SANTA CRUZ BIOTECHNOLOGY, INC.

CEP68 shRNA (h) Lentiviral Particles: sc-94806-V

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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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.
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CHROMOSOMAL LOCATION

Genetic locus: CEP68 (human) mapping to 2p14.

PRODUCT

CEP68 shRNA (h) Lentiviral Particles is a pool of concentrated, transduction-ready viral particles containing 3 target-specific constructs that encode 19-25 nt (plus hairpin) shRNA designed to knock down gene expression. Each vial contains 200 µl frozen stock containing 1.0 x 10^6 infectious units of virus (IFU) in Dulbecco's Modified Eagle's Medium with 25 mM HEPES pH 7.3. Suitable for 10-20 transductions. Also see CEP68 siRNA (h): sc-94806 and CEP68 shRNA Plasmid (h): sc-94806-SH as alternate gene silencing products.

STORAGE

Store lentiviral particles at -80° C. Stable for at least one year from the date of shipment. Once thawed, particles can be stored at 4° C for up to one week. Avoid repeated freeze thaw cycles.

APPLICATIONS

CEP68 shRNA (h) Lentiviral Particles is recommended for the inhibition of CEP68 expression in human cells.

SUPPORT REAGENTS

Control shRNA Lentiviral Particles: sc-108080. Available as 200 µl frozen viral stock containing 1.0 x 10^6 infectious units of virus (IFU); contains an shRNA construct encoding a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor CEP68 gene expression knockdown using RT-PCR Primer: CEP68 (h)-PR: sc-94806-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

BIOSAFETY

Lentiviral particles can be employed in standard Biosafety Level 2 tissue culture facilities (and should be treated with the same level of caution as with any other potentially infectious reagent). Lentiviral particles are replication-incompetent and are designed to self-inactivate after transduction and integration of shRNA constructs into genomic DNA of target cells.

RESEARCH USE

The purchase of this product conveys to the buyer the nontransferable right to use the purchased amount of the product and all replicates and derivatives for research purposes conducted by the buyer in his laboratory only (whether the buyer is an academic or for-profit entity). The buyer cannot sell or otherwise transfer (a) this product (b) its components or (c) materials made using this product or its components to a third party, or otherwise use this product or its components or materials made using this product or its components for Commercial Purposes.

PROTOCOLS

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