SANTA CRUZ BIOTECHNOLOGY, INC.

Chibby 3 siRNA (h): sc-91954

BACKGROUND

Chibby, also known as Cytosolic leucine-rich protein or PIGEA-14, is a 126 amino acid highly conserved protein that inhibits β-catenin-mediated transcriptional activation by competing with LEF-1 to bind β-catenin. Chibby may also play a role in the regulation of the intracellular location of Polycystin-2 and other intracellular proteins. Acting as a homodimer, Chibby is subcellularly localized to the nucleus and golgi apparatus within the *trans*-golgi network. Interaction with 14-3-3 results in the sequestration of Chibby to the cytoplasm and the formation of a stable complex with β-catenin, thereby facilitating nuclear export of β-catenin. Though widely expressed, Chibby is found at highest levels in skeletal muscle, heart, placenta and kidney. Down-regulation of Chibby is observed in thyroid and metastatic uterine tumors, suggesting that the gene encoding Chibby may function as a tumor suppressor. Chibby 3 is a 242 amino acid protein that belongs to the Chibby family.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607757. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
2. Takemaru, K., et al. 2003. Chibby, a nuclear β-catenin-associated antagonist of the Wnt/Wingless pathway. Nature 422: 905-909.
3. Gad, S., et al. 2004. Is the gene encoding Chibby implicated as a tumour suppressor in colorectal cancer ? BMC Cancer 4: 31.
4. Hidaka, S., et al 2004. PIGEA-14, a novel coiled-coil protein affecting the intracellular distribution of Polycystin-2. J. Biol. Chem. 279: 35009-35016.
5. Jung, Y., et al. 2006. TC1 (C8orf4) enhances the Wnt/β-catenin pathway by relieving antagonistic activity of Chibby. Cancer Res. 66: 723-728.
6. Schuierer, M.M., et al. 2006. Reduced expression of β-catenin inhibitor Chibby in colon carcinoma cell lines. World J. Gastroenterol. 12: 1529-1535.
7. Li, F.Q., et al. 2007. Chibby promotes adipocyte differentiation through inhibition of β-catenin signaling. Mol. Cell. Biol. 27: 4347-4354.

CHROMOSOMAL LOCATION

Genetic locus: CBY3 (human) mapping to 5q35.3.

PRODUCT

Chibby 3 siRNA (h) is a pool of 2 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 Chibby 3 shRNA Plasmid (h): sc-91954-SH and Chibby 3 shRNA (h) Lentiviral Particles: sc-91954-V as alternate gene silencing products.

For independent verification of Chibby 3 (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-91954A and sc-91954B.

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

Chibby 3 siRNA (h) is recommended for the inhibition of Chibby 3 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 Chibby 3 gene expression knockdown using RT-PCR Primer: Chibby 3 (h)-PR: sc-91954-PR (20 µl). 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.