

# CRISP-1 siRNA (h): sc-44749

## BACKGROUND

Cysteine-rich secretory proteins (CRISPs) represent a family of evolutionarily conserved proteins which may play a role in the innate immune system and are transcriptionally regulated by androgens in several tissues. AEG is a sperm surface protein involved in the fusion of egg and sperm. Although CRISP-1 (also designated AEG-like protein, ARP, cysteine-rich secretory protein-1 or AEG-related protein) is not the ortholog of rodent AEG, it resembles AEG in that it is an epididymal secretory glycoprotein that binds to the postacrosomal region of the sperm head. CRISP-1 coats the postacrosomal region of sperm heads as they pass through the epididymis. CRISP-1 is found in all regions of the epididymis, ductus deferens, seminal plasma and sperm. CRISP-3 is expressed in pancreas and prostate tissues, and along with CRISP-1, is expressed in saliva. The gene that encodes CRISP-3 is an early response gene that may participate in the pathophysiology of the autoimmune lesions of Sjogren's syndrome.

## REFERENCES

- Hayashi, M., et al. 1996. Characterization of a human glycoprotein with a potential role in sperm-egg fusion: cDNA cloning, immunohistochemical localization, and chromosomal assignment of the gene (AEG1). *Genomics* 32: 367-374.
- Schwidetzky, U., et al. 1997. Isolation and characterization of the androgen-dependent mouse cysteine-rich secretory protein-1 (CRISP-1) gene. *Biochem. J.* 321: 325-332.
- Haendler, B., et al. 1997. Differential androgen regulation of the murine genes for cysteine-rich secretory proteins (CRISP). *Eur. J. Biochem.* 250: 440-446.
- Haendler, B., et al. 1999. Expression of transcripts for cysteine-rich secretory proteins (CRISPs) in the murine lacrimal gland. *J. Cell. Physiol.* 178: 371-378.
- Tapinos, N.I., et al. 2002. Characterization of the cysteine-rich secretory protein 3 gene as an early-transcribed gene with a putative role in the pathophysiology of Sjogren's syndrome. *Arthritis Rheum.* 46: 215-222.

## CHROMOSOMAL LOCATION

Genetic locus: CRISP1 (human) mapping to 6p12.3.

## PRODUCT

CRISP-1 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see CRISP-1 shRNA Plasmid (h): sc-44749-SH and CRISP-1 shRNA (h) Lentiviral Particles: sc-44749-V as alternate gene silencing products.

For independent verification of CRISP-1 (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-44749A, sc-44749B and sc-44749C.

## RESEARCH USE

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

## 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

CRISP-1 siRNA (h) is recommended for the inhibition of CRISP-1 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  $\mu$ M in 66  $\mu$ 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 CRISP-1 gene expression knockdown using RT-PCR Primer: CRISP-1 (h)-PR: sc-44749-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## SELECT PRODUCT CITATIONS

- Yoo, B.K., et al. 2010. Molecular mechanism of chemoresistance by astrocyte elevated gene-1. *Cancer Res.* 70: 3249-3258.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.