SANTA CRUZ BIOTECHNOLOGY, INC.

SPANX-B siRNA (h): sc-90879

BACKGROUND

A variety of morphological and molecular changes are required for mature spermatozoa formation. These steps are temporally guided by the transcription and translation of several testis-specific genes. SPANX (sperm protein associated with the nucleus, X-linked) family members are sperm- and testis-specific proteins containing between 97-103 amino acids, whose genes form a cluster on chromosome X. Sharing a high level of sequence similarity, SPANX-A, -B, -C, -D and -E localize to both cytoplasm and nucleus where they are associated with nuclear craters. SPANX-B (Sperm protein associated with the nucleus on the X chromosome B/F) is a 103 amino acid protein that is detected in round and elongating spermatids.

REFERENCES

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3. Zendman, A.J., et al. 2003. The human SPANX multigene family: genomic organization, alignment and expression in male germ cells and tumor cell lines. Gene 309: 125-133.
4. Westbrook, V.A., et al. 2004. Genomic organization, incidence, and localization of the SPAN-X family of cancer-testis antigens in melanoma tumors and cell lines. Clin. Cancer Res. 10: 101-112.
5. Kouprina, N., et al. 2005. Dynamic structure of the SPANX gene cluster mapped to the prostate cancer susceptibility locus HPCX at Xq27. Genome Res. 15: 1477-1486.
6. Westbrook, V.A., et al. 2006. Hominoid-specific SPANXA/D genes demonstrate differential expression in individuals and protein localization to a distinct nuclear envelope domain during spermatid morphogenesis. Mol. Hum. Reprod. 12: 703-716.
7. Lilljebjörn, H., et al. 2007. Combined high-resolution array-based comparative genomic hybridization and expression profiling of ETV6/RUNX1-positive acute lymphoblastic leukemias reveal a high incidence of cryptic Xq duplications and identify several putative target genes within the commonly gained region. Leukemia 21: 2137-2144.
8. Hansen, S., et al. 2010. SPANX gene variation in fertile and infertile males. Syst. Biol. Reprod. Med. 55: 18-26.

CHROMOSOMAL LOCATION

Genetic locus: SPANXB1 (human) mapping to Xq27.1.

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.

PRODUCT

SPANX-B siRNA (h) is a target-specific 19-25 nt siRNA 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 SPANX-B shRNA Plasmid (h): sc-90879-SH and SPANX-B shRNA (h) Lentiviral Particles: sc-90879-V as alternate gene silencing 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

SPANX-B siRNA (h) is recommended for the inhibition of SPANX-B 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.