

MARVELD3 siRNA (h): sc-93402

BACKGROUND

MARVELD3 (MARVEL domain-containing protein 3), also known as MRVLC3 or MARVD3, is a 401 amino acid multi-pass membrane protein that contains one MARVEL (MAL and related proteins for vesicle trafficking and membrane link) domain. The MARVEL domain, which is common in Occludin proteins, is a 130 amino acid motif that contains four transmembrane helices, both of which have cytoplasmic N- and C-terminal regions. MARVEL domain-containing proteins are thought to participate in tight junction regulation, the biogenesis of vesicular transport carriers and in cholesterol-rich membrane apposition events. Via its MARVEL domain, MARVELD3 may be involved in developmental and regulatory events throughout the cell. Two isoforms of MARVELD3 exist due to alternative splicing events.

REFERENCES

1. Sánchez-Pulido, L., Martín-Belmonte, F., Valencia, A. and Alonso, M.A. 2002. MARVEL: a conserved domain involved in membrane apposition events. *Trends Biochem. Sci.* 27: 599-601.
2. Brandenberger, R., Wei, H., Zhang, S., Lei, S., Murage, J., Fisk, G.J., Li, Y., Xu, C., Fang, R., Guegler, K., Rao, M.S., Mandalam, R., Lebkowski, J. and Stanton, L.W. 2004. Transcriptome characterization elucidates signaling networks that control human ES cell growth and differentiation. *Nat. Biotechnol.* 22: 707-716.
3. Oh, J.H., Yang, J.O., Hahn, Y., Kim, M.R., Byun, S.S., Jeon, Y.J., Kim, J.M., Song, K.S., Noh, S.M., Kim, S., Yoo, H.S., Kim, Y.S. and Kim, N.S. 2005. Transcriptome analysis of human gastric cancer. *Mamm. Genome* 16: 942-954.
4. Riazuddin, S., Ahmed, Z.M., Fanning, A.S., Lagziel, A., Kitajiri, S., Ramzan, K., Khan, S.N., Chattaraj, P., Friedman, P.L., Anderson, J.M., Belyantseva, I.A., Forge, A., Riazuddin, S. and Friedman, T.B. 2006. Tricellulin is a tight-junction protein necessary for hearing. *Am. J. Hum. Genet.* 79: 1040-1051.

CHROMOSOMAL LOCATION

Genetic locus: MARVELD3 (human) mapping to 16q22.2.

PRODUCT

MARVELD3 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 MARVELD3 shRNA Plasmid (h): sc-93402-SH and MARVELD3 shRNA (h) Lentiviral Particles: sc-93402-V as alternate gene silencing products.

For independent verification of MARVELD3 (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-93402A, sc-93402B and sc-93402C.

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 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

MARVELD3 siRNA (h) is recommended for the inhibition of MARVELD3 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor MARVELD3 gene expression knockdown using RT-PCR Primer: MARVELD3 (h)-PR: sc-93402-PR (20 μ 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.