

# RGS1 (H-70): sc-20758

## BACKGROUND

Heterotrimeric G proteins function to relay information from cell surface receptors to intracellular effectors. In mammals, G protein  $\alpha$ ,  $\beta$  and  $\gamma$  polypeptides are encoded by at least 16, 4 and 7 genes, respectively. Most interest in G proteins has been focused on their  $\alpha$  subunits, since these proteins bind and hydrolyze GTP and most obviously regulate the activity of the best studied effectors. Several  $G_{\alpha}$  GTPase activating proteins (GAPs) have been identified and are designated RGS1, RGS2, RGS4, RGS7, RGS9, RGS10 and GAIP ( $G_{\alpha}$ -interacting protein). Each of these proteins has been shown to deactivate specific  $G_{\alpha}$  isoforms by increasing the rate at which they convert GTP to GDP. RGS2 has been shown to be an inhibitor of  $G_{\alpha q}$  function. RGS9 expression is restricted to photoreceptor cells and RGS9 has been shown to regulate  $G_{\alpha t}$ .

## REFERENCES

1. Simon, M.I., et al. 1991. Diversity of G proteins in signal transduction. *Science* 252: 802-808.
2. Cali, J.J., et al. 1992. Selective tissue distribution of G protein  $\gamma$  subunits, including a new form of the  $\gamma$  subunits identified by cDNA cloning. *J. Biol. Chem.* 267: 24023-24027.
3. McLaughlin, S.K., et al. 1992. Gustducin is a taste-cell-specific G protein closely related to the transducins. *Nature* 357: 563-569.
4. von Weizsacker, E., et al. 1992. Diversity among the  $\beta$  subunits of heterotrimeric GTP-binding proteins: characterization of a novel  $\beta$  subunit cDNA. *Biochem. Biophys. Res. Commun.* 183: 350-356.
5. Kleuss, C., et al. 1992. Different  $\beta$  subunits determine G protein interaction with transmembrane receptors. *Nature* 358: 424-426.
6. Conklin, B.R., et al. 1993. Structural elements of G  $\alpha$  subunits that interact with G  $\beta$   $\gamma$ , receptors, and effectors. *Cell* 73: 631-641.
7. Watson, N., et al. 1996. RGS family members: GTPase-activating proteins for heterotrimeric G protein  $\alpha$  subunits. *Nature* 383: 172-175.
8. Heximer, S.P., et al. 1997. RGS2/GOS8 is a selective inhibitor of  $G_{\alpha q}$  function. *Proc. Natl. Acad. Sci. USA* 94: 14389-14393.

## CHROMOSOMAL LOCATION

Genetic locus: RGS1 (human) mapping to 1q31; Rgs1 (mouse) mapping to 1 F.

## SOURCE

RGS1 (H-70) is a rabbit polyclonal antibody raised against amino acids 1-70 of RGS1 of human origin.

## PRODUCT

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

## STORAGE

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

## APPLICATIONS

RGS1 (H-70) is recommended for detection of RGS1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1–2  $\mu$ g per 100–500  $\mu$ g of total protein (1 ml of cell lysate)], 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).

RGS1 (H-70) is also recommended for detection of RGS1 in additional species, including equine and bovine.

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Suitable for use as control antibody for RGS1 siRNA (h): sc-36408 and RGS1 siRNA (m): sc-36409.

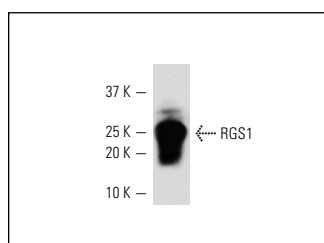
Molecular Weight of RGS1: 20 kDa.

Positive Controls: rat intestine extract.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/ 2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



RGS1 (H-70): sc-20758. Western blot analysis of RGS1 expression in rat intestine extract.

## 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.