



CEP68 siRNA (m): sc-142287

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. CEP68 (Centrosomal protein of 68 kDa) is a 757 amino acid protein that interacts with Rootletin and C-Nap1 to modulate centrosomal cohesion. There are two isoforms of CEP68 that are produced as a result of alternative splicing events.

REFERENCES

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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.
6. Graser, S., et al. 2007. Cep68 and Cep215 (Cdk5rap2) are required for centrosome cohesion. *J. Cell. Sci.* 120: 4321-4331.
7. Zhu, F., et al. 2008. The mammalian SPD-2 ortholog Cep192 regulates centrosome biogenesis. *Curr. Biol.* 18: 136-141.
8. Hamada, T., et al. 2009. Changing modified regions in the genome in hematopoietic stem cell differentiation. *Biochem. Biophys. Res. Commun.* 381: 135-138.

CHROMOSOMAL LOCATION

Genetic locus: Cep68 (mouse) mapping to 11 A3.1.

PRODUCT

CEP68 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 CEP68 shRNA Plasmid (m): sc-142287-SH and CEP68 shRNA (m) Lentiviral Particles: sc-142287-V as alternate gene silencing products.

For independent verification of CEP68 (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-142287A, sc-142287B and sc-142287C.

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

CEP68 siRNA (m) is recommended for the inhibition of CEP68 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 CEP68 gene expression knockdown using RT-PCR Primer: CEP68 (m)-PR: sc-142287-PR (20 μ l). 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.