SANTA CRUZ BIOTECHNOLOGY, INC.

FSD1 siRNA (h): sc-97218

BACKGROUND

FSD1 (fibronectin type III and SPRY domain-containing protein 1), also known as MIR1 (MID1-related protein 1) or microtubule-associated protein GLFND, is a 496 amino acid protein containing one B30.2/SPRY domain, one COS domain, and a fibronectin type-III domain. Localizing to cytoplasm, as well as nucleus and cleavage furrow, FSD1 is highly expressed in brain with lower levels of expression found in spinal cord. FSD1 requires oligomerization to bind microtubules, and may be involved in microtubule organization and stability during cytokinesis. The gene encoding FSD1 maps to human chromosome 19p13.3. Chromosome 19 consists of approximately 63 million bases, makes up over 2% of human genomic DNA, and is recognized for having the greatest gene density of the human chromosomes.

REFERENCES

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2. Manabe, R., Whitmore, L., Weiss, J.M. and Horwitz, A.R. 2002. Identification of a novel microtubule-associated protein that regulates microtubule organization and cytokinesis by using a GFP-screening strategy. Curr. Biol. 12: 1946-1951.
3. Stein, P.A., Toret, C.P., Salic, A.N., Rolls, M.M. and Rapoport, T.A. 2002. A novel centrosome-associated protein with affinity for microtubules. J. Cell Sci. 115: 3389-3402.
4. Baneyx, G., Baugh, L. and Vogel, V. 2002. Fibronectin extension and unfolding within cell matrix fibrils controlled by cytoskeletal tension. Proc. Natl. Acad. Sci. USA 99: 5139-5143.
5. Ota, T., Suzuki, Y., Nishikawa, T., Otsuki, T., Sugiyama, T., Irie, R., Wakamatsu, A., Hayashi, K., Sato, H., Nagai, K., Kimura, K., Makita, H., Sekine, M., Obayashi, M., Nishi, T., Shibahara, T., Tanaka, T., et al. 2004. Complete sequencing and characterization of 21,243 full-length human cDNAs. Nat. Genet. 36: 40-45.

CHROMOSOMAL LOCATION

Genetic locus: FSD1 (human) mapping to 19p13.3.

PRODUCT

FSD1 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see FSD1 shRNA Plasmid (h): sc-97218-SH and FSD1 shRNA (h) Lentiviral Particles: sc-97218-V as alternate gene silencing products.

For independent verification of FSD1 (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-97218A, sc-97218B and sc-97218C.

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 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

FSD1 siRNA (h) is recommended for the inhibition of FSD1 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 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor FSD1 gene expression knockdown using RT-PCR Primer: FSD1 (h)-PR: sc-97218-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.