SANTA CRUZ BIOTECHNOLOGY, INC.

Fascin 1 siRNA (r): sc-270625

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Cell adhesion to extracellular matrix is an important physiological stimulus for organization of the Actin-based cytoskeleton. Adhesion to the matrix glycoprotein Thrombospondin 1 triggers the sustained formation of F-Actin microspikes that contain the Actin-bundling protein Fascin. These structures are also implicated in cell migration, which may be an important function of Thrombospondin 1 in tissue remodelling and wound repair. Fascin bundles Actin microfilaments within dynamic cellular structures such as microspikes, stress fibers and membrane ruffles. Fascin could serve as a prognostic factor for abnormal ovarian epithelial pathology and could be a novel target for the treatment of ovarian cancer. Fascin, an Actin-bundling protein, identifies dendritic cells in the blood and in tissues.

REFERENCES

1. Jaffe, R., DeVaughn, D. and Langhoff, E. 1998. Fascin and the differential diagnosis of childhood histiocytic lesions. Pediatr. Dev. Pathol. 1: 216-221.
2. Adams, J.C. and Schwartz, M.A. 2000. Stimulation of Fascin spikes by thrombospondin-1 is mediated by the GTPases Rac and Cdc42. J. Cell Biol. 150: 807-822.
3. Tubb, B.E., Bardien-Kruger, S., Kashork, C.D., Shaffer, L.G., Ramagli, L.S., Xu, J., Siciliano, M.J. and Bryan, J. 2000. Characterization of human retinal Fascin gene (FSCN2) at 17q25: close physical linkage of Fascin and cytoplasmic Actin genes. Genomics 65: 146-156.
4. Hu, W., McCrea, P.D., Deavers, M., Kavanagh, J.J., Kudelka, A.P. and Verschraegen, C.F. 2000. Increased expression of Fascin, motility associated protein, in cell cultures derived from ovarian cancer and in borderline and carcinomatous ovarian tumors. Clin. Exp. Metastasis 18: 83-88.
5. Grothey, A., Hashizume, R., Sahin, A.A. and McCrea, P.D. 2000. Fascin, an Actin-bundling protein associated with cell motility, is upregulated in hormone receptor negative breast cancer. Br. J. Cancer 83: 870-873.

CHROMOSOMAL LOCATION

Genetic locus: Fscn1 (rat) mapping to 12p11.

PRODUCT

Fascin 1 siRNA (r) is a pool of 2 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 Fascin 1 shRNA Plasmid (r): sc-270625-SH and Fascin 1 shRNA (r) Lentiviral Particles: sc-270625-V as alternate gene silencing products.

For independent verification of Fascin 1 (r) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-270625A and sc-270625B.

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

Fascin 1 siRNA (r) is recommended for the inhibition of Fascin 1 expression in rat 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

Fascin 1 (D-10): sc-46675 is recommended as a control antibody for monitoring of Fascin 1 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 Fascin 1 gene expression knockdown using RT-PCR Primer: Fascin 1 (r)-PR: sc-270625-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.