

RGS6 (U-23): sc-133958

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 $G_{\alpha o}$ subunit for hydrolysis and inhibit $G_{\beta 1\gamma 2}$ -mediated activation of phospholipase C.

REFERENCES

- 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.
- Snow, B.E., et al. 1998. A G protein gamma 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.
- Thomas, E.A., et al. 1998. RGS9: a regulator of G protein signalling with specific expression in rat and mouse striatum. *J. Neurosci. Res.* 52: 118-124.
- Guan, K.L. and Han, M. 1999. A G protein signaling network mediated by an RGS protein. *Genes Dev.* 13: 1763-1767.
- Hepler, J.R. 1999. Emerging roles for RGS proteins in cell signaling. *Trends Pharmacol. Sci.* 20: 376-382.

CHROMOSOMAL LOCATION

Genetic locus: RGS6 (human) mapping to 14q24.2; Rgs6 (mouse) mapping to 12 D1.

SOURCE

RGS6 (U-23) is an affinity purified rabbit polyclonal antibody raised against synthetic RGS6 peptide of human origin.

PRODUCT

Each vial contains 50 μ g IgG in 500 μ l PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

STORAGE

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

PROTOCOLS

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

APPLICATIONS

RGS6 (U-23) is recommended for detection of RGS6 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], 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).

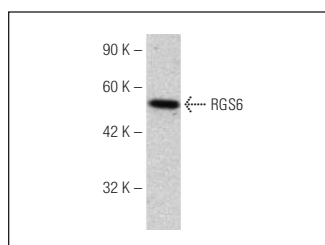
Suitable for use as control antibody for RGS6 siRNA (h): sc-40665, RGS6 siRNA (m): sc-40666, RGS6 shRNA Plasmid (h): sc-40665-SH, RGS6 shRNA Plasmid (m): sc-40666-SH, RGS6 shRNA (h) Lentiviral Particles: sc-40665-V and RGS6 shRNA (m) Lentiviral Particles: sc-40666-V.

Positive Controls: Jurkat whole cell lysate: sc-2204 or human kidney tissue.

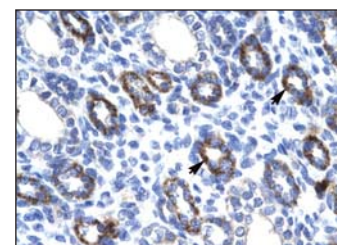
RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



RGS6 (U-23): sc-133958. Western blot analysis of RGS6 expression in Jurkat whole cell lysate.



RGS6 (U-23): sc-133958. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human kidney tissue showing cytoplasmic localization.

RESEARCH USE

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