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SGPP1 Antibody (N-term) Blocking Peptide

Synthetic peptide
Catalog # BP13228a

Specification

SGPP1 Antibody (N-term) Blocking Peptide - Product Information

Primary Accession Q9BX95

SGPP1 Antibody (N-term) Blocking Peptide - Additional Information

Gene ID 81537

Other Names
Sphingosine-1-phosphate phosphatase 1, SPPase1, Spp1, hSPP1, hSPPase1, 313-, Sphingosine-1-phosphatase 1, SGPP1

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP13228a was selected from the N-term region of SGPP1. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

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.

SGPP1 Antibody (N-term) Blocking Peptide - Protein Information

Name SGPP1 (HGNC:17720)

Function
Specifically dephosphorylates sphingosine 1-phosphate (S1P), dihydro-S1P, and phyto-S1P. Does not act on ceramide 1-phosphate, lysophosphatidic acid or phosphatidic acid (PubMed:16782891). Sphingosine-1-phosphate phosphatase activity is needed for efficient recycling of sphingosine into the sphingolipid synthesis pathway (PubMed:11756451, PubMed:12815058, PubMed:16782891). Regulates the intracellular levels of the bioactive sphingolipid metabolite S1P that regulates diverse biological processes acting both as an extracellular receptor ligand or as an intracellular second messenger (PubMed:11756451, PubMed:12815058, PubMed:<a

href="http://www.uniprot.org/citations/16782891" target="_blank">16782891). Involved in efficient ceramide synthesis from exogenous sphingoid bases. Converts S1P to sphingosine, which is readily metabolized to ceramide via ceramide synthase. In concert with sphingosine kinase 2 (SphK2), recycles sphingosine into ceramide through a phosphorylation/dephosphorylation cycle (By similarity). Regulates endoplasmic-to-Golgi trafficking of ceramides, resulting in the regulation of ceramide levels in the endoplasmic reticulum, preferentially long-chain ceramide species, and influences the anterograde membrane transport of both ceramide and proteins from the endoplasmic reticulum to the Golgi apparatus (PubMed:16782891). The modulation of intracellular ceramide levels in turn regulates apoptosis (By similarity). Via S1P levels, modulates resting tone, intracellular Ca(2+) and myogenic vasoconstriction in resistance arteries (PubMed:18583713). Also involved in unfolded protein response (UPR) and ER stress-induced autophagy via regulation of intracellular S1P levels (PubMed:18583713, PubMed:20798685). Involved in the regulation of epidermal homeostasis and keratinocyte differentiation (By similarity).

Cellular Location
Endoplasmic reticulum membrane; Multi-pass membrane protein. Cell membrane {ECO:0000250|UniProtKB:Q9JI99}; Multi-pass membrane protein

Tissue Location
Ubiquitous, with the strongest level in placenta and kidney.

SGPP1 Antibody (N-term) Blocking Peptide - Protocols

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

- Blocking Peptides

SGPP1 Antibody (N-term) Blocking Peptide - Images

SGPP1 Antibody (N-term) Blocking Peptide - Background

Sphingosine-1-phosphate (S1P) is a bioactive sphingolipidmetabolite that regulates diverse biologic processes. SGPP1catalyzes the degradation of S1P via salvage and recycling ofsphingosine into long-chain ceramides (Mandala et al., 2000 [PubMed10859351]; Le Stunff et al., 2007 [PubMed 17895250]).[supplied byOMIM].

SGPP1 Antibody (N-term) Blocking Peptide - References

Hicks, A.A., et al. PLoS Genet. 5 (10), E1000672 (2009) :Le Stunff, H., et al. J. Biol. Chem. 282(47):34372-34380(2007)Sugiyama, N., et al. Mol. Cell Proteomics 6(6):1103-1109(2007)Olsen, J.V., et al. Cell 127(3):635-648(2006)Giussani, P., et al. Mol. Cell. Biol. 26(13):5055-5069(2006)