

**SGPP1 Antibody (N-term) Blocking Peptide**  
**Synthetic peptide**  
**Catalog # BP13228a****Specification**

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**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:<a href="http://www.uniprot.org/citations/16782891" target="\_blank">16782891</a>). Sphingosine-1-phosphate phosphatase activity is needed for efficient recycling of sphingosine into the sphingolipid synthesis pathway (PubMed:<a href="http://www.uniprot.org/citations/12815058" target="\_blank">12815058</a>, PubMed:<a href="http://www.uniprot.org/citations/11756451" target="\_blank">11756451</a>, PubMed:<a href="http://www.uniprot.org/citations/16782891" target="\_blank">16782891</a>). 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:<a href="http://www.uniprot.org/citations/11756451" target="\_blank">11756451</a>, PubMed:<a href="http://www.uniprot.org/citations/12815058" target="\_blank">12815058</a>, PubMed:<a href="http://www.uniprot.org/citations/16782891" target="\_blank">16782891</a>).

[16782891](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/18583713)). Also involved in unfolded protein response (UPR) and ER stress-induced autophagy via regulation of intracellular S1P levels (PubMed:[20798685](http://www.uniprot.org/citations/20798685), PubMed:[18583713](http://www.uniprot.org/citations/18583713)). 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 sphingolipid metabolite that regulates diverse biologic processes. SGPP1 catalyzes the degradation of S1P via salvage and recycling of sphingosine into long-chain ceramides (Mandala et al., 2000 [PubMed10859351]; Le Stunff et al., 2007 [PubMed 17895250]). [supplied by OMIM].

### **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)