

# RGS16 (F-9): sc-398120

## 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  $G_{\alpha}$  subunits and act as GTPase-activating proteins (GAPs) to attenuate and/or modulate hormone and neurotransmitter receptor-initiated signaling by both  $G_{\alpha}$ -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

1. 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.
2. Kardostuncer, 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.
3. 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.
4. Hepler, J.R. 1999. Emerging roles for RGS proteins in cell signalling. *Trends Pharmacol. Sci.* 20: 376-382.
5. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 602514. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

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

## SOURCE

RGS16 (F-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 170-199 within an internal region of RGS16 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-398120 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## STORAGE

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

## APPLICATIONS

RGS16 (F-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  $\mu$ g per 100-500  $\mu$ 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.

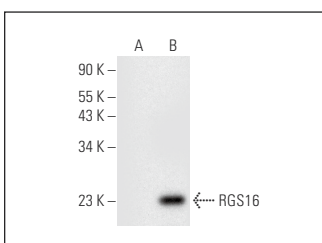
Molecular Weight of RGS16: 23 kDa.

Positive Controls: 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 $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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 $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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 (F-9): sc-398120. Western blot analysis of RGS16 expression in non-transfected: sc-117752 (A) and mouse RGS16 transfected: sc-123100 (B) 293T whole cell lysates.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.