

RGS16 (A-9): sc-166083

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 the activated G protein. RGS16 is expressed at high levels in retina. Overexpression of RGS16 inhibits G protein-coupled mitogenic signal transduction and activation of the mitogen-activated protein kinase (MAPK) signaling cascade. RGS16 enhances the rate of GTP-hydrolysis by transducin, suggesting that RGS16 may play a role in regulating the kinetics of signaling in the phototransduction cascade. The gene which encodes RGS16 maps to human chromosome 1q25.3.

REFERENCES

- Chen, C.K., et al. 1996. RGS-r, a retinal specific RGS protein, binds an intermediate conformation of transducin and enhances recycling. *Proc. Nat. Acad. Sci. USA* 93: 12885-12889.
- Kardstuncer, 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.
- Snow, B.E., et al. 1998. Cloning of a retinally abundant regulator of G protein signaling (RGS-r/RGS16): genomic structure and chromosomal localization of the human gene. *Gene* 206: 247-253.
- Hepler, J.R. 1999. Emerging roles for RGS proteins in cell signalling. *Trends Pharmacol. Sci.* 20: 376-382.

CHROMOSOMAL LOCATION

Genetic locus: RGS16 (human) mapping to 1q25.3; Rgs16 (mouse) mapping to 1 G3.

SOURCE

RGS16 (A-9) is a mouse monoclonal antibody raised against amino acids 103-202 mapping at the C-terminus of RGS16 of human origin.

PRODUCT

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

RGS16 (A-9) is available conjugated to agarose (sc-166083 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166083 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166083 PE), fluorescein (sc-166083 FITC), Alexa Fluor[®] 488 (sc-166083 AF488), Alexa Fluor[®] 546 (sc-166083 AF546), Alexa Fluor[®] 594 (sc-166083 AF594) or Alexa Fluor[®] 647 (sc-166083 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-166083 AF680) or Alexa Fluor[®] 790 (sc-166083 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

RGS16 (A-9) is recommended for detection of RGS16 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for RGS16 siRNA (h): sc-37161, RGS16 siRNA (m): sc-37162, RGS16 shRNA Plasmid (h): sc-37161-SH, RGS16 shRNA Plasmid (m): sc-37162-SH, RGS16 shRNA (h) Lentiviral Particles: sc-37161-V and RGS16 shRNA (m) Lentiviral Particles: sc-37162-V.

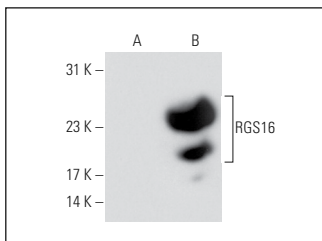
Molecular Weight of RGS16: 23 kDa.

Positive Controls: rat eye extract: sc-364805, mouse eye extract: sc-364241 or RGS16 (m): 293T Lysate: sc-123100.

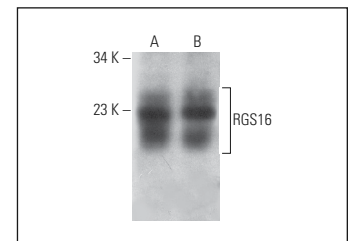
RECOMMENDED SUPPORT REAGENTS

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.

DATA



RGS16 (A-9): sc-166083. Western blot analysis of RGS16 expression in non-transfected: sc-117752 (A) and mouse RGS16 transfected: sc-123100 (B) 293T whole cell lysates.



RGS16 (A-9): sc-166083. Western blot analysis of RGS16 expression in mouse eye (A) and rat eye (B) tissue extracts.

SELECT PRODUCT CITATIONS

- Hernandez, K.R., et al. 2019. Regulator of G-protein signaling 16 is a negative modulator of platelet function and thrombosis. *J. Am. Heart Assoc.* 8: e011273.

RESEARCH USE

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

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