SANTA CRUZ BIOTECHNOLOGY, INC.

ARHGEF38 siRNA (m): sc-140524

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The Power to Question

BACKGROUND

Rho GTPases, which play fundamental roles in numerous cellular processes, are initiated by external stimuli that signal though G protein-coupled receptors. ARHGEF38 (Rho guanine nucleotide exchange factor (GEF) 38) is a 219 amino acid protein that contains one DH (DBL-homology) domain. Conserved in chimpanzee, mouse and zebrafish, ARHGEF38 is encoded by a gene that maps to human chromosome 4q24. Representing approximately 6% of the human genome and containing nearly 900 genes, chromosome 4 contains the largest gene deserts (genome regions with no protein encoding genes) and possesses one of the two lowest recombination frequencies of the human chromosomes. Huntington's disease, Ellis-van Creveld syndrome, methylmalonic acidemia and polycystic kidney disease are all associated with chromosome 4.

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CHROMOSOMAL LOCATION

Genetic locus: Arhgef38 (mouse) mapping to 3 G3.

RESEARCH USE

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

PRODUCT

ARHGEF38 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 ARHGEF38 shRNA Plasmid (m): sc-140524-SH and ARHGEF38 shRNA (m) Lentiviral Particles: sc-140524-V as alternate gene silencing products.

For independent verification of ARHGEF38 (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-140524A, sc-140524B and sc-140524C.

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

ARHGEF38 siRNA (m) is recommended for the inhibition of ARHGEF38 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 ARHGEF38 gene expression knockdown using RT-PCR Primer: ARHGEF38 (m)-PR: sc-140524-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.