SANTA CRUZ BIOTECHNOLOGY, INC.

SPIN3 siRNA (h): sc-91032

BACKGROUND

SPIN3 (spindlin family, member 3), also known as spindlin-3, is a 258 amino acid protein that belongs to the SPIN/STSY family. SPIN3 exists as two alternatively spliced isoforms and is believed to be involved in gamete generation. While moderately expressed in cervix and macrophages in lung, SPIN3 is highly expressed in spleen and bone marrow. The gene encoding SPIN3 maps to human chromosome Xp11.21. 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 tumor types. There is a high number of mendelian diseases that are documented for the X chromosome and there is also evidence for a major susceptibility locus for sex reversal/gonadal dysgenesis on the short arm of the X-chromosome (Xp11.21-11.23).

REFERENCES

1. 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.
2. Ota, T., et al. 2004. Complete sequencing and characterization of 21,243 full-length human cDNAs. Nat. Genet. 36: 40-45.
3. Mehring, M., et al. 2004. Pseudoentanglement of spin states in the multilevel 15NρC60 system. Phys. Rev. Lett. 93: 206603.
4. Ross, M.T., et al. 2005. The DNA sequence of the human X chromosome. Nature 434: 325-337.
5. Rajender, S., et al. 2006. A novel human sex-determining gene linked to Xp11.21-11.23. J. Clin. Endocrinol. Metab. 91: 4028-4036.

CHROMOSOMAL LOCATION

Genetic locus: SPIN3 (human) mapping to Xp11.21.

PRODUCT

SPIN3 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 SPIN3 shRNA Plasmid (h): sc-91032-SH and SPIN3 shRNA (h) Lentiviral Particles: sc-91032-V as alternate gene silencing products.

For independent verification of SPIN3 (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-91032A, sc-91032B and sc-91032C.

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

SPIN3 siRNA (h) is recommended for the inhibition of SPIN3 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 SPIN3 gene expression knockdown using RT-PCR Primer: SPIN3 (h)-PR: sc-91032-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Janecki, D.M., et al. 2018. SPIN1 is a proto-oncogene and SPIN3 is a tumor suppressor in human seminoma. Oncotarget 9: 32466-32477.

RESEARCH USE

For research use only, not for use in diagnostic procedures.