

RGS9 (H-231): sc-25497

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

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2. Snow, B.E., et al. 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., et al. 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., et al. 1999. A G-protein signaling network mediated by an RGS protein. *Genes and Dev.* 13: 1763-1767.
5. Hepler, J.R. 1999. Emerging roles for RGS proteins in cell signaling. *Trends Pharmacol. Sci.* 20: 376-382.
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CHROMOSOMAL LOCATION

Genetic locus: RGS9 (human) mapping to 17q24.1; Rgs9 (mouse) mapping to 11 E1.

SOURCE

RGS9 (H-231) is a rabbit polyclonal antibody raised against amino acids 444-674 of RGS9 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.

STORAGE

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

APPLICATIONS

RGS9 (H-231) is recommended for detection of RGS9 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for RGS9 siRNA (h): sc-36412, RGS9 siRNA (m): sc-36413, RGS9 shRNA Plasmid (h): sc-36412-SH, RGS9 shRNA Plasmid (m): sc-36413-SH, RGS9 shRNA (h) Lentiviral Particles: sc-36412-V and RGS9 shRNA (m) Lentiviral Particles: sc-36413-V.

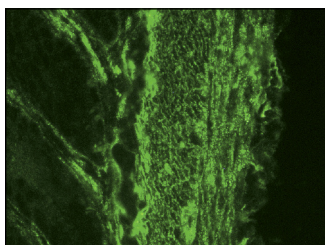
Molecular Weight of RGS9: 55 kDa.

Positive Controls: A-10 cell lysate: sc-3806 or PC-12 cell lysate: sc-2250.

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



RGS9 (H-231): sc-25497. Immunofluorescence staining of normal mouse intestine frozen section showing membrane staining.

RESEARCH USE

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

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Try **RGS9 (C-8): sc-377252**, our highly recommended monoclonal alternative to RGS9 (H-231).