SANTA CRUZ BIOTECHNOLOGY, INC.

CSPP1 siRNA (h): sc-77463

BACKGROUND

Centrosomes are dynamic organelles involved in many aspects of cell function and growth. Centrosomes act as microtubule organizing centers, and provide a site for concerted regulation of cell cycle progression. Duplication of centrosomes occurs once during each cell cycle and requires proper mitotic spindle formation and chromosome segregation. Defects in centrosome duplication or function are linked to many human diseases, including various forms of cancer. The centrosome and spindle pole-associated protein 1 (CSPP1) interacts with centrosomes and microtubules and may play a role in the regulation of G_1/S-phase progression and spindle assembly. Two isoforms of CSPP1 exist as a result of alternative splicing events. Isoform 1 expression increases throughout the cell cycle and peaks in G_2/M phase, whereas isoform 2 expression is highest in G_1 phase and decreases thereafter.

REFERENCES

1. Cassimeris, L., et al. 2003. Regulated assembly of the mitotic spindle: a perspective from two ends. Curr. Issues Mol. Biol. 5: 99-112.
2. Doxsey, S., et al. 2005. Centrosomes in cellular regulation. Annu. Rev. Cell Dev. Biol. 21: 411-434.
3. Patzke, S., et al. 2005. Identification of a novel centrosome/microtubule-associated coiled-coil protein involved in cell-cycle progression and spindle organization. Oncogene 24: 1159-1173.
4. Patzke, S., et al. 2006. CSPP and CSPP-L associate with centrosomes and microtubules and differently affect microtubule organization. J. Cell. Physiol. 209: 199-210.
5. Mattison, C.P., et al. 2006. The centrosome cycle. Results Probl. Cell Differ. 42: 111-146.
6. Hauge, H., et al. 2007. Characterization of the FAM110 gene family. Genomics 90: 14-27.

CHROMOSOMAL LOCATION

Genetic locus: CSPP1 (human) mapping to 8q13.1.

PRODUCT

CSPP1 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 CSPP1 shRNA Plasmid (h): sc-77463-SH and CSPP1 shRNA (h) Lentiviral Particles: sc-77463-V as alternate gene silencing products.

For independent verification of CSPP1 (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-77463A, sc-77463B and sc-77463C.

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

CSPP1 siRNA (h) is recommended for the inhibition of CSPP1 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 CSPP1 gene expression knockdown using RT-PCR Primer: CSPP1 (h)-PR: sc-77463-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Zhu, L., et al. 2015. Mitotic protein CSPP1 interacts with CENP-H protein to coordinate accurate chromosome oscillation in mitosis. J. Biol. Chem. 290: 27053-27066.

RESEARCH USE

For research use only, not for use in diagnostic procedures.