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Acid Sphingomyelinase Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP51974

Product Information

Application	WB
Primary Accession	P17405
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	69936

Additional Information

Gene ID	6609
Other Names	Sphingomyelin phosphodiesterase, Acid sphingomyelinase, aSMase, SMPD1, ASM
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human Acid Sphingomyelinase. The exact sequence is proprietary.
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

Protein Information

Name	SMPD1 (HGNC:11120)
Function	Converts sphingomyelin to ceramide (PubMed: 12563314, PubMed:1840600, PubMed:18815062, PubMed:25339683, PubMed:25920558, PubMed:27659707, PubMed:33163980). 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:20807762, PubMed:21098024, PubMed:9660788). However, in response to various forms of stress, lysosomal exocytosis may represent a major source of the secretory form (PubMed:12563314, PubMed:20530211, PubMed:20807762, PubMed:22573858, PubMed:9393854).
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)

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.

References

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Newrzella D.,et al.Biol. Chem. Hoppe-Seyler 373:1233-1238(1992).
Schuchman E.H.,et al.Genomics 12:197-205(1992).
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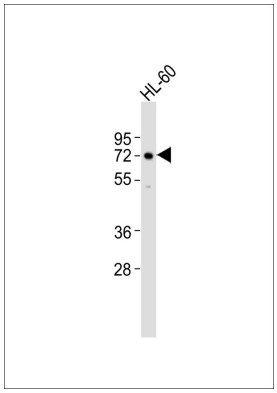
Ota T.,et al.Nat. Genet. 36:40-45(2004).

Images



Anti-Acid Sphingomyelinase Antibodyat 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.