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SGMS2 Antibody (C-term) Blocking Peptide

Synthetic peptide
Catalog # BP9740b

Specification

SGMS2 Antibody (C-term) Blocking Peptide - Product Information

Primary Accession Q8NHU3

SGMS2 Antibody (C-term) Blocking Peptide - Additional Information

Gene ID 166929

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

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

SGMS2 Antibody (C-term) Blocking Peptide - 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) Blocking Peptide - Protocols

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

- Blocking Peptides

SGMS2 Antibody (C-term) Blocking Peptide - Images

SGMS2 Antibody (C-term) Blocking Peptide - 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) Blocking Peptide - 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)