

SCP-3 siRNA (h): sc-44882

BACKGROUND

Synaptonemal complexes are meiosis-specific nuclear organelles that are involved in chromosome rearrangements, such as chromosome pairing and recombination during meiotic prophase. SCP-2 and SCP-3 are major components of the lateral elements of synaptonemal complexes. SCP-3 is a sister chromatid arm cohesin during mammalian meiosis I. It has a C-terminal coiled-coil domain that promotes homotypic interactions *in vitro*. SCP-3 is expressed in testicular meiotic prophase cells and primordial germ cells. SCP-2 and SCP-3 first appear in leptotene-stage spermatocytes and disappear in late meiotic cells.

REFERENCES

- Schalk, J., et al. 1998. Localization of SCP2 and SCP3 protein molecules within synaptonemal complexes of the rat. *Chromosoma* 107: 540-548.
- Offenberg, H., et al. 1998. SCP2: a major protein component of the axial elements of synaptonemal complexes of the rat. *Nucleic Acids Res.* 26: 2572-2579.
- Online Mendelian Inheritance in Man, OMIM™. 1998. Johns Hopkins University, Baltimore, MD. MIM Number: 602162. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Prieto, I., et al. 2001. Mammalian STAG3 is a cohesion specific to sister chromatid arms in meiosis I. *Nat. Cell Biol.* 3: 761-766.
- Pfeifer, C., et al. 2001. Centromere and telomere redistribution precedes homologue pairing and terminal synapsis initiation during prophase I of cattle spermatogenesis. *Cytogenet. Cell Genet.* 93: 304-314.
- Peltari, J., et al. 2001. A meiotic chromosomal core consisting of cohesin complex proteins recruits DNA recombination proteins and promotes synapsis in the absence of an axial element in mammalian meiotic cells. *Mol. Cell. Biol.* 21: 5667-5677.

CHROMOSOMAL LOCATION

Genetic locus: SYCP3 (human) mapping to 12q23.2.

PRODUCT

SCP-3 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 SCP-3 shRNA Plasmid (h): sc-44882-SH and SCP-3 shRNA (h) Lentiviral Particles: sc-44882-V as alternate gene silencing products.

For independent verification of SCP-3 (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-44882A, sc-44882B and sc-44882C.

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 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

SCP-3 siRNA (h) is recommended for the inhibition of SCP-3 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.

GENE EXPRESSION MONITORING

SCP-3 (25): sc-136064 is recommended as a control antibody for monitoring of SCP-3 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor SCP-3 gene expression knockdown using RT-PCR Primer: SCP-3 (h)-PR: sc-44882-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.