

RGS2 (C-18): sc-7678

BACKGROUND

Heterotrimeric G proteins function to relay information from cell surface receptors to intracellular effectors. In mammals, G protein α , β and γ polypeptides are encoded by at least 16, 4 and 7 genes, respectively. Most interest in G proteins has been focused on their α subunits, since these proteins bind and hydrolyze GTP and most obviously regulate the activity of the best studied effectors. Several G_{α} GTP-ase activating proteins (GAPs) have been identified and are designated RGS1, RGS2, RGS4, RGS7, RGS9, RGS10 and GAIP (G_{α} -interacting protein). Each of these proteins has been shown to deactivate specific G_{α} 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

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2. Cali, J.J., et al. 1992. Selective tissue distribution of G protein γ subunits, including a new form of the γ 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 β -subunit cDNA. *Biochem. Biophys. Res. Commun.* 183: 350-356.
5. Kleuss, C., et al. 1992. Different β -subunits determine G-protein interaction with transmembrane receptors. *Nature* 358: 424-426.
6. Conklin, B.R., et al. 1993. Structural elements of G_{α} 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 α -subunits. *Nature* 383: 172-175.

CHROMOSOMAL LOCATION

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

SOURCE

RGS2 (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of RGS2 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-7678 P, (100 μ 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 (C-18) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

RGS2 (C-18) is also recommended for detection of RGS2 in additional species, including equine, canine, bovine, porcine and avian.

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.

SELECT PRODUCT CITATIONS

1. Luo, X., et al. 2001. RGS proteins provide biochemical control of agonist-evoked $[Ca^{2+}]_i$ oscillations. *Mol. Cell* 7: 651-660.
2. Zmijewski, J.W., et al. 2001. Oxidative stress and heat shock stimulate RGS2 expression in 1321N1 astrocytoma cells. *Arch. Biochem. Biophys.* 392: 192-196.
3. Ni, J., et al. 2006. Palmitoylation and its effect on the GTPase-activating activity and conformation of RGS2. *Int. J. Biochem. Cell Biol.* 38: 2209-2218.
4. Teplyuk, N.M., et al. 2008. Runx2 regulates G protein-coupled signaling pathways to control growth of osteoblast progenitors. *J. Biol. Chem.* 283: 27585-27597.

RESEARCH USE

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



Try **RGS2 (BC-43): sc-100761**, our highly recommended monoclonal alternative to RGS2 (C-18).