

## RGS2 (N-16): sc-9933

### 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  $G_{\alpha}$  GTP-ase 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  $G_{\alpha t}$ .

### CHROMOSOMAL LOCATION

Genetic locus: RGS2 (human) mapping to 1q31.2; Rgs2 (mouse) mapping to 1 F.

### SOURCE

RGS2 (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of RGS2 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.

Blocking peptide available for competition studies, sc-9933 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### STORAGE

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

### APPLICATIONS

RGS2 (N-16) is recommended for detection of RGS2 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

RGS2 (N-16) is also recommended for detection of RGS2 in additional species, including equine.

Suitable for use as control antibody for RGS2 siRNA (h): sc-40659, RGS2 siRNA (m): sc-40660, RGS2 shRNA Plasmid (h): sc-40659-SH, RGS2 shRNA Plasmid (m): sc-40660-SH, RGS2 shRNA (h) Lentiviral Particles: sc-40659-V and RGS2 shRNA (m) Lentiviral Particles: sc-40660-V.

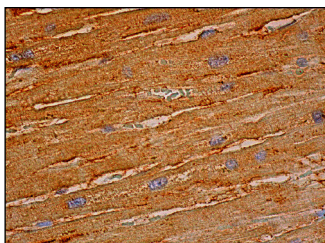
Molecular Weight of RGS2: 32 kDa.

Positive Controls: IMR-32 nuclear extract: sc-2148, MCF7 whole cell lysate: sc-2206 or mouse brain extract: sc-2253.

### 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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

### DATA



RGS2 (N-16): sc-9933. Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing cytoplasmic and membrane staining of myocytes.

### SELECT PRODUCT CITATIONS

- Doupnik, C.A., et al. 2001. Profile of RGS expression in single rat atrial myocytes. *Biochim. Biophys. Acta* 1522: 97-107.
- Li, Y., et al. 2005. Angiotensin II-evoked enhanced expression of RGS2 attenuates  $G_i$ -mediated adenylyl cyclase signaling in A10 cells. *Cardiovasc. Res.* 66: 503-511.
- Roy, A.A., et al. 2006. Up-regulation of endogenous RGS2 mediates cross-desensitization between  $G_s$  and  $G_q$  signaling in osteoblasts. *J. Biol. Chem.* 281: 32684-32693.
- Ji, M., et al. 2011. RGS2 and RGS4 modulate melatonin-induced potentiation of glycine currents in rat retinal ganglion cells. *Brain Res.* 1411: 1-8.

### 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 **RGS2 (BC-43): sc-100761**, our highly recommended monoclonal alternative to RGS2 (N-16).