SANTA CRUZ BIOTECHNOLOGY, INC.

RGS8 (F-3): sc-398949

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.

CHROMOSOMAL LOCATION

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

SOURCE

RGS8 (F-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 127-146 at the C-terminus of RGS8 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RGS8 (F-3) is available conjugated to agarose (sc-398949 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398949 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398949 PE), fluorescein (sc-398949 FITC), Alexa Fluor® 488 (sc-398949 AF488), Alexa Fluor® 546 (sc-398949 AF546), Alexa Fluor® 594 (sc-398949 AF594) or Alexa Fluor® 647 (sc-398949 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398949 AF680) or Alexa Fluor® 790 (sc-398949 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398949 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

RGS8 (F-3) 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 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).

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.

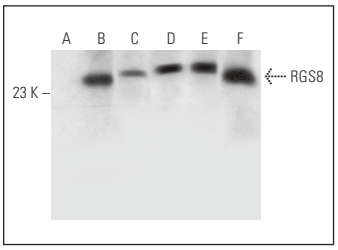
Molecular Weight of RGS8: 21 kDa.

Positive Controls: RGS8 (h): 293T Lysate: sc-371567, Hep G2 cell lysate: sc-2227 or HEK293 whole cell lysate: sc-45136.

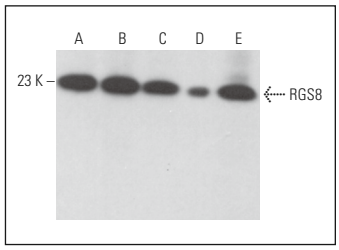
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 (F-3): sc-398949. Western blot analysis of RGS8 expression in non-transfected 293T: sc-117752 (**A**), human RGS8 transfected 293T: sc-371567 (**B**), IMR-32 (**C**), Hep G2 (**D**) and HEK293 (**E**) whole cell lysates and human lateral ventricle tissue extract (**F**).



RGS8 (F-3): sc-398949. Western blot analysis of RGS8 expression in IMR-32 (**A**), SUP-T1 (**B**), TF-1 (**C**), TK-1 (**D**) and C2C12 (**E**) 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.

PROTOCOLS

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