SANTA CRUZ BIOTECHNOLOGY, INC.

ARHGAP27 siRNA (h): sc-93628

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The Power to Question

BACKGROUND

ARHGAP27 (Rho GTPase activating protein 27), also known as CAMGAP1, is an 889 amino acid protein that localizes to both the cytoplasm and to the peripheral membrane and contains one PH domain, one Rho-GAP domain, one SH3 domain and three WW domains. Expressed in spleen, kidney, lung, small intestine and thymus, ARHGAP27 functions as a Rho GTPase-activating protein that interacts with CIN85 and is thought to be involved in clathrin-mediated endocytosis. Overexpression of ARHGAP27 is associated with chronic lymphocytic leukemia, as well as with pancreatic and lung cancer, suggesting an involvement in tumorigenesis. ARHGAP27 exhibits specific activity towards Rac 1 and Cdc42, effectively converting them to inactive, GDP-bound proteins. Multiple isoforms of ARHGAP27 exist due to alternative splicing events.

REFERENCES

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2. Gamblin, S.J. and Smerdon, S.J. 1998. GTPase-activating proteins and their complexes. Curr. Opin. Struct. Biol. 8: 195-201.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 610591. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Sakakibara, T., Nemoto, Y., Nukiwa, T. and Takeshima, H. 2004. Identification and characterization of a novel Rho GTPase activating protein implicated in receptor-mediated endocytosis. FEBS Lett. 566: 294-300.
5. Katoh, Y. and Katoh, M. 2004. Identification and characterization of ARHGAP27 gene in silico. Int. J. Mol. Med. 14: 943-947.
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CHROMOSOMAL LOCATION

Genetic locus: ARHGAP27 (human) mapping to 17q21.31.

PRODUCT

ARHGAP27 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 ARHGAP27 shRNA Plasmid (h): sc-93628-SH and ARHGAP27 shRNA (h) Lentiviral Particles: sc-93628-V as alternate gene silencing products.

For independent verification of ARHGAP27 (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-93628A, sc-93628B and sc-93628C.

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

ARHGAP27 siRNA (h) is recommended for the inhibition of ARHGAP27 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 ARHGAP27 gene expression knockdown using RT-PCR Primer: ARHGAP27 (h)-PR: sc-93628-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.