



▶ TEX11 siRNA (h): sc-91002

BACKGROUND

TEX11 (testis-expressed sequence 11 protein) is a 940 amino acid protein that exists as three alternatively spliced isoforms. Forming discrete foci on synapsed regions of meiotic chromosomes, TEX11 may be a constituent of meiotic nodules involved in recombination. TEX11 is thought to promote initiation and/or maintenance of synapsis and formation of crossovers, and may provide a link between these two meiotic processes. The gene that encodes TEX11 consists of nearly 380,000 bases and maps to human chromosome Xq13.1. Chromosome X consists of about 153 million base pairs and nearly 1,000 genes. There are a number of conditions related to an unusual number and combination of sex chromosomes being inherited, including Turner's syndrome, Klinefelter's syndrome and triple X syndrome. Color blindness, hemophilia, and Duchenne muscular dystrophy are well known X chromosome-linked conditions which affect males more frequently as males carry a single X chromosome.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 300311. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
2. Bernardino-Sgherri, J., Flagiello, D. and Dutrillaux, B. 2002. Overall DNA methylation and chromatin structure of normal and abnormal X chromosomes. *Cytogenet. Genome Res.* 99: 85-91.
3. Deeb, S.S. 2005. The molecular basis of variation in human color vision. *Clin. Genet.* 67: 369-377.
4. Bojesen, A., Kristensen, K., Birkebaek, N.H., Fedder, J., Mosekilde, L., Bennett, P., Laurberg, P., Frystyk, J., Flyvbjerg, A., Christiansen, J.S. and Gravholt, C.H. 2006. The metabolic syndrome is frequent in Klinefelter's syndrome and is associated with abdominal obesity and hypogonadism. *Diabetes Care* 29: 1591-1598.
5. Maggio, M.C., Liotta, A., De Grazia, E., Cimador, M., Di Pace, R. and Corsello, G. 2007. Polycystic ovary and gonadoblastoma in Turner's syndrome. *Minerva Pediatr.* 59: 397-401.
6. Yang, F., Gell, K., van der Heijden, G.W., Eckardt, S., Leu, N.A., Page, D.C., Benavente, R., Her, C., Höög, C., McLaughlin, K.J. and Wang, P.J. 2008. Meiotic failure in male mice lacking an X-linked factor. *Genes Dev.* 22: 682-691.
7. Helderma-van den Enden, A.T., de Jong, R., den Dunnen, J.T., Houwing-Duistermaat, J.J., Kneppers, A.L., Ginjaar, H.B., Breuning, M.H. and Bakker, E. 2009. Recurrence risk due to germ line mosaicism: Duchenne and Becker muscular dystrophy. *Clin. Genet.* 75: 465-472.

CHROMOSOMAL LOCATION

Genetic locus: TEX11 (human) mapping to Xq13.1.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

PRODUCT

TEX11 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see TEX11 shRNA Plasmid (h): sc-91002-SH and TEX11 shRNA (h) Lentiviral Particles: sc-91002-V as alternate gene silencing products.

For independent verification of TEX11 (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-91002A, sc-91002B and sc-91002C.

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

TEX11 siRNA (h) is recommended for the inhibition of TEX11 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor TEX11 gene expression knockdown using RT-PCR Primer: TEX11 (h)-PR: sc-91002-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.