., et al. 2004. DNA microarray analysis of region-specific gene expression in the mouse epididymis. Biol. Reprod. 70: 448-457.
4. Smith, C.A., et al. 2005. Temporal and spatial expression profile of the novel armadillo-related gene, Alex2, during testicular differentiation in the mouse embryo. Dev. Dyn. 233: 188-193.
5. Olsen, J.V., et al. 2006. Global, *in vivo,* and site-specific phosphorylation dynamics in signaling networks. Cell 127: 635-648.

CHROMOSOMAL LOCATION

Genetic locus: ARMCX3 (human) mapping to Xq22.1.

PRODUCT

ARMCX3 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 ARMCX3 shRNA Plasmid (h): sc-91193-SH and ARMCX3 shRNA (h) Lentiviral Particles: sc-91193-V as alternate gene silencing products.

For independent verification of ARMCX3 (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-91193A, sc-91193B and sc-91193C.

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

ARMCX3 siRNA (h) is recommended for the inhibition of ARMCX3 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

ARMCX3 (A-8): sc-393752 is recommended as a control antibody for monitoring of ARMCX3 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 ARMCX3 gene expression knockdown using RT-PCR Primer: ARMCX3 (h)-PR: sc-91193-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Du, J., et al. 2017. Alex3 suppresses non-small cell lung cancer invasion via Akt/Slug/E-cadherin pathway. Tumour Biol. 39: 1010428317701441.

RESEARCH USE

For research use only, not for use in diagnostic procedures.