

## Fascin 2 siRNA (h): sc-44615

### 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. Fascin 2 is involved in photoreceptor cell-specific events. Fascin 2 localizes to the inner and outer segments of the photoreceptor cells in the retina.

### REFERENCES

1. Bardien-Kruger, S., et al. 1999. Refinement of the RP17 locus for autosomal dominant retinitis pigmentosa, construction of a YAC contig and investigation of the candidate gene retinal Fascin. *Eur. J. Hum. Genet.* 7: 332-338.
2. Adams, J.C., et al. 2000. Stimulation of Fascin spikes by thrombospondin-1 is mediated by the GTPases Rac and Cdc42. *J. Cell Biol.* 150: 807-822.
3. Saishin, Y., et al. 2000. Retinal Fascin: functional nature, subcellular distribution, and chromosomal localization. *Invest. Ophthalmol. Vis. Sci.* 41: 2087-2095.
4. Tubb, B.E., et al. 2000. Characterization of human retinal Fascin gene (FSCN2) at 17q25: close physical linkage of Fascin and cytoplasmic Actin genes. *Genomics* 65: 146-156.
5. Hu, W., et al. 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.
6. Grothey, A., et al. 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: FSCN2 (human) mapping to 17q25.3.

### PRODUCT

Fascin 2 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Fascin 2 shRNA Plasmid (h): sc-44615-SH and Fascin 2 shRNA (h) Lentiviral Particles: sc-44615-V as alternate gene silencing products.

For independent verification of Fascin 2 (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-44615A, sc-44615B and sc-44615C.

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

### APPLICATIONS

Fascin 2 siRNA (h) is recommended for the inhibition of Fascin 2 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  $\mu$ M in 66  $\mu$ 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

Fascin 2 (G-12): sc-515233 is recommended as a control antibody for monitoring of Fascin 2 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 $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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 $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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 2 gene expression knockdown using RT-PCR Primer: Fascin 2 (h)-PR: sc-44615-PR (20  $\mu$ l). 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](http://www.scbt.com) for detailed protocols and support products.