

# SGSM1 (N-15): sc-86863



The Power to Question

## BACKGROUND

Small G proteins act as molecular switches for regulation of a variety of cellular processes, such as nuclear transport, signal transduction, membrane trafficking and protein synthesis. SGSM1 (small G protein signaling modulator 1), also known as RUTBC2, is a 1,148 amino acid protein that localizes to the Golgi apparatus and is a member of the RUTBC family. Consisting of one Rab-GAP TBC domain and a RUN domain, SGSM1 is mainly expressed in brain, heart and testis. SGSM1 interacts with RAP and RAB subfamily members of the small G protein superfamily, and function as modulators of the small G protein RAP and RAB-mediated neuronal signal transduction and vesicular transportation pathways. SGSM1 is encoded by a gene located on human chromosome 22q11.23.

## REFERENCES

1. Gilbert, F. 1998. Disease genes and chromosomes: disease maps of the human genome. Chromosome 22. Genet. Test. 2: 89-97.
2. Schwab, S.G. and Wildenauer, D.B. 1999. Chromosome 22 workshop report. Am. J. Med. Genet. 88: 276-278.
3. Yang, H., Sasaki, T., Minoshima, S. and Shimizu, N. 2007. Identification of three novel proteins (SGSM1, 2, 3) which modulate small G protein (RAP and RAB)-mediated signaling pathway. Genomics 90: 249-260.
4. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 611417. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Williams, J.A., Chen, X. and Sabbatini, M.E. 2009. Small G proteins as key regulators of pancreatic digestive enzyme secretion. Am. J. Physiol. Endocrinol. Metab. 296: E405-E414.

## CHROMOSOMAL LOCATION

Genetic locus: SGSM1 (human) mapping to 22q11.23; Sgsm1 (mouse) mapping to 5 F.

## SOURCE

SGSM1 (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of SGSM1 of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-86863 P, (100 µg 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.

## PROTOCOLS

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

## APPLICATIONS

SGSM1 (N-15) is recommended for detection of SGSM1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 SGSM3.

SGSM1 (N-15) is also recommended for detection of SGSM1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for SGSM1 siRNA (h): sc-76491, SGSM1 siRNA (m): sc-153424, SGSM1 shRNA Plasmid (h): sc-76491-SH, SGSM1 shRNA Plasmid (m): sc-153424-SH, SGSM1 shRNA (h) Lentiviral Particles: sc-76491-V and SGSM1 shRNA (m) Lentiviral Particles: sc-153424-V.

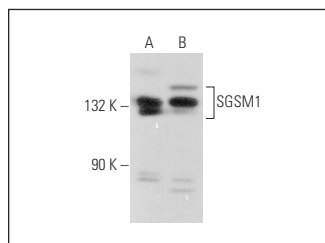
Molecular Weight of SGSM1: 130 kDa.

Positive Controls: mouse brain extract: sc-2253 or mouse kidney extract: sc-2255.

## 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



SGSM1 (N-15): sc-86863. Western blot analysis of SGSM1 expression in mouse brain (A) and mouse kidney (B) tissue extracts.

## RESEARCH USE

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