SANTA CRUZ BIOTECHNOLOGY, INC.

CENP-I siRNA (m): sc-142263

BACKGROUND

A replicated chromosome includes two kinetochores that control chromosome segregation during mitosis.The CENPA-CAD complex is recruited to centromeres where it is involved in assembly of kinteochore proteins, chromosome segregation and mitotic progression. As a component of the CENPA-CAD complex, CENP-I (centromere protein I), also known as ICEN19 (Interphase centromere complex protein 19), FSHPRH1 (Follicle-stimulating hormone primary response protein) and LRPR1 (Leucine-rich primary response protein 1), is a 756 amino acid protein that is involved in the incorporation of newly synthesized CENP-A into centrosomes. CENP-I is also required for localization of MAD2, MAD1L1 and CENP-F to kinteochores, an essential event for mitosis. Transcription of the CENP-I gene is rapidly activated in response to follicle-stimulating hormone (FSH) and may therefore play a role in gonadal development. There are two isoforms of CENP-I that are produced as a result of alternative splicing events.

REFERENCES

1. Slegtenhorst-Eegdeman, K.E., et al. 1995. Regulation of gene expression in Sertoli cells by follicle-stimulating hormone (FSH): cloning and characterization of LRPR1, a primary response gene encoding a leucine-rich protein. Mol. Cell. Endocrinol. 108: 115-124.
2. Roberts, R.G., et al. 1996. Sequence and chromosomal location of a human homologue of LRPR1, an FSH primary response gene. Genomics 37: 122-124.
3. Liu, S.T., et al. 2003. Human CENP-I specifies localization of CENP-F, MAD1 and MAD2 to kinetochores and is essential for mitosis. Nat. Cell Biol. 5: 341-345.
4. Izuta, H., et al. 2006. Comprehensive analysis of the ICEN (Interphase Centromere Complex) components enriched in the CENP-A chromatin of human cells. Genes Cells. 11: 673-684.
5. Okada, M., et al. 2006. The CENP-H-I complex is required for the efficient incorporation of newly synthesized CENP-A into centromeres. Nat. Cell Biol. 8: 446-457.
6. Foltz, D.R., et al. 2006. The human CENP-A centromeric nucleosome-associated complex. Nat. Cell Biol. 8: 458-469.

CHROMOSOMAL LOCATION

Genetic locus: Cenpi (mouse) mapping to X E3.

PRODUCT

CENP-I 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 CENP-I shRNA Plasmid (m): sc-142263-SH and CENP-I shRNA (m) Lentiviral Particles: sc-142263-V as alternate gene silencing products.

For independent verification of CENP-I (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-142263A, sc-142263B and sc-142263C.

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

CENP-I siRNA (m) is recommended for the inhibition of CENP-I 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor CENP-I gene expression knockdown using RT-PCR Primer: CENP-I (m)-PR: sc-142263-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.

PROTOCOLS

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