

RGS16 (C-18): sc-23859

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-q31.

REFERENCES

- Chen, C.K., Wieland, T. and Simon, M.I. 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.
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- Snow, B.E., Antonio, L., Suggs, S. and Siderovski, D.P. 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.
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CHROMOSOMAL LOCATION

Genetic locus: RGS16 (human) mapping to 1q25-q31; Rgs16 (mouse) mapping to 1 G3.

SOURCE

RGS16 (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of RGS16 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-23859 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

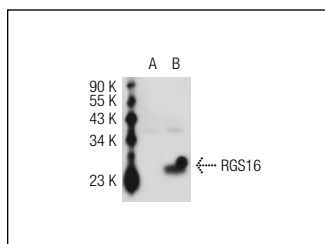
APPLICATIONS

RGS16 (C-18) is recommended for detection of RGS16 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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.

Positive Controls: Y79 cell lysate: sc-2240.

DATA



RGS16 (C-18): sc-23859. Western blot analysis of RGS16 expression in non-transfected: sc-117752 (A) and mouse RGS16 transfected: sc-123100 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Shi, J., Damjanoska, K.J., Zemaitaitis, B., Garcia, F., Carrasco, G., Sullivan, N.R., She, Y., Young, K.H., Battaglia, G., Van De kar, L.D., Howland, D.S. and Muma, N.A. 2006. Alterations in 5-HT2A receptor signaling in male and female transgenic rats over-expressing either G_q or RGS-insensitive G_q protein. *Neuropharmacology* 51: 524-535.

RESEARCH USE

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

PROTOCOLS

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



Try **RGS16 (A-9): sc-166083** or **RGS16 (F-9): sc-398120**, our highly recommended monoclonal alternatives to RGS16 (C-18).