SANTA CRUZ BIOTECHNOLOGY, INC.

ARVCF siRNA (m): sc-29745

BACKGROUND

The Armadillo repeat gene deleted in velo-cardiofacial syndrome (ARVCF) is a member of the p120^{ctn} subfamily of Armadillo repeat proteins. ARVCF is a 962 amino acid protein that contains a coiled coil domain and 10 tandem armadillo repeats. Like a number of catenins that directly bind the cytoplasmic tails of cadherin, ARVCF binds the cytoplasmic domain of M-cadherin through its armadillo repeat region. ARVCF also competes with p120 for interaction with the E-cadherin juxtamembrane domain. However, ARVCF is tenfold less abundant than p120 in a wide variety of cell types and is difficult to detect by immunofluorescence unless it is overexpressed. ARVCF is dually localized to junctions and to nuclei, suggesting that ARVCF may function in different cellular compartments, as is the case for other Armadillo repeat proteins including p120.

REFERENCES

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3. Mariner, D.J., Wang, J. and Reynolds, A.B. 2000. ARVCF localizes to the nucleus and adherens junction and is mutually exclusive with p120^{ctn} in E-cadherin complexes. J. Cell Sci. 113: 1481-1490.
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5. Paulson, A.F., Mooney, E., Fang, X., Ji, H. and McCrea, P.D. 2000. Xarvcf, *Xenopus* member of the p120 catenin subfamily associating with cadherin juxtamembrane region. J. Biol. Chem. 275: 30124-30131.

CHROMOSOMAL LOCATION

Genetic locus: Arvcf (mouse) mapping to 16 A3.

PRODUCT

ARVCF siRNA (m) 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 ARVCF shRNA Plasmid (m): sc-29745-SH and ARVCF shRNA (m) Lentiviral Particles: sc-29745-V as alternate gene silencing products.

For independent verification of ARVCF (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-29745A, sc-29745B and sc-29745C.

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

ARVCF siRNA (m) is recommended for the inhibition of ARVCF expression in mouse 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

ARVCF (4B1): sc-23874 is recommended as a control antibody for monitoring of ARVCF 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 ARVCF gene expression knockdown using RT-PCR Primer: ARVCF (m)-PR: sc-29745-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.

PROTOCOLS

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