SANTA CRUZ BIOTECHNOLOGY, INC.

ARHGEF19 siRNA (h): sc-88342

BACKGROUND

Rho GTPases, which play fundamental roles in numerous cellular processes, are initiated by external stimuli that signal though G protein-coupled receptors. ARHGEF19 (Rho guanine nucleotide exchange factor (GEF) 19), also known as WGEF (weakly similar to Rho GEF), is an 802 amino acid protein that contains one DH (DBL-homology) domain, one PH domain and one SH3 domain. Conserved in chimpanzee, canine, bovine, mouse, rat and zebrafish, ARHGEF19 exists as two alternatively spliced isoforms and shares 48% similarity with ARHGEF5. Highly expressed in intestine, with lower expression in liver, heart and kidney, ARHGEF19 displays GEF activity towards Rho A family members, with possible activity against Rac 1 and Cdc42. ARHGEF19 regulates adipogenesis by modifying DNA methylation. Overexpression of ARHGEF19 may be linked to filopodia and stress fiber formation, membrane ruffling and lamellipodia.

REFERENCES

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8. Hiramoto-Yamaki, N., et al. 2010. Ephexin4 and EphA2 mediate cell migration through a RhoG-dependent mechanism. J. Cell Biol. 190: 461-477.
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CHROMOSOMAL LOCATION

Genetic locus: ARHGEF19 (human) mapping to 1p36.13.

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.

PRODUCT

ARHGEF19 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 ARHGEF19 shRNA Plasmid (h): sc-88342-SH and ARHGEF19 shRNA (h) Lentiviral Particles: sc-88342-V as alternate gene silencing products.

For independent verification of ARHGEF19 (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-88342A, sc-88342B and sc-88342C.

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

ARHGEF19 siRNA (h) is recommended for the inhibition of ARHGEF19 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 ARHGEF19 gene expression knockdown using RT-PCR Primer: ARHGEF19 (h)-PR: sc-88342-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.