

RGS6 (N-18): sc-9711

BACKGROUND

Heterotrimeric G proteins function to relay information from cell surface receptors to various intracellular effectors. G proteins comprise α , β and γ subunits, and following activation the α subunit binds GTP and dissociates from the $\beta\gamma$ complex. A large group of proteins have been identified as GTPase-activating proteins (GAPs), including the RGS (regulator of G protein signaling) family, which serve to deactivate specific G_{α} isoforms by increasing the rate at which they convert GTP to GDP. A subfamily of RGS proteins expressed in the central nervous system contain, in addition to the highly conserved RGS domain, a characteristic GGL domain, or G protein γ subunit-like domain, which mediates binding to $G_{\beta 5}$ subunits. This subfamily, which includes RGS6, RGS7, RGS9 and RGS11, associates with $G_{\beta 5}$ to form active GAP complexes that are predominantly localized to the cytosol. RGS/ $\beta 5$ complexes preferentially target $G_{\alpha 0}$ subunit for hydrolysis and inhibit $G_{\beta 1\gamma 2}$ -mediated activation of phospholipase C.

REFERENCES

1. Conklin, B.R. and Bourne, H.R. 1993. Structural elements of G_{α} subunits that interact with $G_{\beta\gamma}$ receptors, and effectors. *Cell* 73: 631-641.
2. Snow, B.E., Krumin, A.M., Brothers, G.M., Lee, S.F., Wall, M.A., Chung, S., Mangion, J., Arya, S., Gilman, A.G. and Siderovski, D.P. 1998. A G protein γ subunit-like domain shared between RGS11 and other RGS proteins specifies binding to $G_{\beta 5}$ subunits. *Proc. Natl. Acad. Sci. USA* 95: 13307-13312.
3. Thomas, E.A., Danielson, P.E. and Sutcliffe, J.G. 1998. RGS9: a regulator of G-protein signalling with specific expression in rat and mouse striatum. *J. Neurosci. Res.* 52: 118-124.
4. Guan, K.L. and Han, M. 1999. A G-protein signaling network mediated by an RGS protein. *Genes Dev.* 13: 1763-1767.
5. Hepler, J.R. 1999. Emerging roles for RGS proteins in cell signalling. *Trends Pharmacol. Sci.* 20: 376-382.
6. Posner, B.A., Gilman, A.G. and Harris, B.A. 1999. Regulators of G protein signaling 6 and 7. Purification of complexes with $G_{\beta 5}$ and assessment of their effects on G protein-mediated signalin pathways. *J. Biol. Chem.* 274: 31087-31093.

CHROMOSOMAL LOCATION

Genetic locus: RGS6 (human) mapping to 14q24.2.

SOURCE

RGS6 (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of RGS6 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.

RESEARCH USE

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

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-9711 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

RGS6 (N-18) is recommended for detection of RGS6 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

RGS6 (N-18) is also recommended for detection of RGS6 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for RGS6 siRNA (h): sc-40665, RGS6 shRNA Plasmid (h): sc-40665-SH and RGS6 shRNA (h) Lentiviral Particles: sc-40665-V.

Molecular Weight of RGS6 isoforms: 50-57 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

1. Doupnik, C.A., Xu, T. and Shinaman, J.M. 2001. Profile of RGS expression in single rat atrial myocytes. *Biochim. Biophys. Acta* 1522: 97-107.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **RGS6/7 (F-10): sc-271643** or **RGS6/7 (B-10): sc-398222**, our highly recommended monoclonal alternatives to RGS6 (N-18).