

RGS8 (H-7): sc-390393

BACKGROUND

The regulators of G protein signaling (RGS) proteins inhibit heterotrimeric G protein signaling. RGS proteins work by functioning as GTPase-activating proteins (which increase the GTPase activity of G protein α subunits) thereby driving G proteins into their inactive GDP-bound form. RGS8 is a 180 amino acid RGS protein that is expressed mainly in the brain, specifically in the Purkinje cells of the cerebellum. RGS8 differs from most other RGS members in that RGS8 has a positive effect on G protein-coupled inwardly rectifying K⁺ (GIRK1/2) channels, whereas other RGS proteins function as simple negative regulators. Because both positive and negative effects have been observed with the RGS8 protein, RGS8 expression most likely improves upon the kinetic efficacy of G-proteins. The NH₂ terminus of RGS8 is responsible for its subcellular localization.

REFERENCES

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2. Saitoh, O., et al. 1999. RGS7 and RGS8 differentially accelerate G protein-mediated modulation of K⁺ currents. *J. Biol. Chem.* 274: 9899-9904.
3. Saitoh, O., et al. 2001. Regulator of G protein signaling 8 (RGS8) requires its NH₂ terminus for subcellular localization and acute desensitization of G protein-gated K⁺ channels. *J. Biol. Chem.* 276: 5052-5058.
4. Saitoh, O., et al. 2002. Alternative splicing of RGS8 gene determines inhibitory function of receptor type-specific G_q signaling. *Proc. Natl. Acad. Sci. USA* 99: 10138-10143.
5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607189. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Saitoh, O. and Yoshihiro, K. 2004. Biochemical and electrophysiological analyses of RGS8 function. *Meth. Enzymol.* 390: 129-148.
7. Benians, A., et al. 2004. Participation of RGS8 in the ternary complex of agonist, receptor and G protein. *Biochem. Soc. Trans.* 32: 1045-1047.

CHROMOSOMAL LOCATION

Genetic locus: RGS8 (human) mapping to 1q25.3; Rgs8 (mouse) mapping to 1 G3.

SOURCE

RGS8 (H-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 19-51 near the N-terminus of RGS8 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-390393 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

RGS8 (H-7) is recommended for detection of RGS8 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

RGS8 (H-7) is also recommended for detection of RGS8 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for RGS8 siRNA (h): sc-61472, RGS8 siRNA (m): sc-61473, RGS8 shRNA Plasmid (h): sc-61472-SH, RGS8 shRNA Plasmid (m): sc-61473-SH, RGS8 shRNA (h) Lentiviral Particles: sc-61472-V and RGS8 shRNA (m) Lentiviral Particles: sc-61473-V.

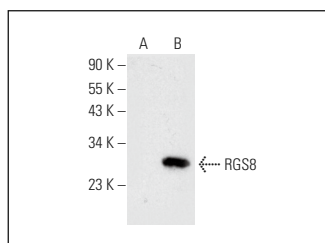
Molecular Weight of RGS8: 21 kDa.

Positive Controls: RGS8 (h): 293T Lysate: sc-371567.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



RGS8 (H-7): sc-390393. Western blot analysis of RGS8 expression in non-transfected: sc-117752 (A) and human RGS8 transfected: sc-371567 (B) 293T whole cell lysates.

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.