

RGS12 (T-20): sc-17739

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_{α} subunits and act as GTPase-activating proteins (GAPs) to attenuate and/or modulate hormone and neurotransmitter receptor-initiated signaling by both G_{α} -GTP and $G_{\beta\gamma}$. RGS proteins shorten the lifetime of the activated G protein. RGS12 is a GTPase-activating protein for G_i class α subunits. Rat cardiac myocytes express mRNA for at least 10 RGS proteins, including RGS12. RGS12 contains a Ras-binding domain (RBD), PDZ and PTB domains and single "LGN motifs" that are guanine nucleotide exchange factors specific for the α -subunit of G proteins. There are twelve distinct transcripts of human RGS12 that arise by unusually complex splicing of the RGS12 gene and are expressed at high levels in brain and lung and lower levels in testis, heart and spleen. The RGS gene generates proteins that are expressed in a tissue-specific manner and range in size from 356 to 1447 amino acids. The human RGS12 gene maps to chromosome 4p16.3.

REFERENCES

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2. Kardestuncer, 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. Snow, B.E., Hall, R.A., Krumins, A.M., Brothers, G.M., Bouchard, D., Brothers, C.A., Chung, S., Mangion, J., Gilman, A.G., Lefkowitz, R.J. and Siderovski, D.P. 1998. GTPase activating specificity of RGS12 and binding specificity of an alternatively spliced PDZ (PSD-95/Dlg/ZO-1) domain. *J. Biol. Chem.* 273: 17749-17755.
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SOURCE

RGS12 (T-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of RGS12 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.

Blocking peptide available for competition studies, sc-17739 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

RGS12 (T-20) is recommended for detection of RGS12 isoforms 1-4 of human origin and both RGS12 isoforms of mouse and rat 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).

RGS12 (T-20) is also recommended for detection of RGS12 isoforms 1-4 in additional species, including equine, canine, porcine and avian.

Suitable for use as control antibody for RGS12 siRNA (h): sc-40671, RGS12 siRNA (m): sc-40672, RGS12 shRNA Plasmid (h): sc-40671-SH, RGS12 shRNA Plasmid (m): sc-40672-SH, RGS12 shRNA (h) Lentiviral Particles: sc-40671-V and RGS12 shRNA (m) Lentiviral Particles: sc-40672-V.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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 or our catalog for detailed protocols and support products.


 MONOS
Satisfaction
Guaranteed

Try **RGS12 (G-4): sc-398545** or **RGS12 (A-2): sc-514173**, our highly recommended monoclonal alternatives to RGS12 (T-20).