

Fibulin-2 siRNA (h): sc-43119

BACKGROUND

Fibulin-1 and Fibulin-2 associate with Fibronectin and other extracellular matrix proteins. In bone marrow, Fibulin-1 and Fibulin-2 bind to Fibronectin in the adherent layer. Fibulin-1 expression is stimulated by estrogen in ovarian cancer cell lines and has been suggested as both an agent of metastasis in ovarian cancer cells and as an indicator for predicting cancer risk or aggressiveness in ovarian carcinomas. The mobility of cancer cells may be inhibited with increasing exposure to Fibulin-1. Fibulin-2 binds to the lectin domains of extracellular matrix proteins aggrecan, versican and brevican. Fibulin-2 is abundantly expressed in heart, placenta and ovarian tissue, where it localizes to basement membranes and connective tissue compartments. In mice, differential Fibulin-2 gene expression correlates with the early phase of diabetic kidneys and glomerulosclerosis. The gene encoding human Fibulin-2 maps to chromosome 3p25.1.

REFERENCES

1. Argraves, W.S., et al. 1989. Fibulin, a novel protein that interacts with the Fibronectin receptor β -subunit cytoplasmic domain. *Cell* 58: 623-629.
2. Pan, T.C., et al. 1993. Structure and expression of Fibulin-2, a novel extracellular matrix protein with multiple EGF-like repeats and consensus motifs for calcium binding. *J. Cell Biol.* 123: 1269-1277.
3. Zhang, R.Z., et al. 1994. Fibulin-2 (Fbln-2): human cDNA sequence, mRNA expression, and mapping of the gene on human and mouse chromosomes. *Genomics* 22: 425-430.
4. Clinton, G.M., et al. 1996. Estrogens increase the expression of Fibulin-1, an extracellular matrix protein secreted by human ovarian cancer cells. *Proc. Natl. Acad. Sci. USA* 93: 316-320.

CHROMOSOMAL LOCATION

Genetic locus: FBLN2 (human) mapping to 3p25.1.

PRODUCT

Fibulin-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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Fibulin-2 shRNA Plasmid (h): sc-43119-SH and Fibulin-2 shRNA (h) Lentiviral Particles: sc-43119-V as alternate gene silencing products.

For independent verification of Fibulin-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-43119A, sc-43119B and sc-43119C.

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

Fibulin-2 siRNA (h) is recommended for the inhibition of Fibulin-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 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

Fibulin-2 (H-5): sc-271843 is recommended as a control antibody for monitoring of Fibulin-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 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 Fibulin-2 gene expression knockdown using RT-PCR Primer: Fibulin-2 (h)-PR: sc-43119-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Zhang, X., et al. 2020. Correlation of Fibulin-2 expression with proliferation, migration and invasion of breast cancer cells. *Oncol. Lett.* 20: 1945-1951.
2. Ma, Y., et al. 2021. Fibulin-2 is hypermethylated and suppresses tumor cell proliferation through inhibition of cell adhesion and extracellular matrix genes in non-small cell lung cancer. *Int. J. Mol. Sci.* 22: 11834.

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.