

FMNL2 siRNA (h): sc-62327

BACKGROUND

Formin-like protein 2 (FMNL2, Formin homology 2 domain-containing protein 2, FHOD2) is a 1,087 amino acid protein encoded by the human gene FMNL2. FMNL2 belongs to the formin homology family and has one DAD (diaphanous autoregulatory) domain, one FH2 (formin homology 2) domain, and one GBD/FH3 (Rho GTPase-binding/formin homology 3) domain. Formins are a conserved class of proteins expressed in all eukaryotes, with known roles in generating cellular actin-based structures. Formin-related proteins have been implicated in morphogenesis, cytokinesis, and cell polarity. FMNL2 is believed to play a role in the control of cell motility and survival of macrophages.

REFERENCES

1. Yayoshi-Yamamoto, S., et al. 2000. FRL, a novel formin-related protein, binds to Rac and regulates cell motility and survival of macrophages. *Mol. Cell. Biol.* 20: 6872-6881.
2. Katoh, M. and Katoh, M. 2003. Identification and characterization of human FMNL1, FMNL2 and FMNL3 genes in silico. *Int. J. Oncol.* 22: 1161-1168.
3. Katoh, M. and Katoh, M. 2004. Identification and characterization of the human FMN1 gene in silico. *Int. J. Mol. Med.* 14: 121-126.
4. Harris, E.S., et al. 2004. The mouse formin, FRLa, slows Actin filament barbed end elongation, competes with capping protein, accelerates polymerization from monomers, and severs filaments. *J. Biol. Chem.* 279: 20076-20087.
5. Favaro, P.M., et al. 2006. High expression of FMNL1 protein in T non-Hodgkin's lymphomas. *Leuk. Res.* 30: 735-738.
6. Schwartzberg, P.L. 2007. Formin the way. *Immunity* 26: 139-141.
7. Gomez, T.S., et al. 2007. Formins regulate the Actin-related protein 2/3 complex-independent polarization of the centrosome to the immunological synapse. *Immunity* 26: 177-190.

CHROMOSOMAL LOCATION

Genetic locus: FMNL2 (human) mapping to 2q23.3.

PRODUCT

FMNL2 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 FMNL2 shRNA Plasmid (h): sc-62327-SH and FMNL2 shRNA (h) Lentiviral Particles: sc-62327-V as alternate gene silencing products.

For independent verification of FMNL2 (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-62327A, sc-62327B and sc-62327C.

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

FMNL2 siRNA (h) is recommended for the inhibition of FMNL2 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

FMNL2 (D-3): sc-390298 is recommended as a control antibody for monitoring of FMNL2 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 FMNL2 gene expression knockdown using RT-PCR Primer: FMNL2 (h)-PR: sc-62327-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.