SANTA CRUZ BIOTECHNOLOGY, INC.

CEP57 siRNA (m): sc-142285

BACKGROUND

CEP57 (centrosomal protein 57kDa), also known as PIG8, TSP57 or Translokin, is a 500 amino acid protein that localizes to both the nucleus and the cytoplasm, specifically associating with microtubules at the centrosome. Expressed ubiquitously, CEP57 exists as a homodimer that functions to mediate the mitogenic activity and nuclear translocation of FGF-2, an internalized growth factor, thereby regulating FGF-2 signaling pathways. Additionally, CEP57 is thought to play a role in spermatogenesis, possibly via the indirect regulation of gene expression. Human CEP57 shares 88% sequence identity with its mouse and bovine orthologs, suggesting a highly conserved role between species. Multiple isoforms of CEP57 exist due to alternative splicing events.

REFERENCES

1. Nagase, T., et al. 1995. Prediction of the coding sequences of unidentified human genes. III. The coding sequences of 40 new genes (KIAA0081-KIAA0120) deduced by analysis of cDNA clones from human cell line KG-1. DNA Res. 2: 37-43.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607951 World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Bossard, C., et al. 2003. Translokin is an intracellular mediator of FGF-2 trafficking. Nat. Cell Biol. 5: 433-439.
4. Kim, Y.S., et al. 2004. Tsp57: a novel gene induced during a specific stage of spermatogenesis. Biol. Reprod. 70: 106-113.
5. Emanuele, M.J., et al. 2007. *Xenopus* Cep57 is a novel kinetochore component involved in microtubule attachment. Cell 130: 893-905.
6. DeLuca, J.G. 2007. Spindle microtubules: getting attached at both ends. Curr. Biol. 17: R966-R969.
7. Momotani, K., et al. 2008. Cep57, a multidomain protein with unique microtubule and centrosomal localization domains. Biochem. J. 412: 265-273.

CHROMOSOMAL LOCATION

Genetic locus: Cep57 (mouse) mapping to 9 A1.

PRODUCT

CEP57 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 CEP57 shRNA Plasmid (m): sc-142285-SH and CEP57 shRNA (m) Lentiviral Particles: sc-142285-V as alternate gene silencing products.

For independent verification of CEP57 (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-142285A, sc-142285B and sc-142285C.

RESEARCH USE

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

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

CEP57 siRNA (m) is recommended for the inhibition of CEP57 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 CEP57 gene expression knockdown using RT-PCR Primer: CEP57 (m)-PR: sc-142285-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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