SANTA CRUZ BIOTECHNOLOGY, INC.

CRISP-2 siRNA (m): sc-77025

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. 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-2, also known as testis-specific protein TPX1 or cancer/testis antigen 36 (CT36), is a 243 amino acid secreted protein. Expressed in the testis and epididymis, CRISP-2 is thought to be involved in calcium fluxes during sperm capacitation by regulating the activity of certain ion channels. 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 auto-immune lesions of Sjogren's syndrome.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM™. 1998. Johns Hopkins University, Baltimore, MD. MIM Number: 187430. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
2. Busso, D., et al. 2005. Human testicular protein TPX1/CRISP-2: localization in spermatozoa, fate after capacitation and relevance for gamete interaction. Mol. Hum. Reprod. 11: 299-305.
3. Du, Y., et al. 2006. Human testis specific protein 1 expression in human spermatogenesis and involvement in the pathogenesis of male infertility. Fertil. Steril. 85: 1852-1854.
4. Gibbs, G.M., et al. 2006. The cysteine-rich secretory protein domain of TPX1 is related to ion channel toxins and regulates ryanodine receptor Ca^{2+} signaling. J. Biol. Chem. 281: 4156-4163.
5. Hamann, H., et al. 2007. A polymorphism within the equine CRISP-3 gene is associated with stallion fertility in Hanoverian warmblood horses. Anim. Genet. 38: 259-264.

CHROMOSOMAL LOCATION

Genetic locus: Crisp2 (mouse) mapping to 17 B2.

PRODUCT

CRISP-2 siRNA (m) 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see CRISP-2 shRNA Plasmid (m): sc-77025-SH and CRISP-2 shRNA (m) Lentiviral Particles: sc-77025-V as alternate gene silencing products.

For independent verification of CRISP-2 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-77025A, sc-77025B and sc-77025C.

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 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

CRISP-2 siRNA (m) is recommended for the inhibition of CRISP-2 expression in mouse 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.

GENE EXPRESSION MONITORING

CRISP-2 (D-10): sc-390914 is recommended as a control antibody for monitoring of CRISP-2 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).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor CRISP-2 gene expression knockdown using RT-PCR Primer: CRISP-2 (m)-PR: sc-77025-PR (20 µl). 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.