

Mig-2 siRNA (h): sc-106786

BACKGROUND

Mig-2 recruits migfilin to cell-matrix adhesions, while the interaction with filamin mediates the association of migfilin with Actin filaments. Together, Mig-2, migfilin and filamin define a connection between cell matrix adhesions and the Actin cytoskeleton and participate in the orchestration of Actin assembly and cell shape modulation. Mig-2 expression is transcriptionally elevated in leiomyomas and could be involved in its hormone-mediated growth of leiomyomas of the uterus. Expression of Mig-2 is ubiquitous, and it is found in numerous tumor tissues.

REFERENCES

1. Stossel, T.P., et al. 2003. Filling gaps in signaling to Actin cytoskeletal remodeling. *Dev. Cell* 4: 444-445.
2. Tu, Y., et al. 2003. Migfilin and Mig-2 link focal adhesions to filamin and the Actin cytoskeleton and function in cell shape modulation. *Cell* 113: 37-47.
3. Kato, K., et al. 2004. Expression of the mitogen-inducible gene-2 (Mig-2) is elevated in human uterine leiomyomas but not in leiomyosarcomas. *Hum. Pathol.* 35: 55-60.
4. Tseng, Y., et al. 2004. The bimodal role of filamin in controlling the architecture and mechanics of F-Actin networks. *J. Biol. Chem.* 279: 1819-1826.
5. Wu, C. 2005. Migfilin and its binding partners: from cell biology to human diseases. *J. Cell Sci.* 118: 659-664.
6. Gkretsi, V., et al. 2005. Physical and functional association of migfilin with cell-cell adhesions. *J. Cell Sci.* 118: 697-710.

CHROMOSOMAL LOCATION

Genetic locus: FERMT2 (human) mapping to 14q22.1.

PRODUCT

Mig-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 Mig-2 shRNA Plasmid (h): sc-106786-SH and Mig-2 shRNA (h) Lentiviral Particles: sc-106786-V as alternate gene silencing products.

For independent verification of Mig-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-106786A, sc-106786B and sc-106786C.

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

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

Mig-2 (NQ-A16): sc-134387 is recommended as a control antibody for monitoring of Mig-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 Mig-2 gene expression knockdown using RT-PCR Primer: Mig-2 (h)-PR: sc-106786-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. Yang, J.R., et al. 2016. Kindlin-2 promotes invasiveness of prostate cancer cells via NF κ B-dependent upregulation of matrix metalloproteinases. *Gene* 576: 571-576.
2. Chronopoulos, A., et al. 2020. Syndecan-4 tunes cell mechanics by activating the kindlin-integrin-RhoA pathway. *Nat. Mater.* 19: 669-678.

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.