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SMPD1 Antibody (C-term) Blocking Peptide

Synthetic peptide
Catalog # BP8882b

Specification

SMPD1 Antibody (C-term) Blocking Peptide - Product Information

Primary Accession P17405

SMPD1 Antibody (C-term) Blocking Peptide - Additional Information

Gene ID 6609

Other Names
Sphingomyelin phosphodiesterase, Acid sphingomyelinase, aSMase, SMPD1, ASM

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP8882b was selected from the C-term region of human SMPD1. 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.

SMPD1 Antibody (C-term) Blocking Peptide - Protein Information

Name SMPD1 (HGNC:11120)

Function

SMPD1 Antibody (C-term) Blocking Peptide - Background

SMPD1 is a lysosomal acid sphingomyelinase that converts sphingomyelin to ceramide. This protein also has phospholipase C activity.

SMPD1 Antibody (C-term) Blocking Peptide - References

Takahashi,T., et.al., Hum. Mutat. 1 (1), 70-71 (1992)

Converts sphingomyelin to ceramide (PubMed:1840600, PubMed:18815062, PubMed:27659707, PubMed:25920558, PubMed:25339683, PubMed:33163980, PubMed:12563314). Exists as two enzymatic forms that arise from alternative trafficking of a single protein precursor, one that is targeted to the endolysosomal compartment, whereas the other is released extracellularly (PubMed:21098024, PubMed:9660788, PubMed:20807762). However, in response to various forms of stress, lysosomal exocytosis may represent a major source of the secretory form (PubMed:20530211, PubMed:12563314, PubMed:20807762, PubMed:9393854, PubMed:22573858).

Cellular Location
Lysosome. Lipid droplet. Secreted.

Note=The secreted form is induced in a time- and dose-dependent by IL1B and TNF as well as stress and viral infection. This increase of the secreted form seems to be due to exocytosis of the lysosomal form and is Ca(2+)-dependent (PubMed:20807762, PubMed:22573858, PubMed:20530211). Secretion is dependent of phosphorylation at Ser-510 (PubMed:17303575). Secretion is induced by inflammatory mediators such as IL1B, IFNG or TNF as well as infection with bacteria and viruses (PubMed:12563314, PubMed:20807762)

SMPD1 Antibody (C-term) Blocking Peptide - Protocols

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

- Blocking Peptides