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Product datasheet for AP05201PU-N

Acid Sphingomyelinase Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	ELISA, WB
Recommended Dilution:	Western blot (5-10 µg/ml). ELISA.
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Synthetic peptide derived from human acid sphingomyelinase protein.
Specificity:	The antibody recognizes human acid sphingomyelinase.
Formulation:	PBS, pH 7.4 containing 0.08% Sodium Azide as preservative. State: Purified State: Liquid purified IgG fraction.
Concentration:	lot specific
Conjugation:	Unconjugated
Storage:	Ship at ambient temperature, freeze upon arrival. Product should be stored (in aliquots) at -20°C. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.

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Background: Human acid sphingomyelinase (sphingomyelin phosphodiesterase, ASM) is the lysosomal enzyme responsible for the hydrolysis of sphingomyelin to ceramide and phosphocholine. Converts sphingomyelin to ceramide. aSM also has phospholipase C activities toward 1,2-diacylglycerol-phosphocholine and 1,2-diacylglycerol-phosphoglycerol. The enzyme is a membrane-associated glycoprotein with a pH optimum of about 4.5 and a subunit molecular mass of about 72 kDa. In addition AtoS M, two other sphingomyelinases have been identified in man, a Mg2+- dependent neutral sphingomyelinase found primarily in brain and a Zn2+-dependent acid sphingomyelinase found primarily in serum. Although it is likely that the acid and neutral sphingomyelinases are coded by different genes, the molecular genetic relationship of these three biochemically distinct sphingomyelinases has not been determined. Understanding the role of these sphingomyelinases in the hydrolysis of sphingomyelin to ceramide will be an important step in the understanding of ceramide as it is further hydrolyzed to sphingosine, a neutral phospholipid which has been implicated in the regulation of protein kinase C-mediated signal transduction. Inherited deficiencies of ASM have been reported in man, deficient ASM activity results in the two major subtypes of Niemann-Pick disease (NPD).

Synonyms: Acid Sphingomyelinase, aSMase, SMPD1, ASM, Sphingomyelin Phosphodiesterase, ASM-1