

F-Spondin siRNA (m): sc-60614

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

1. Burstyn-Cohen, T., et al. 1998. Accumulation of F-Spondin in injured peripheral nerve promotes the outgrowth of sensory axons. *J. Neurosci.* 18: 8875-8885.
2. Shimeld, S.M. 1998. Characterization of Amphif-Spondin reveals the modular evolution of chordate F-Spondin genes. *Mol. Biol. Evol.* 15: 1218-1223.
3. Zarfaty-Majar, V., et al. 2001. Plasmin-mediated release of the guidance molecule F-Spondin from the extracellular matrix. *J. Biol. Chem.* 276: 28233-28241.
4. Zarfati-Majar, V., et al. 2001. F-Spondin is a contact-repellent molecule for embryonic motor neurons. *Proc. Natl. Acad. Sci. USA* 98: 4722-4727.
5. Feinstein, Y., et al. 2004. The neuronal class 2 TSR proteins F-Spondin and Mindin: a small family with divergent biological activities. *Int. J. Biochem. Cell Biol.* 36: 975-980.
6. Pyle-Chenault, R.A., et al. 2005. VSGP/F-Spondin: a new ovarian cancer marker. *Tumour Biol.* 26: 245-257.

CHROMOSOMAL LOCATION

Genetic locus: Spon1 (mouse) mapping to 7 F1.

PRODUCT

F-Spondin siRNA (m) 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 F-Spondin shRNA Plasmid (m): sc-60614-SH and F-Spondin shRNA (m) Lentiviral Particles: sc-60614-V as alternate gene silencing products.

For independent verification of F-Spondin (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-60614A, sc-60614B and sc-60614C.

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

F-Spondin siRNA (m) is recommended for the inhibition of F-Spondin 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 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 F-Spondin gene expression knockdown using RT-PCR Primer: F-Spondin (m)-PR: sc-60614-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.