SANTA CRUZ BIOTECHNOLOGY, INC.

Centrin-1 siRNA (m): sc-60360

BACKGROUND

EF-hand type Ca^{2+}-binding proteins consists of several family members, including Centrin-1, Centrin-2 and Centrin-3. The Centrin proteins are ubiquitously expressed cytoskeletal components that show increased expression during cell differentiation. Tissues where cilia are present, such as the retina and testis, express both Centrin-1 and -2, but Centrin-2 is also expressed in non-differentiated, nonciliated retinal cells (retinoblastoma cells), liver, skeletal muscle and cardiac muscle. In these tissues, Centrin associates with the centrosomes, mitotic spindle poles and basal bodies. Knockdown studies reveal a requirement for Centrin in centriole duplication and organization of spindle pole morphology and the completion of cytokinesis. Centrin-3 plays a role in centrosome reproduction.

REFERENCES

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2. Wolfrum, U., et al. 1998. Expression of Centrin isoforms in the mammalian retina. Exp. Cell Res. 242: 10-17.
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4. Laoukili, J., et al. 2000. Differential expression and cellular distribution of Centrin isoforms during human ciliated cell differentiation *in vitro*. J. Cell Sci. 113: 1355-1364.
5. Middendorp, S., et al. 2000. A role for Centrin-3 in centrosome reproduction. J. Cell Biol. 148: 405-416.
6. Araki, M., et al. 2001. Centrosome protein Centrin-2/Caltractin 1 is part of the xeroderma pigmentosum group C complex that initiates global genome nucleotide excision repair. J. Biol. Chem. 276: 18665-18672.
7. Rice, L.M., et al. 2002. Centriole duplication: Centrin in on answers? Curr. Biol. 12: 618-619.
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CHROMOSOMAL LOCATION

Genetic locus: Cetn1 (mouse) mapping to 18 A1.

PRODUCT

Centrin-1 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 Centrin-1 shRNA Plasmid (m): sc-60360-SH and Centrin-1 shRNA (m) Lentiviral Particles: sc-60360-V as alternate gene silencing products.

For independent verification of Centrin-1 (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-60360A, sc-60360B and sc-60360C.

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

Centrin-1 siRNA (m) is recommended for the inhibition of Centrin-1 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 Centrin-1 gene expression knockdown using RT-PCR Primer: Centrin-1 (m)-PR: sc-60360-PR (20 µl, 427 bp). 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.