SANTA CRUZ BIOTECHNOLOGY, INC.

RGS8 (H-65): sc-134552

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 NH_2 terminus of RGS8 is responsible for its subcellular localization.

REFERENCES

1. Saitoh, O., et al. 1997. RGS8 accelerates G protein-mediated modulation of K^+ currents. Nature 390: 525-529.
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 NH_2 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. Methods 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-65) is a rabbit polyclonal antibody raised against amino acids 1-65 mapping at the N-terminus of RGS8 of human origin.

PRODUCT

Each vial contains 200 µg 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

RGS8 (H-65) is recommended for detection of RGS8 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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-65) is also recommended for detection of RGS8 in additional species, including equine, canine 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.

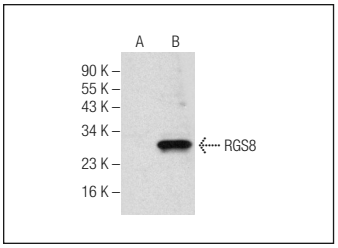
Molecular Weight of RGS8: 21 kDa.

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

RECOMMENDED 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



RGS8 (H-65): sc-134552. Western blot analysis of RGS8 expression in non-transfected: sc-117752 (**A**) and human RGS8 transfected: sc-371567 (**B**) 293T whole cell lysates.

RESEARCH USE

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