

SGMS2 Antibody (C-term)
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP9740b**Specification**

SGMS2 Antibody (C-term) - Product Information

Application	WB,E
Primary Accession	Q8NHU3
Other Accession	Q4JM44 , Q9D4B1 , Q4R763
Reactivity	Human, Mouse
Predicted	Monkey, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	42280
Antigen Region	338-365

SGMS2 Antibody (C-term) - Additional Information**Gene ID** 166929**Other Names**

Phosphatidylcholine:ceramide cholinephosphotransferase 2, Sphingomyelin synthase 2, SGMS2, SMS2

Target/Specificity

This SGMS2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 338-365 amino acids from the C-terminal region of human SGMS2.

Dilution

WB~~1:1000

E~~Use at an assay dependent concentration.

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

SGMS2 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

SGMS2 Antibody (C-term) - Protein Information**Name** SGMS2 {ECO:0000303|PubMed:30779713, ECO:0000312|HGNC:HGNC:28395}

Function Sphingomyelin synthase that primarily contributes to sphingomyelin synthesis and homeostasis at the plasma membrane. Catalyzes the reversible transfer of phosphocholine moiety in sphingomyelin biosynthesis: in the forward reaction transfers phosphocholine head group of phosphatidylcholine (PC) on to ceramide (CER) to form ceramide phosphocholine (sphingomyelin, SM) and diacylglycerol (DAG) as by-product, and in the reverse reaction transfers phosphocholine from SM to DAG to form PC and CER (PubMed:[14685263](#), PubMed:[17449912](#), PubMed:[17982138](#), PubMed:[18370930](#), PubMed:[38388831](#)). The direction of the reaction appears to depend on the levels of CER and DAG in the plasma membrane (PubMed:[14685263](#), PubMed:[17449912](#), PubMed:[17982138](#), PubMed:[18370930](#)). Does not use free phosphorylcholine or CDP-choline as donors (PubMed:[14685263](#)). Can also transfer phosphoethanolamine head group of phosphatidylethanolamine (PE) on to ceramide (CER) to form ceramide phosphoethanolamine (CPE) (PubMed:[19454763](#)). Regulates receptor-mediated signal transduction via mitogenic DAG and proapoptotic CER, as well as via SM, a structural component of membrane rafts that serve as platforms for signal transduction and protein sorting (PubMed:[17449912](#), PubMed:[17982138](#)). To a lesser extent, plays a role in secretory transport via regulation of DAG pool at the Golgi apparatus and its downstream effects on PRKD1 (PubMed:[18370930](#), PubMed:[21980337](#)). Required for normal bone matrix mineralization (PubMed:[30779713](#)).

Cellular Location

Cell membrane; Multi-pass membrane protein. Golgi apparatus membrane; Multi-pass membrane protein. Note=Primarily localized at the plasma membrane with a small fraction at the Golgi apparatus.

Tissue Location

Brain, heart, kidney, liver, muscle and stomach. Also expressed in a number of cell lines such as carcinoma HeLa cells, hepatoma Hep-G2 cells, and colon carcinoma Caco-2 cells

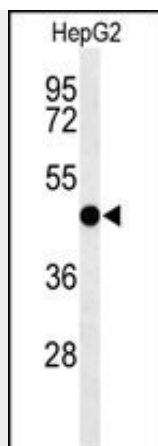
SGMS2 Antibody (C-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

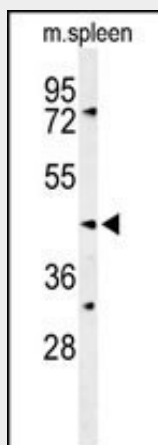
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

SGMS2 Antibody (C-term) - Images

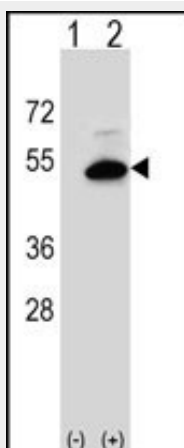




Western blot analysis of SGMS2 Antibody (C-term) (Cat. #AP9740b) in HepG2 cell line lysates (35ug/lane). SGMS2 (arrow) was detected using the purified Pab.



Western blot analysis of SGMS2 Antibody (C-term) (Cat. #AP9740b) in mouse spleen tissue lysates (35ug/lane). SGMS2 (arrow) was detected using the purified Pab.



Western blot analysis of SGMS2 (arrow) using rabbit polyclonal SGMS2 Antibody (C-term) (Cat. #AP9740b). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the SGMS2 gene.

SGMS2 Antibody (C-term) - Background

Sphingomyelin, a major component of cell and Golgi membranes, is made by the transfer of phosphocholine from phosphatidylcholine onto ceramide, with diacylglycerol as a side product.

SGMS2 is an enzyme that catalyzes this reaction primarily at the cell membrane. The synthesis is reversible, and this enzyme can catalyze the reaction in either direction. This protein is required for cell growth.

SGMS2 Antibody (C-term) - References

Ternes, P., et al. J. Lipid Res. 50(11):2270-2277(2009)

Liu, J., et al. Arterioscler. Thromb. Vasc. Biol. 29(6):850-856(2009)

Tani, M., et al. Biochem. Biophys. Res. Commun. 381(3):328-332(2009)

SGMS2 Antibody (C-term) - Citations

- [Sphingomyelin Synthase 2 Participate in the Regulation of Sperm Motility and Apoptosis](#)
- [Sphingomyelin synthase 2 promotes H2O2-induced endothelial dysfunction by activating the Wnt/ \$\beta\$ -catenin signaling pathway.](#)