SANTA CRUZ BIOTECHNOLOGY, INC.

GAPVD1 siRNA (h): sc-92781

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The Power to Question

BACKGROUND

GAPVD1 (GTPase-activating protein and VPS9 domain-containing protein 1), also known as RAP6 (Rab5-activating protein 6) and GAPex-5, is a 1,478 amino acid peripheral membrane protein that acts both as a GTPase-activating protein (GAP) and a guanine nucleotide exchange factor (GEF). GAPVD1 participates in many processes such as Insulin receptor internalization, Glut4 trafficking and endocytosis. In addition, depletion of GAPVD1 leads to delayed EGFR degradation by mediating receptor ubiquination through its RGD domain, suggesting that it may be an important mediator of carcinogenesis resulting from Ras protein mutations. There are six isoforms of GAPVD1 that are produced as a result of alternative splicing events.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: GAPVD1 (human) mapping to 9q33.3.

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

GAPVD1 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 GAPVD1 shRNA Plasmid (h): sc-92781-SH and GAPVD1 shRNA (h) Lentiviral Particles: sc-92781-V as alternate gene silencing products.

For independent verification of GAPVD1 (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-92781A, sc-92781B and sc-92781C.

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

GAPVD1 siRNA (h) is recommended for the inhibition of GAPVD1 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 GAPVD1 gene expression knockdown using RT-PCR Primer: GAPVD1 (h)-PR: sc-92781-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.