

SPANX-C siRNA (h): sc-90876

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. While SPANX-A through -E are detected in round and elongated spermatids, SPANX-C and D are also found in melanoma and SPANX-C has been reported in bladder carcinoma.

REFERENCES

- Westbrook, V.A., Diekman, A.B., Klotz, K.L., Khole, V.V., von Kap-Herr, C., Golden, W.L., Eddy, R.L., Shows, T.B., Stoler, M.H., Lee, C.Y., Flickinger, C.J. and Herr, J.C. 2000. Spermatid-specific expression of the novel X-linked gene product SPAN-X localized to the nucleus of human spermatozoa. *Biol. Reprod.* 63: 469-481.
- Westbrook, V.A., Diekman, A.B., Naaby-Hansen, S., Coonrod, S.A., Klotz, K.L., Thomas, T.S., Norton, E.J., Flickinger, C.J. and Herr, J.C. 2001. Differential nuclear localization of the cancer/testis-associated protein, SPAN-X/CTP11, in transfected cells and in 50% of human spermatozoa. *Biol. Reprod.* 64: 345-358.
- Zendman, A.J., Zschocke, J., van Kraats, A.A., de Wit, N.J., Kurpisz, M., Weidle, U.H., Ruiter, D.J., Weiss, E.H. and van Muijen, G.N. 2003. The human SPANX multigene family: genomic organization, alignment and expression in male germ cells and tumor cell lines. *Gene* 309: 125-133.
- Westbrook, V.A., Schoppee, P.D., Diekman, A.B., Klotz, K.L., Allietta, M., Hogan, K.T., Slingluff, C.L., Patterson, J.W., Frierson, H.F., Irvin, W.P., Flickinger, C.J., Coppola, M.A. and Herr, J.C. 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.
- Kouprina, N., Pavlicek, A., Noskov, V.N., Solomon, G., Otstot, J., Isaacs, W., Carpten, J.D., Trent, J.M., Schleutker, J., Barrett, J.C., Jurka, J. and Larionov, V. 2005. Dynamic structure of the SPANX gene cluster mapped to the prostate cancer susceptibility locus HPCX at Xq27. *Genome Res.* 15: 1477-1486.
- Salemi, M., Calogero, A.E., Castiglione, R., Tricoli, D., Asero, P., Rosa, R., Rappazzo, G. and Vicari, E. 2006. Expression of SPANX proteins in normal testes and in testicular germ cell tumours. *Int. J. Androl.* 29: 368-373.
- Westbrook, V.A., Schoppee, P.D., Vanage, G.R., Klotz, K.L., Diekman, A.B., Flickinger, C.J., Coppola, M.A. and Herr, J.C. 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.
- Online Mendelian Inheritance in Man, OMIM[™]. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 300305. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: SPANXC (human) mapping to Xq27.2.

PRODUCT

SPANX-C 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SPANX-C shRNA Plasmid (h): sc-90876-SH and SPANX-C shRNA (h) Lentiviral Particles: sc-90876-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 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

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

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.