

# RGS22 (E-12): sc-98103

## BACKGROUND

Heterotrimeric G proteins function to relay information from cell surface receptors to intracellular effectors. In mammals, G protein  $\alpha$ ,  $\beta$  and  $\gamma$  polypeptides are encoded by at least 16, 4 and 7 genes, respectively. Most interest in G proteins has been focused on their  $\alpha$  subunits, since these proteins bind and hydrolyze GTP and most obviously regulate the activity of the best studied effectors. RGS22 (regulator of G protein signaling 22), also known as FLJ75004, PRTD-NY2, FLJ40080, MGC102908 or DKFZp434I092, is a novel 1,264 amino acid regulator of G protein signaling specific to testis. RGS22 inhibits signal transduction and contains two isoforms as a result of alternative splicing. RGS22 is found in spermatogenic cells and Leydig cells, and may be involved in the translocation of GNA13 from the cytoplasm to the nucleus during spermiogenesis. RGS22 contains two RGS domains: RGS1 and RGS2, and the gene encoding RGS22 maps to human chromosome 8q22.2.

## REFERENCES

- Conklin, B.R. and Bourne, H.R. 1993. Structural elements of  $G_{\alpha}$  subunits that interact with  $G_{\beta\gamma}$  receptors, and effectors. *Cell* 73: 631-641.
- Hepler, J.R. 1999. Emerging roles for RGS proteins in cell signalling. *Trends Pharmacol. Sci.* 20: 376-382.
- Neitzel, K.L., et al. 2006. Cellular mechanisms that determine selective RGS protein regulation of G protein-coupled receptor signaling. *Semin. Cell Dev. Biol.* 17: 383-389.
- Hu, Y., et al. 2008. RGS22, a novel testis-specific regulator of G protein signaling involved in human and mouse spermiogenesis along with GNA12/13 subunits. *Biol. Reprod.* 79: 1021-1029.
- Hurst, J.H., et al. 2009. Regulator of G protein signaling (RGS) proteins in cancer biology. *Biochem. Pharmacol.* 78: 1289-1297.

## CHROMOSOMAL LOCATION

Genetic locus: RGS22 (human) mapping to 8q22.2; Rgs22 (mouse) mapping to 15 B3.1.

## SOURCE

RGS22 (E-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of RGS22 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-98103 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

RGS22 (E-12) is recommended for detection of RGS22 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); non cross-reactive with other RGS family members.

RGS22 (E-12) is also recommended for detection of RGS22 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for RGS22 siRNA (h): sc-77832, RGS22 siRNA (m): sc-152841, RGS22 shRNA Plasmid (h): sc-77832-SH, RGS22 shRNA Plasmid (m): sc-152841-SH, RGS22 shRNA (h) Lentiviral Particles: sc-77832-V and RGS22 shRNA (m) Lentiviral Particles: sc-152841-V.

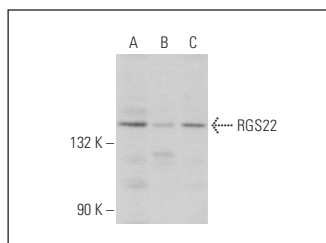
Molecular Weight of RGS22: 147 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, F9 cell lysate: sc-2245 or HEK293 whole cell lysate: sc-45136.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



RGS22 (E-12): sc-98103. Western blot analysis of RGS22 expression in HeLa (A), F9 (B) and HEK293 (C) whole cell lysates.

## PROTOCOLS

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