SANTA CRUZ BIOTECHNOLOGY, INC.

Cylicin-2 siRNA (h): sc-62179

BACKGROUND

Cylicin-2 (multiple-band polypeptide II) is a 348 amino acid protein encoded by the human gene CYLC2. Cylicin-1 is a type of a cytoskeletal protein, which contains numerous Lys-Lys-Asp tripeptides accumulated in nine central repetitive units predicted to form α-helices. Cylicin-2, present in bovine and human sperm heads, has the same prominent molecular characteristics as Cylicin-1, including a high content of charged amino acids, the abundance of Lys-Lys-Asp tripeptides and repetitive units of presumably α-helical configuration. Cylicin-2 is found in the acrosomal region of round spermatids and in the postacrosomal region of late spermatids and spermatozoa, in agreement with the localization of Cylicin-1. Cylicin-2 is a novel Actin-binding protein, which probably plays a role in the Actin-related events that occur during spermiogenesis and the early events of fertilization.

REFERENCES

1. Hess, H., et al. 1993. Molecular characterization of mammalian cylicin, a basic protein of the sperm head cytoskeleton. J. Cell Biol. 122: 1043-1052.
2. Fouquet, J.P., et al. 1995. The cytoskeleton of mammalian spermatozoa. Biol. Cell 81: 89-93.
3. Hess, H., et al. 1995. The protein complexity of the cytoskeleton of bovine and human sperm heads: the identification and characterization of cylicin II. Exp. Cell Res. 218: 174-182.
4. Heid, H., et al. 2002. Novel actin-related proteins Arp-T1 and Arp-T2 as components of the cytoskeletal calyx of the mammalian sperm head. Exp. Cell Res. 279: 177-187.
5. Xie, X., et al. 2003. Systematic search and molecular characterization of the antigenic targets of myeloma immunoglobulins: a monoclonal IgA from a female patient targeting sperm-specific cylicin II. Cancer Immun. 1: 11-11.
6. Rousseaux-Prévost, R., et al. 2003. Characterization of boar sperm cytoskeletal cylicin II as an Actin-binding protein. Biochem. Biophys. Res. Commun. 303: 182-189.

CHROMOSOMAL LOCATION

Genetic locus: CYLC2 (human) mapping to 9q31.1.

PRODUCT

Cylicin-2 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Cylicin-2 shRNA Plasmid (h): sc-62179-SH and Cylicin-2 shRNA (h) Lentiviral Particles: sc-62179-V as alternate gene silencing products.

For independent verification of Cylicin-2 (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-62179A, sc-62179B and sc-62179C.

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

Cylicin-2 siRNA (h) is recommended for the inhibition of Cylicin-2 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 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Cylicin-2 gene expression knockdown using RT-PCR Primer: Cylicin-2 (h)-PR: sc-62179-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.