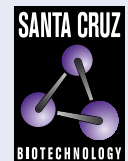


RGS5 (B-4): sc-514184



The Power to Question

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.

CHROMOSOMAL LOCATION

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

SOURCE

RGS5 (B-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 28-47 near the N-terminus of RGS5 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RGS5 (B-4) is available conjugated to agarose (sc-514184 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514184 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514184 PE), fluorescein (sc-514184 FITC), Alexa Fluor® 488 (sc-514184 AF488), Alexa Fluor® 546 (sc-514184 AF546), Alexa Fluor® 594 (sc-514184 AF594) or Alexa Fluor® 647 (sc-514184 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514184 AF680) or Alexa Fluor® 790 (sc-514184 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-514184 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

RGS5 (B-4) 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 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), 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).

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.

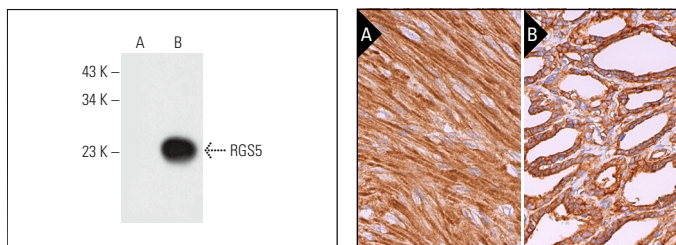
Molecular Weight of RGS5: 25 kDa.

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-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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

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.

RGS5 (B-4): sc-514184. Immunoperoxidase staining of formalin fixed, paraffin-embedded human smooth muscle (A) and human seminal vesicle (B) tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

- Kremer, H., et al. 2020. Pro-angiogenic activity discriminates human adipose-derived stromal cells from retinal pericytes: considerations for cell-based therapy of diabetic retinopathy. *Front. Cell Dev. Biol.* 8: 387.
- Heathcote, K.C., et al. 2024. N-terminal cysteine acetylation and oxidation patterns may define protein stability. *Nat. Commun.* 15: 5360.

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.