SANTA CRUZ BIOTECHNOLOGY, INC.

FBLIM1 siRNA (m): sc-145095

BACKGROUND

FBLIM1 (filamin binding LIM protein 1), also known as CAL (CSX-associated LIM), Mig-2-interacting protein or Migfilin, is a cytoplasmic protein that belongs to the LIM superfamily. Three isoforms exist for FBLIM1 due to alternative splicing events, namely FBLP-1A, FBLP-1 and FBLP-1B. All three isoforms are expressed in pancreas, kidney, placenta, lung, platelets and heart, while FBLP-1 is also expressed in brain and skeletal muscle. Depending on the isoform, FBLIM1 contains a proline-rich domain and two or three C-terminal LIM zinc-binding domains. FBLIM1 specifically localizes to cell-matrix adhesion sites and, via its C-terminus, interacts with Mig-2 functioning as an important scaffold protein. Via its N-terminus, FBLIM1 interacts with Filamin 3 and provides an anchoring site for actin filaments, linking cell-matrix adhesions with the actin cytoskeleton. In addition, FBLIM1 is capable of translocating to the nucleus and regulating gene expression.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607747. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
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. Takafuta, T., et al. 2003. A new member of the LIM protein family binds to filamin B and localizes at stress fibers. J. Biol. Chem. 278: 12175-12181.
4. Wu, C. 2005. Migfilin and its binding partners: from cell biology to human diseases. J. Cell Sci. 118: 659-664.
5. Gkretsi, V., et al. 2005. Physical and functional association of migfilin with cell-cell adhesions. J. Cell Sci. 118: 697-710.
6. Gozgit, J.M., et al. 2006. Use of an aggressive MCF-7 cell line variant, TMX2-28, to study cell invasion in breast cancer. Mol. Cancer Res. 4: 905-913.
7. Zhang, Y., et al. 2006. Migfilin interacts with vasodilator-stimulated phosphoprotein (VASP) and regulates VASP localization to cell-matrix adhesions and migration. J. Biol. Chem. 281: 12397-12407.
8. Papachristou, D.J., et al. 2007. Increased cytoplasmic level of migfilin is associated with higher grades of human leiomyosarcoma. Histopathology 51: 499-508.

CHROMOSOMAL LOCATION

Genetic locus: Fblim1 (mouse) mapping to 4 E1.

PRODUCT

FBLIM1 siRNA (m) is a target-specific 19-25 nt siRNA 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 FBLIM1 shRNA Plasmid (m): sc-145095-SH and FBLIM1 shRNA (m) Lentiviral Particles: sc-145095-V as alternate gene silencing 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

FBLIM1 siRNA (m) is recommended for the inhibition of FBLIM1 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

FBLIM1 (G-7): sc-271417 is recommended as a control antibody for monitoring of FBLIM1 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 FBLIM1 gene expression knockdown using RT-PCR Primer: FBLIM1 (m)-PR: sc-145095-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.