SANTA CRUZ BIOTECHNOLOGY, INC.

ARHGAP25 siRNA (h): sc-94483

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The Power to Question

BACKGROUND

GTPase-activating proteins (GAPs) accelerate the intrinsic rate of GTP hydrolysis of Ras-related proteins, resulting in downregulation of their active form. ARHGAP25 (Rho GTPase activating protein 25), also known as Rho-type GTPase-activating protein 25, is a 645 amino acid protein that contains one Pleckstrin homology (PH) domain and one Rho-GAP domain. Encoded by a gene that maps to human chromosome 2p13.3, ARHGAP25 exists as four alternatively spliced isoforms and shares significant homology with ARHGAP22 and ARHGAP24 by exhibiting a common domain structure (PH-RhoGAP-CC); however, tissue expression of ARHGAP25 is myeloid-specific. ARHGAP25 is a candidate epigenetic biomarker for non-invasive prenatal diagnosis of Down syndrome, as well as a candidate gene in a chromosome 2p susceptibility locus linked to salt-sensitive hypertension and drug response.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: ARHGAP25 (human) mapping to 2p13.3.

RESEARCH USE

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

PRODUCT

ARHGAP25 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 ARHGAP25 shRNA Plasmid (h): sc-94483-SH and ARHGAP25 shRNA (h) Lentiviral Particles: sc-94483-V as alternate gene silencing products.

For independent verification of ARHGAP25 (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-94483A, sc-94483B and sc-94483C.

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

ARHGAP25 siRNA (h) is recommended for the inhibition of ARHGAP25 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 ARHGAP25 gene expression knockdown using RT-PCR Primer: ARHGAP25 (h)-PR: sc-94483-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.