

RGS5 (m2): 293T Lysate: sc-123108

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 activated G proteins. Vascular endothelial cells express the RGS protein RGS5, where it correlates with capillary morphogenesis, thus rendering it a candidate gene involved in capillary growth, angiogenesis, and also potentially the pathophysiology of stroke.

REFERENCES

1. Kardesuncer, T., et al. 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.
2. Hepler, J.R. 1999. Emerging roles for RGS proteins in cell signalling. *Trends Pharmacol. Sci.* 20: 376-382.
3. Wieland, T., et al. 2003. Regulators of G-protein signalling: multifunctional proteins with impact on signalling in the cardiovascular system. *Pharmacol. Ther.* 97: 95-115.
4. Bondjers, C., et al. 2003. Transcription profiling of platelet-derived growth factor-B-deficient mouse embryos identifies RGS5 as a novel marker for pericytes and vascular smooth muscle cells. *Am. J. Pathol.* 162: 721-729.
5. Cho, H., et al. 2003. Pericyte-specific expression of RGS5: implications for PDGF and EDG receptor signaling during vascular maturation. *FASEB J.* 17: 440-442.
6. Li, J., et al. 2004. Regulator of G protein signaling 5 marks peripheral arterial smooth muscle cells and is downregulated in atherosclerotic plaque. *J. Vasc. Surg.* 40: 519-528.
7. Furuya, M., et al. 2004. Expression of regulator of G protein signalling protein 5 (RGS5) in the tumour vasculature of human renal cell carcinoma. *J. Pathol.* 203: 551-558.

CHROMOSOMAL LOCATION

Genetic locus: *Rgs5* (mouse) mapping to 1 H2.

PRODUCT

RGS5 (m2): 293T Lysate represents a lysate of mouse RGS5 transfected 293T cells and is provided as 100 µg protein in 200 µl 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.

PROTOCOLS

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

APPLICATIONS

RGS5 (m2): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive RGS5 antibodies. Recommended use: 10-20 µl per lane.

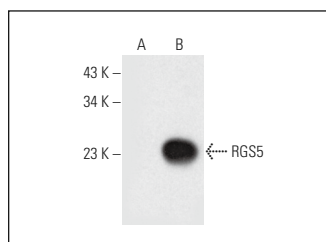
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RGS5 (B-4): sc-514184 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse RGS5 expression in RGS5 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-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.

DATA



RGS5 (B-4): sc-514184. Western blot analysis of RGS5 expression in non-transfected: sc-117752 (A) and mouse RGS5 transfected: sc-123108 (B) 293T whole cell lysates.

RESEARCH USE

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