SANTA CRUZ BIOTECHNOLOGY, INC.

CCPG1 siRNA (h): sc-90150

BACKGROUND

CCPG1 (cell cycle progression 1), also known as CPR8, is a 757 amino acid single-pass type II membrane protein that acts as an assembly platform for Rho protein signaling complexes. Involved in cell cycle regulation, CCPG1 limits guanine nucleotide exchange activity of Dbs, a Rho-specific guanine nucleotide exchange factor, toward Rho A, which results in an inhibition of both its transcriptional activation ability and its transforming activity. Considered a novel scaffold protein, CCPG1 exists as four isoforms produced by alternative splicing events. The gene encoding CCPG1 maps to human chromosome 15, which houses over 700 genes and comprises nearly 3% of the human genome. Angelman syndrome, Prader-Willi syndrome, Tay-Sachs disease and Marfan syndrome are all associated with defects in chromosome 15-localized genes.

REFERENCES

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3. Cheng, L., et al. 2002. RhoGEF specificity mutants implicate Rho A as a target for Dbs transforming activity. Mol. Cell. Biol. 22: 6895-6905.
4. Rossman, K.L. and Sondek, J. 2005. Larger than Dbl: new structural insights into Rho A activation. Trends Biochem. Sci. 30: 163-165.
5. Kostenko, E.V., et al. 2006. CCPG1, a novel scaffold protein that regulates the activity of the Rho guanine nucleotide exchange factor Dbs. Mol. Cell. Biol. 26: 8964-8975.
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CHROMOSOMAL LOCATION

Genetic locus: CCPG1 (human) mapping to 15q21.3.

PRODUCT

CCPG1 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 CCPG1 shRNA Plasmid (h): sc-90150-SH and CCPG1 shRNA (h) Lentiviral Particles: sc-90150-V as alternate gene silencing products.

For independent verification of CCPG1 (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-90150A, sc-90150B and sc-90150C.

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

CCPG1 siRNA (h) is recommended for the inhibition of CCPG1 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 CCPG1 gene expression knockdown using RT-PCR Primer: CCPG1 (h)-PR: sc-90150-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.