

RGS4 (R-16): sc-31187

BACKGROUND

Heterotrimeric G proteins function to relay information from cell surface receptors to intracellular effectors. In mammals, G protein α , β and γ polypeptides are encoded by at least 16, 4 and 7 genes, respectively. Most interest in G proteins has been focused on their α subunits, since these proteins bind and hydrolyze GTP and most obviously regulate the activity of the best studied effectors. Four G_{α} GTPase-activating proteins (GAPs) have been identified and are designated RGS1 (regulator of G protein signaling), RGS4, RGS10 and GAIP (G_{α} -interacting protein). Each of these proteins has been shown to deactivate specific G_{α} isoforms by increasing the rate at which they convert GTP to GDP. RGS1, RGS4 and GAIP bind tightly to and exhibit GAP activity towards $G_{\alpha i}$, $G_{\alpha o}$ and $G_{\alpha t}$, but not $G_{\alpha s}$. RGS10 increases the GTP hydrolytic activity of several members of the $G_{\alpha i}$ subfamily including $G_{\alpha i-3}$, $G_{\alpha z}$, and $G_{\alpha o}$.

REFERENCES

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3. McLaughlin, S.K., et al. 1992. Gustducin is a taste-cell-specific G protein closely related to the transducins. *Nature* 357: 563-569.
4. Kleuss, C., et al. 1992. Different β subunits determine G protein interaction with transmembrane receptors. *Nature* 358: 424-426.
5. Cali, J.J., et al. 1992. Selective tissue distribution of G protein γ subunits, including a new form of the γ subunits identified by cDNA cloning. *J. Biol. Chem.* 267: 24023-24027.
6. Conklin, B.R., et al. 1993. Structural elements of G_{α} subunits that interact with $G_{\beta\gamma}$ receptors, and effectors. *Cell* 73: 631-641.
7. Watson, N., et al. 1996. RGS family members: GTPase-activating proteins for heterotrimeric G-protein α -subunits. *Nature* 383: 172-175.
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CHROMOSOMAL LOCATION

Genetic locus: RGS4 (human) mapping to 1q23.3; Rgs4 (mouse) mapping to 1 H3.

SOURCE

RGS4 (R-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of RGS4 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-31187 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

RGS4 (R-16) is recommended for detection of RGS4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

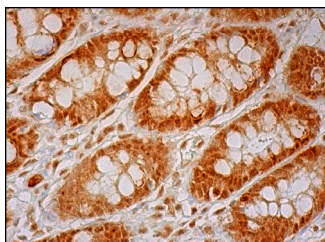
RGS4 (R-16) is also recommended for detection of RGS4 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for RGS4 siRNA (h): sc-40663, RGS4 siRNA (m): sc-40664, RGS4 shRNA Plasmid (h): sc-40663-SH, RGS4 shRNA Plasmid (m): sc-40664-SH, RGS4 shRNA (h) Lentiviral Particles: sc-40663-V and RGS4 shRNA (m) Lentiviral Particles: sc-40664-V.

Molecular Weight of RGS4 isoforms 1/2/3/4/5: 23/23/34/11/21 kDa.

Positive Controls: SK-N-SH cell lysate: sc-2410, SK-N-MC cell lysate: sc-2237 or rat brain extract: sc-2392.

DATA



RGS4 (R-16): sc-31187. Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing cytoplasmic and nuclear staining of glandular cells and nuclear staining of interstitial cells.

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 **RGS4 (H-12): sc-398348** or **RGS4 (D-8): sc-398658**, our highly recommended monoclonal alternatives to RGS4 (R-16).