SANTA CRUZ BIOTECHNOLOGY, INC.

SPIN4 siRNA (h): sc-90949

BACKGROUND

SPIN4 (spindlin family, member 4), also known as spindlin-4, is a 249 amino acid cytoplasmic protein belonging to the SPIN/STSY family that is involved in the generation of gametes. Most visceral glandular cells, seminal vesicle, a fraction of cells in seminiferus ducts, Purkinje cells and heart muscle display moderate expression of SPIN4. The gene that encodes SPIN4 contains 4,117 bases and maps to human chromosome Xq11.1. The human X chromosome is commonly known as the sex chromosome shared by males and females. LINE1 repeat elements cover one-third of the X chromosome, with a distribution that is consistent with their proposed role as way stations in the process of X-chromosome inactivation. The X chromosome contains 1,098 genes, of which 99 encode proteins expressed in testis and in various tumour types. There is a high number of mendelian diseases that are documented for the X chromosome.

REFERENCES

1. Oh, B., et al. 1997. Spindlin, a major maternal transcript expressed in the mouse during the transition from oocyte to embryo. Development 124: 493-503.
2. Strausberg, R.L., et al. 2002. Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences. Proc. Natl. Acad. Sci. USA 99: 16899-16903.
3. Gerhard, D.S., et al. 2004. The status, quality, and expansion of the NIH full-length cDNA project: the mammalian gene collection (MGC). Genome Res. 14: 2121-2127.
4. Ota, T., et al. 2004. Complete sequencing and characterization of 21,243 full-length human cDNAs. Nat. Genet. 36: 40-45.
5. Ross, M.T., et al. 2005. The DNA sequence of the human X chromosome. Nature 434: 325-337.

CHROMOSOMAL LOCATION

Genetic locus: SPIN4 (human) mapping to Xq11.1.

PRODUCT

SPIN4 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 SPIN4 shRNA Plasmid (h): sc-90949-SH and SPIN4 shRNA (h) Lentiviral Particles: sc-90949-V as alternate gene silencing products.

For independent verification of SPIN4 (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-90949A, sc-90949B and sc-90949C.

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

SPIN4 siRNA (h) is recommended for the inhibition of SPIN4 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 SPIN4 gene expression knockdown using RT-PCR Primer: SPIN4 (h)-PR: sc-90949-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.