SANTA CRUZ BIOTECHNOLOGY, INC.

RGS13 siRNA (m): sc-61465

BACKGROUND

The regulators of G protein signaling (RGS) proteins inhibit heterotrimeric G protein signaling. RGS proteins work by functioning as GTPase-activating proteins (which increase the GTPase activity of G protein α subunits) thereby driving G proteins into their inactive GDP-bound form. RGS13 (regulator of G protein signaling 13) localizes in membrane and nuclear fractions, and is expressed predominantly in tonsil, thymus, lymph node, lung and spleen tissues. Within the lymphoid compartment, highest levels of RGS13 have been found in resting CD19-positive (B cells). Unlike most RGS proteins, RGS13 has no recognizable domain other than the RGS box, but because of its prevalence in the immune system and lung and its ability to inhibit $G_{\alpha\ q}$, $G_{\alpha\ i}$ and cAMP generation, the function of RGS13 might be to modulate specific G protein-dependent signal transduction pathways in these regions.

REFERENCES

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2. Shi, G.X., et al. 2002. RGS13 regulates germinal center B lymphocytes responsiveness to CXC chemokine ligand (CXCL)12 and CXCL13. J. Immunol. 169: 2507-2515.
3. Sierra, D.A., et al. 2002. Evolution of the regulators of G protein signaling multigene family in mouse and human. Genomics 79: 177-185.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607190. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Estes, J.D., et al. 2004. Follicular dendritic cell regulation of CXCR4-mediated germinal center CD4 T cell migration. J. Immunol. 173: 6169-6178.
6. Moratz, C., et al. 2004. Regulation of chemokine-induced lymphocyte migration by RGS proteins. Methods Enzymol. 389: 15-32.
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CHROMOSOMAL LOCATION

Genetic locus: Rgs13 (mouse) mapping to 1 F.

PRODUCT

RGS13 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 RGS13 shRNA Plasmid (m): sc-61465-SH and RGS13 shRNA (m) Lentiviral Particles: sc-61465-V as alternate gene silencing products.

For independent verification of RGS13 (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-61465A, sc-61465B and sc-61465C.

RESEARCH USE

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

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

RGS13 siRNA (m) is recommended for the inhibition of RGS13 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 RGS13 gene expression knockdown using RT-PCR Primer: RGS13 (m)-PR: sc-61465-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.