

ARMCX1 siRNA (h): sc-90942

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 that function in signal transduction and cell structure. ARMCX1 (armadillo repeat containing, X-linked 1), also known as ALEX1 (arm protein lost in epithelial cancers, X chromosome, 1), is a 453 amino acid single-pass membrane protein expressed at high levels ovary, heart, testis, prostate, brain, spleen and colon and expressed at very low levels in liver and thymus. Containing three ARM repeats, ARMCX1 may play a role in tumor suppression. ARMCX1 is significantly down-regulated in human lung, prostate, colon, pancreas and ovarian carcinomas.

REFERENCES

1. Loureiro, J. et al. 1998. Roles of Armadillo, a *Drosophila* catenin, during central nervous system development. *Curr. Biol.* 8: 622-632.
2. Hatzfeld, M. 1999. The armadillo family of structural proteins. *Int. Rev. Cytol.* 186: 179-224.
3. 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.
4. Hsia, N., et al. 2004. DNA microarray analysis of region-specific gene expression in the mouse epididymis. *Biol. Reprod.* 70: 448-457.
5. 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.
6. Olsen, J.V., et al. 2006. Global, *in vivo*, and site-specific phosphorylation dynamics in signaling networks. *Cell* 127: 635-648.
7. Rohrbeck, A., et al. 2009. Cancer genomics identifies regulatory gene networks associated with the transition from dysplasia to advanced lung adenocarcinomas induced by c-Raf-1. *PLoS ONE* 4: e7315.

CHROMOSOMAL LOCATION

Genetic locus: ARMCX1 (human) mapping to Xq22.1.

PRODUCT

ARMCX1 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see ARMCX1 shRNA Plasmid (h): sc-90942-SH and ARMCX1 shRNA (h) Lentiviral Particles: sc-90942-V as alternate gene silencing products.

For independent verification of ARMCX1 (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-90942A, sc-90942B and sc-90942C.

RESEARCH USE

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

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

ARMCX1 siRNA (h) is recommended for the inhibition of ARMCX1 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 μ M in 66 μ l. 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

ARMCX1 (G-5): sc-376291 is recommended as a control antibody for monitoring of ARMCX1 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-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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 ARMCX1 gene expression knockdown using RT-PCR Primer: ARMCX1 (h)-PR: sc-90942-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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