

# RGS11 (C-19): sc-9724

## BACKGROUND

Heterotrimeric G proteins function to relay information from cell surface receptors to various intracellular effectors. G proteins comprise  $\alpha$ ,  $\beta$  and  $\gamma$  subunits, and following activation the  $\alpha$  subunit binds GTP and dissociates from the  $\beta\gamma$  complex. A large group of proteins have been identified as GTPase-activating proteins (GAPs), including the RGS (regulator of G protein signaling) family, which serve to deactivate specific  $G\alpha$  isoforms by increasing the rate at which they convert GTP to GDP. A subfamily of RGS proteins expressed in the central nervous system contain, in addition to the highly conserved RGS domain, a characteristic GGL domain, or G protein  $\gamma$  subunit-like domain, which mediates binding to  $G\beta_5$  subunits. This subfamily, which includes RGS6, RGS7, RGS9 and RGS11, associates with  $G\beta_5$  to form active GAP complexes that are predominantly localized to the cytosol. RGS/ $\beta_5$  complexes preferentially target  $G\alpha_o$  subunit for hydrolysis and inhibit  $G\beta_1\gamma_2$ -mediated activation of phospholipase C.

## REFERENCES

1. Conklin, B.R., et al. 1993. Structural elements of  $G\alpha$  subunits that interact with  $G\beta\gamma$ , receptors, and effectors. *Cell* 73: 631-641.
2. Snow, B.E., et al. 1998. A G protein  $\gamma$  subunit-like domain shared between RGS11 and other RGS proteins specifies binding to  $G\beta_5$  subunits. *Proc. Natl. Acad. Sci. USA* 95: 13307-13312.
3. Thomas, E.A., et al. 1998. RGS9: a regulator of G protein signalling with specific expression in rat and mouse striatum. *J. Neurosci. Res.* 52: 118-124.
4. Guan, K.L., et al. 1999. A G protein signaling network mediated by an RGS protein. *Genes Dev.* 13: 1763-1767.

## CHROMOSOMAL LOCATION

Genetic locus: RGS11 (human) mapping to 16p13.3; Rgs11 (mouse) mapping to 17 A3.3.

## SOURCE

RGS11 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of RGS11 of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-9724 P, (100  $\mu$ 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.

## RESEARCH USE

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

## APPLICATIONS

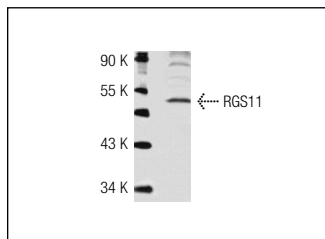
RGS11 (C-19) is recommended for detection of RGS11 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution 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 RGS11 siRNA (h): sc-40669, RGS11 siRNA (m): sc-40670, RGS11 shRNA Plasmid (h): sc-40669-SH, RGS11 shRNA Plasmid (m): sc-40670-SH, RGS11 shRNA (h) Lentiviral Particles: sc-40669-V and RGS11 shRNA (m) Lentiviral Particles: sc-40670-V.

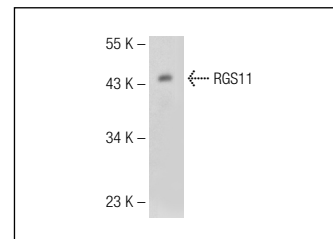
Molecular Weight of RGS11: 50 kDa.

Positive Controls: rat brain extract: sc-2392, SK-N-SH cell lysate: sc-2410 or IMR-32 cell lysate: sc-2409.

## DATA



RGS11 (C-19): sc-9724. Western blot analysis of RGS11 expression in rat brain extract.



RGS11 (C-19): sc-9724. Western blot analysis of RGS11 expression in mouse brain tissue extract.

## SELECT PRODUCT CITATIONS

1. Garzon, J., et al. 2003. The R7 subfamily of RGS proteins assists tachyphylaxis and acute tolerance at  $\mu$ -opioid receptors. *Neuropsychopharmacology* 28: 1983-1990.
2. Lopez-Fando, A., et al. 2005. Expression of neural RGS-R7 and  $G\beta_5$  proteins in response to acute and chronic morphine. *Neuropsychopharmacology* 30: 99-110.
3. Garzon, J., et al. 2005. Morphine alters the selective association between  $\mu$ -opioid receptors and specific RGS proteins in mouse periaqueductal gray matter. *Neuropharmacology* 48: 853-868.
4. Garzon, J., et al. 2005. Activation of  $\mu$ -opioid receptors transfers control of  $G\alpha$  subunits to the regulator of G protein signaling RGS9-2: role in receptor desensitization. *J. Biol. Chem.* 280: 8951-8960.



Try **RGS11 (E-3): sc-515412**, our highly recommended monoclonal alternative to RGS11 (C-19).