

# RGS21 siRNA (h): sc-88065

## BACKGROUND

The regulators of G protein signaling (RGS) proteins inhibit heterotrimeric G protein signaling. RGS proteins work by functioning as GTPase-activators (which increase the GTPase activity of G protein  $\alpha$ -subunits) thereby driving G proteins into their inactive GDP-bound form. RGS21 (regulator of G-protein signaling 21) is a 152 amino acid protein that is ubiquitously expressed and contains one RGS domain. The gene encoding RGS21 maps to human chromosome 1q31.2 and mouse chromosome 1 F. Human chromosome 1 spans 260 million base pairs, contains over 3,000 genes, comprises nearly 8% of the human genome and houses a large number of disease-associated genes, including those that are involved in familial adenomatous polyposis, Stickler syndrome, Parkinson's disease, Gaucher disease, schizophrenia and Usher syndrome.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: RGS21 (human) mapping to 1q31.2.

## PRODUCT

RGS21 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see RGS21 shRNA Plasmid (h): sc-88065-SH and RGS21 shRNA (h) Lentiviral Particles: sc-88065-V as alternate gene silencing products.

For independent verification of RGS21 (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-88065A, sc-88065B and sc-88065C.

## 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

RGS21 siRNA (h) is recommended for the inhibition of RGS21 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  $\mu$ M in 66  $\mu$ l. 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 RGS21 gene expression knockdown using RT-PCR Primer: RGS21 (h)-PR: sc-88065-PR (20  $\mu$ l). 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.