

**Acid Sphingomyelinase Antibody**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP51974**

**Specification**

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**Acid Sphingomyelinase Antibody - Product Information**

Application	WB
Primary Accession	<a href="#">P17405</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	70 KDa
Antigen Region	421 - 480

**Acid Sphingomyelinase Antibody - Additional Information**

**Gene ID** 6609

**Other Names**

Sphingomyelin phosphodiesterase, Acid sphingomyelinase, aSMase, SMPD1, ASM

**Target/Specificity**

KLH conjugated synthetic peptide derived from human Acid Sphingomyelinase

**Dilution**

WB~~ 1:1000

**Format**

0.01M PBS, pH 7.2, 0.09% (W/V) Sodium azide, Glycerol 50%

**Storage**

Store at -20 °C. Stable for 12 months from date of receipt

**Acid Sphingomyelinase Antibody - Protein Information**

**Name** SMPD1 ([HGNC:11120](#))

**Function**

Converts sphingomyelin to ceramide (PubMed:<a href="http://www.uniprot.org/citations/12563314" target="\_blank">12563314</a>, PubMed:<a href="http://www.uniprot.org/citations/1840600" target="\_blank">1840600</a>, PubMed:<a href="http://www.uniprot.org/citations/18815062" target="\_blank">18815062</a>, PubMed:<a href="http://www.uniprot.org/citations/25339683" target="\_blank">25339683</a>, PubMed:<a href="http://www.uniprot.org/citations/25920558" target="\_blank">25920558</a>, PubMed:<a href="http://www.uniprot.org/citations/27659707" target="\_blank">27659707</a>, PubMed:<a href="http://www.uniprot.org/citations/33163980" target="\_blank">33163980</a>). 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:<a href="http://www.uniprot.org/citations/20807762" target="\_blank">20807762</a>, PubMed:<a href="http://www.uniprot.org/citations/21098024" target="\_blank">21098024</a>, PubMed:<a href="http://www.uniprot.org/citations/9660788" target="\_blank">9660788</a>). However, in response to various forms of stress, lysosomal exocytosis may represent a major source of the secretory form (PubMed:<a href="http://www.uniprot.org/citations/12563314" target="\_blank">12563314</a>, PubMed:<a href="http://www.uniprot.org/citations/20530211" target="\_blank">20530211</a>, PubMed:<a href="http://www.uniprot.org/citations/20807762" target="\_blank">20807762</a>, PubMed:<a href="http://www.uniprot.org/citations/22573858" target="\_blank">22573858</a>, PubMed:<a href="http://www.uniprot.org/citations/9393854" target="\_blank">9393854</a>).

### Cellular Location

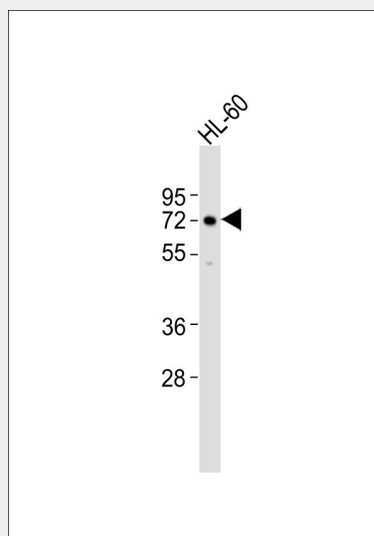
Lysosome. Lipid droplet. Secreted. Note=The secreted form is induced in a time- and dose-dependent by IL1B and TNF as well as stress and viral infection. This increase of the secreted form seems to be due to exocytosis of the lysosomal form and is Ca(2+)-dependent (PubMed:20530211, PubMed:20807762, PubMed:22573858). 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)

### Acid Sphingomyelinase Antibody - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### Acid Sphingomyelinase Antibody - Images



Anti-Acid Sphingomyelinase Antibody at 1:1000 dilution + HL-60 whole cell lysates  
Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated

at 1/10000 dilution Predicted band size : 70 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

### **Acid Sphingomyelinase Antibody - Background**

Converts sphingomyelin to ceramide. Also has phospholipase C activities toward 1,2-diacylglycerolphosphocholine and 1,2-diacylglycerolphosphoglycerol. Isoform 2 and isoform 3 have lost catalytic activity.

### **Acid Sphingomyelinase Antibody - References**

Schuchman E.H.,et al.J. Biol. Chem. 266:8531-8539(1991).  
Newrzella D.,et al.Biol. Chem. Hoppe-Seyler 373:1233-1238(1992).  
Schuchman E.H.,et al.Genomics 12:197-205(1992).  
Ida H.,et al.J. Biochem. 114:15-20(1993).  
Ota T.,et al.Nat. Genet. 36:40-45(2004).