SANTA CRUZ BIOTECHNOLOGY, INC.

RGS5 (H-1): sc-390245

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. Kardestuncer, 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.

CHROMOSOMAL LOCATION

Genetic locus: RGS5 (human) mapping to 1q23.3; Rgs5 (mouse) mapping to 1 H3.

SOURCE

RGS5 (H-1) is a mouse monoclonal antibody raised against amino acids 5-49 mapping near the N-terminus of RGS5 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

RGS5 (H-1) is recommended for detection of RGS5 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

Suitable for use as control antibody for RGS5 siRNA (h): sc-45814, RGS5 siRNA (m): sc-45815, RGS5 shRNA Plasmid (h): sc-45814-SH, RGS5 shRNA Plasmid (m): sc-45815-SH, RGS5 shRNA (h) Lentiviral Particles: sc-45814-V and RGS5 shRNA (m) Lentiviral Particles: sc-45815-V.

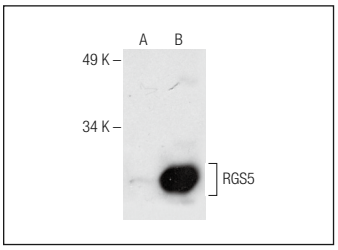
Molecular Weight of RGS5: 25 kDa.

Positive Controls: RGS5 (m2): 293T Lysate: sc-123108.

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



RGS5 (H-1): sc-390245. Western blot analysis of RGS5 expression in non-transfected: sc-117752 (**A**) and mouse RGS5 transfected: sc-123108 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Chan, E.C., et al. 2018. Regulator of G protein signaling 5 restricts neutrophil chemotaxis and trafficking. J. Biol. Chem. 293: 12690-12702.
2. Abbadi, D., et al. 2019. Muscle development and regeneration controlled by AUF1-mediated stage-specific degradation of fate-determining checkpoint mRNAs. Proc. Natl. Acad. Sci. USA 116: 11285-11290.
3. Ito, Y., et al. 2021. NKX2-1 re-expression induces cell death through apoptosis and necrosis in dedifferentiated thyroid carcinoma cells. PLoS ONE 16: e0259558.

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 for detailed protocols and support products.