

# RGS14 (H-70): sc-30202

## BACKGROUND

Regulators of G-protein signaling (RGS proteins) are a family of highly diverse, multifunctional signaling proteins that share a conserved 120 amino acid domain (RGS domain). RGS domains bind directly to activated  $G_{\alpha}$  subunits and act as GTPase-activating proteins (GAPs) to attenuate and/or modulate hormone and neurotransmitter receptor-initiated signaling by both  $G_{\alpha}$ -GTP and  $G_{\beta\gamma}$ . RGS proteins shorten the lifetime of the activated G protein. Western blot analysis shows strong expression of RGS14 as a primarily cytosolic protein restricted to brain and spleen. It is suggested that RGS14 may constitute a bridging molecule that allows cross-regulation of signaling pathways downstream from G protein-coupled receptors. The gene which encodes RGS14 maps to human chromosome 5q35.3.

## REFERENCES

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2. Kardstuncer, T., Wu, H., Lim, A.L. and Neer, E.J. 1998. Cardiac myocytes express mRNA for ten RGS proteins: changes in RGS mRNA expression in ventricular myocytes and cultured atria. *FEBS Lett.* 438: 285-288.
3. Hepler, J.R. 1999. Emerging roles for RGS proteins in cell signalling. *Trends Pharmacol. Sci.* 20: 376-382.
4. Traver, S., Bidot, C., Spassky, N., Baltauss, T., de Tand, M.F., Thomas, J.L., Zalc, B., Janoueix-Lerosey, I. and de Gunzburg, J. 2000. RGS14 is a novel Rap effector that preferentially regulates the GTPase activity of  $G_{\alpha}$ . *Biochem. J.* 350: 19-29.
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## CHROMOSOMAL LOCATION

Genetic locus: RGS14 (human) mapping to 5q35.3; Rgs14 (mouse) mapping to 13 B1.

## SOURCE

RGS14 (H-70) is a rabbit polyclonal antibody raised against amino acids 191-260 mapping within an internal region of RGS14 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ 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

RGS14 (H-70) is recommended for detection of RGS14 isoforms 1-4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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).

RGS14 (H-70) is also recommended for detection of RGS14 isoforms 1-4 in additional species, including bovine and porcine.

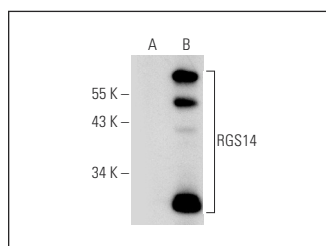
Suitable for use as control antibody for RGS14 siRNA (h): sc-40673, RGS14 siRNA (m): sc-40674, RGS14 shRNA Plasmid (h): sc-40673-SH, RGS14 shRNA Plasmid (m): sc-40674-SH, RGS14 shRNA (h) Lentiviral Particles: sc-40673-V and RGS14 shRNA (m) Lentiviral Particles: sc-40674-V.

Positive Controls: RGS14 (m) 293T Lysates: sc-123099.

## 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



RGS14 (H-70): sc-30202. Western blot analysis of RGS14 expression in non-transfected: sc-117752 (A) and mouse RGS14 transfected: sc-123099 (B) 293T whole cell lysates.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.