



CEP41 siRNA (m): sc-142283

BACKGROUND

Centrosomes are the major microtubule-organizing centers of mammalian cells. They are composed of a centriole pair and surrounding microtubule-nucleating material termed pericentriolar material (PCM). Bipolar mitotic spindle assembly relies on two intertwined processes: centriole duplication and centrosome maturation. Failure to properly orchestrate centrosome duplication and maturation is subsequently linked to spindle defects, which can result in aneuploidy and promote cancer progression. The CEP41 (centrosomal protein of 41 kDa) gene encodes a protein of 373 amino acids that is alternatively spliced into 4 isoforms. Isoforms 1 and 4 are expressed in testis, as well as in and fetal brain and liver.

REFERENCES

1. Lange, B.M., et al. 2000. Centriole duplication and maturation in animal cells. *Curr. Top. Dev. Biol.* 49: 235-249.
2. Palazzo, R.E., et al. 2000. Centrosome maturation. *Curr. Top. Dev. Biol.* 49: 449-470.
3. Yamada, T., et al. 2002. The gene TSGA14, adjacent to the imprinted gene MEST, escapes genomic imprinting. *Gene* 288: 57-63.
4. Yamada, T., et al. 2004. Imprinting analysis of 10 genes and/or transcripts in a 1.5-Mb MEST-flanking region at human chromosome 7q32. *Genomics* 83: 402-412.
5. Pelletier, L., et al. 2006. Centriole assembly in *Caenorhabditis elegans*. *Nature* 444: 619-623.

CHROMOSOMAL LOCATION

Genetic locus: Tsga14 (mouse) mapping to 6 A3.3.

PRODUCT

CEP41 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see CEP41 shRNA Plasmid (m): sc-142283-SH and CEP41 shRNA (m) Lentiviral Particles: sc-142283-V as alternate gene silencing products.

For independent verification of CEP41 (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-142283A, sc-142283B and sc-142283C.

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

CEP41 siRNA (m) is recommended for the inhibition of CEP41 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 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor CEP41 gene expression knockdown using RT-PCR Primer: CEP41 (m)-PR: sc-142283-PR (20 μ l). Annealing temperature for the primers should be $55-60^{\circ}$ C and the extension temperature should be $68-72^{\circ}$ 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.