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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

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. 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.

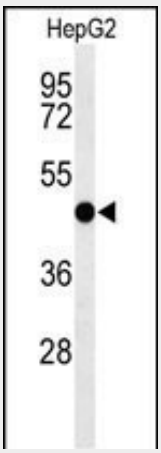
Tissue Location
Brain, heart, kidney, liver, muscle and stomach. Also expressed in a number of cell lines such as carcinoma HeLa cells, hepatoma Hep-G2 cells, and colon carcinoma Caco-2 cells

SGMS2 Antibody (C-term) - Protocols

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

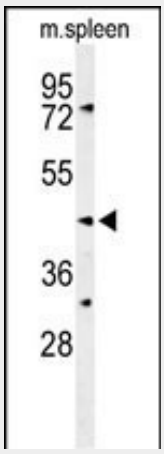
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

SGMS2 Antibody (C-term) - Images

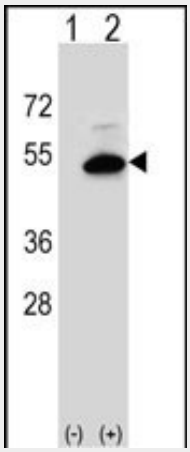


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Western blot analysis of SGMS2 Antibody (C-term) (Cat. #AP9740b) in HepG2 cell line lysates (35ug/lane). SGMS2 (arrow) was detected using the purified Pab.



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/β-catenin signaling pathway.

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