SANTA CRUZ BIOTECHNOLOGY, INC.

F-Spondin siRNA (h): sc-60613

BACKGROUND

F-Spondin, also designated Spondin-1 or vascular smooth muscle growth-promoting factor, is a member of the subgroup of the Thrombospondin type 1 class molecules. F-Spondin is a secreted, extracellular matrix-attached protein which patterns axonal trajectories by promoting adhesion and outgrowth of commissural axons, in addition to inhibiting outgrowth of motor axons. F-Spondin contains two conserved domains at the amino-terminus, FS1 and FS2, which are regions of homology with Reelin and Mindin. Additionally, F-Spondin contains either six or four Thrombospondin repeats (TSRs) at the carboxyl-terminus, which are typical of class 2 TSRs. The F-Spondin gene is expressed in the nervous system, mainly at the embryonic floor plate and the hippocampus. F-Spondin may play a role in promoting axonal regeneration after nerve injury and in inflammatory processes in the nervous system.

REFERENCES

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6. Pyle-Chenault, R.A., Stolk, J.A., Molesh, D.A., Boyle-Harlan, D., McNeill, P.D., Repasky, E.A., Jiang, Z., Fanger, G.R. and Xu, J. 2005. VSGP/F-Spondin: a new ovarian cancer marker. Tumour Biol. 26: 245-257.

CHROMOSOMAL LOCATION

Genetic locus: SPON1 (human) mapping to 11p15.2.

PRODUCT

F-Spondin 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 F-Spondin shRNA Plasmid (h): sc-60613-SH and F-Spondin shRNA (h) Lentiviral Particles: sc-60613-V as alternate gene silencing products.

For independent verification of F-Spondin (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-60613A, sc-60613B and sc-60613C.

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

F-Spondin siRNA (h) is recommended for the inhibition of F-Spondin 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.

GENE EXPRESSION MONITORING

F-Spondin (B-3): sc-390182 is recommended as a control antibody for monitoring of F-Spondin 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 F-Spondin gene expression knockdown using RT-PCR Primer: F-Spondin (h)-PR: sc-60613-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.