SANTA CRUZ BIOTECHNOLOGY, INC.

ARHGAP8 siRNA (m): sc-141219

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The Power to Question

BACKGROUND

ARHGAP8 (Rho GTPase activating protein 8), also known as PP610 or BPGAP1, is a 464 amino acid protein that contains one Rho GAP domain and one CRAL-TRIO domain. Expressed at high levels in placenta and kidney, and at lower levels in testis, stomach, colon, small intestine and skeletal muscle, ARHGAP8 functions as a negative regulator of Rho-type GTPases, specifically catalyzing the conversion of the target GTPase to an inactive, GDP-bound state. Via its catalytic activity, ARHGAP8 is thought to play a role in signaling pathways and cytoskeletal changes throughout the cell. ARHGAP8 is overexpressed in colorectal and breast tumors, suggesting a role for ARHGAP8 in carcinogenesis. Human ARHGAP8 shares 80% homology with its mouse counterpart, suggesting a conserved role between species. Multiple isoforms of ARHGAP8 exist due to alternative splicing events.

REFERENCES

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4. Shang, X., et al. 2003. Concerted regulation of cell dynamics by BNIP-2 and Cdc42GAP homology/Sec14p-like, proline-rich, and GTPase-activating protein domains of a novel Rho GTPase-activating protein, BPGAP1. J. Biol. Chem. 278: 45903-45914.
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PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

CHROMOSOMAL LOCATION

Genetic locus: Arhgap8 (mouse) mapping to 15 E2.

PRODUCT

ARHGAP8 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 ARHGAP8 shRNA Plasmid (m): sc-141219-SH and ARHGAP8 shRNA (m) Lentiviral Particles: sc-141219-V as alternate gene silencing products.

For independent verification of ARHGAP8 (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-141219A, sc-141219B and sc-141219C.

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

ARHGAP8 siRNA (m) is recommended for the inhibition of ARHGAP8 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 ARHGAP8 gene expression knockdown using RT-PCR Primer: ARHGAP8 (m)-PR: sc-141219-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.