

# RGS13 (G-12): sc-48279

## 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  $\alpha$  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 pre-valence 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

- Johnson, E.N. and Druey, K.M. 2002. Functional characterization of the G protein-regulator RGS13. *J. Biol. Chem.* 277: 16768-16774.
- Shi, G.X., Harrison, K., Wilson, G.L., Moratz, C. and Kehrl, J.H. 2002. RGS13 regulates germinal center B lymphocytes responsiveness to CXCL chemokine ligand (CXCL12) and CXCL13. *J. Immunol.* 169: 2507-2515.
- Sierra, D.A., Gilbert, D.J., Householder, D., Grishin, N.V., Yu, K., Ukidwe, P., Barker, S.A., He, W., Wensel, T.G., Otero, G., Brown, G., Copeland, N.G., Jenkins, N.A. and Wilkie, T.M. 2002. Evolution of the regulators of G protein-signaling multigene family in mouse and human. *Genomics* 79: 177-185.
- 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/>
- Estes, J.D., Thacker, T.C., Hampton, D.L., Kell, S.A., Keele, B.F., Palenske, E.A., Druey, K.M. and Burton, G.F. 2004. Follicular dendritic cell regulation of CXCR4-mediated germinal center CD4 T cell migration. *J. Immunol.* 173: 6169-6178.
- Moratz, C., Harrison, K. and Kehrl, J.H. 2004. Regulation of chemokine-induced lymphocyte migration by RGS proteins. *Meth. Enzymol.* 389: 15-32.
- Han, J.I., Huang, N.N., Kim, D.U. and Kehrl, J.H. 2006. RGS1 and RGS13 mRNA silencing in a human B lymphoma line enhances responsiveness to chemoattractants and impairs desensitization. *J. Leukoc. Biol.* 79: 1357-1368.

## CHROMOSOMAL LOCATION

Genetic locus: RGS13 (human) mapping to 1q31.2; Rgs13 (mouse) mapping to 1 F.

## SOURCE

RGS13 (G-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of RGS13 of human origin.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-48279 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

RGS13 (G-12) is recommended for detection of RGS13 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for RGS13 siRNA (h): sc-61464, RGS13 siRNA (m): sc-61465, RGS13 shRNA Plasmid (h): sc-61464-SH, RGS13 shRNA Plasmid (m): sc-61465-SH, RGS13 shRNA (h) Lentiviral Particles: sc-61464-V and RGS13 shRNA (m) Lentiviral Particles: sc-61465-V.

Molecular Weight of RGS13: 19 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## SELECT PRODUCT CITATIONS

- Bansal, G., Xie, Z., Rao, S., Nocka, K.H. and Druey, K.M. 2008. Suppression of immunoglobulin E-mediated allergic responses by regulator of G protein-signaling 13. *Nat. Immunol.* 9: 73-80.

## 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) or our catalog for detailed protocols and support products.



Try **RGS13 (G-7): sc-514590**, our highly recommended monoclonal alternative to RGS13 (G-12).