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# SGSM1 Antibody

Catalog # ASC11547

## Product Information

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| **Application** | WB, IF, E |
| **Primary Accession** | Q2NKQ1 |
| **Other Accession** | NP_001035037, 90577167 |
| **Reactivity** | Human, Mouse, Rat |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Isotype** | IgG |
| **Calculated MW** | 129718 |
| **Concentration (mg/ml)** | 1 mg/mL |
| **Conjugate** | Unconjugated |
| **Application Notes** | SGSM1 antibody can be used for detection of SGSM1 by Western blot at 1 g/mL. For immunofluorescence start at 20 g/mL. |

## Additional Information

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| **Gene ID** | 129049 |
| **Other Names** | Small G protein signaling modulator 1, RUN and TBC1 domain-containing protein 2, SGSM1, KIAA1941, RUTBC2 |
| **Target/Specificity** | SGSM1; At least four isoforms of SGSM1 are known to exist; SGSM1 antibody will detect all four isoforms. |
| **Reconstitution & Storage** | SGSM1 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures. |
| **Precautions** | SGSM1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

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| **Name** | SGSM1 |
| **Synonyms** | KIAA1941, RUTBC2 |
| **Function** | Interacts with numerous Rab family members, functioning as Rab effector for some, and as GTPase activator for others. Promotes GTP hydrolysis by RAB34 and RAB36. Probably functions as a GTPase effector with RAB9A and RAB9B; does not stimulate GTP hydrolysis with RAB9A and RAB9B. |
| **Cellular Location** | Golgi apparatus, trans-Golgi network {ECO:0000250\|UniProtKB:Q8BPQ7}. Cytoplasmic vesicle membrane; Peripheral membrane protein. Cytoplasm |

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| | Note=Recruited to cytoplasmic vesicle membranes via its interaction with Rab family members, such as RAB9A. |
| **Tissue Location** | Mainly expressed in brain, heart and testis. |

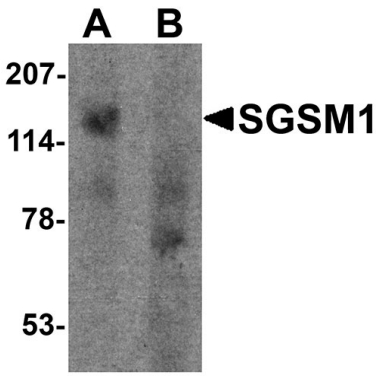
## Background

SGSM1 Antibody: Small G proteins such as RAP and RAB proteins are the key molecules in intracellular signal transduction and vesicle transportation. A novel protein family small G protein signaling modulator (SGSM) consisting of three members SGSM1-3 bind to RAP and RAB family proteins. All three SGSM proteins possess both a RUN domain and a TBC domain. SGSM1 (RUTBC2) is a 1,148 amino acid protein that localizes to the Golgi apparatus and is mainly expressed in the CNS. SGSM1 interacts with RAP and RAB subfamily members of the small G proteins, and function as modulators of RAP and RAB-mediated neuronal signal transduction and vesicular transportation pathways.

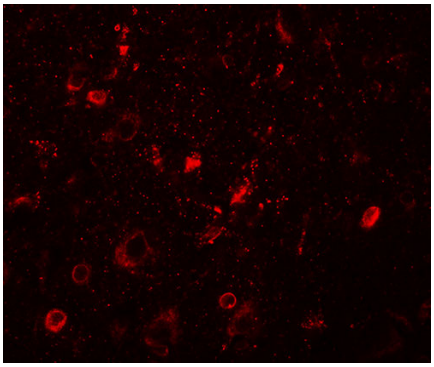
## References

Bar-Sagi D and Hall A. Ras and Rho GTPases: a family reunion. Cell 2000; 103:227-38.
Colicelli J. Human ras superfamily proteins and related GTPases. Sci. STKE 2004; 250:RE13.
Yang H, Sasaki T, Minoshima S, et al. Identification of three novel proteins (SGSM1, 2, 3) which modulate small G protein (RAP and RAB)-mediated signaling pathway. Genomics 2007; 90:249-60.
Williams JA, Chen X and Sabbatini ME. Small G proteins as key regulators of pancreatic digestive enzyme secretion. Am. J. Physiol. Endocrinol. Metab. 2009; 296:E405-14.

## Images




Western blot analysis of SGSM1 in human cerebellum tissue lysate with SGSM1 antibody at 1 µg/ml in (A) the absence and (B) the presence of blocking peptide.



Immunofluorescence of SGSM1 in human brain tissue with SGSM1 antibody at 20 µg/mL.