

RGS2 (m): 293T Lysate: sc-123104

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. Several G_{α} GTP-ase activating proteins (GAPs) have been identified and are designated RGS1, RGS2, RGS4, RGS7, RGS9, 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. RGS2 has been shown to be an inhibitor of $G_{\alpha q}$ function. RGS9 expression is restricted to photoreceptor cells and RGS9 has been shown to regulate $G_{\alpha t}$.

REFERENCES

1. Simon, M.I., et al. 1991. Diversity of G proteins in signal transduction. *Science* 252: 802-808.
2. 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.
3. von Weizsacker, E., et al. 1992. Diversity among the β subunits of heterotrimeric GTP-binding proteins: characterization of a novel β -subunit cDNA. *Biochem. Biophys. Res. Comm.* 183: 350-356.
4. McLaughlin, S.K., et al. 1992. Gustducin is a taste-cell-specific G protein closely related to the transducins. *Nature* 357: 563-569.
5. Kleuss, C., et al. 1992. Different β -subunits determine G protein interaction with transmembrane receptors. *Nature* 358: 424-426.
6. Conklin, B.R. and Bourne, H.R. 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.
8. Heximer, S.P., et al. 1997. RGS2/GOS8 is a selective inhibitor of $G_{\alpha q}$ function. *Proc. Natl. Acad. Sci. USA* 94: 14389-14393.
9. He, W., et al. 1998. RGS9, a GTPase accelerator for phototransduction. *Neuron* 20: 95-102.

CHROMOSOMAL LOCATION

Genetic locus: Rgs2 (mouse) mapping to 1 F.

PRODUCT

RGS2 (m): 293T Lysate represents a lysate of mouse RGS2 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

RESEARCH USE

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

APPLICATIONS

RGS2 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive RGS2 antibodies. Recommended use: 10-20 μ l per lane.

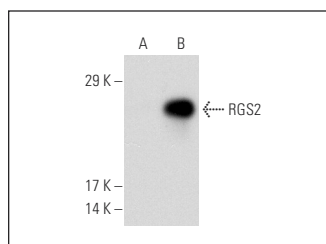
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RGS2 (BC-43): sc-100761 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse RGS2 expression in RGS2 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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.

DATA



RGS2 (BC-43): sc-100761. Western blot analysis of RGS2 expression in non-transfected: sc-117752 (A) and mouse RGS2 transfected: sc-123104 (B) 293T whole cell lysates.

PROTOCOLS

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