SMPD1 Protein, Mouse (sf9, His)

Cat. No.:	HY-P76134
Synonyms:	Sphingomyelin phosphodiesterase; Acid sphingomyelinase; ASMase; Smpd1; Asm
Species:	Mouse
Source:	Sf9 insect cells
Accession:	Q04519 (M1-L626)
Gene ID:	20597
Molecular Weight:	Approximately 63 kDa.

PROPERTIES

Appearance	Solution.
Formulation	Supplied as a 0.2 μm filtered solution of 20 mM Tris, 500 mM NaCl, 10% glycerol, pH 8.0, 0.1% Tween20.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	N/A.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background	The SMPD1 protein functions by converting sphingomyelin into ceramide through two enzymatic forms derived from alternative trafficking of a single precursor protein. One form is targeted to the endolysosomal compartment, while the other is released extracellularly. However, during stress responses, lysosomal exocytosis may serve as a significant source of the secretory form. Within lysosomes, it carries out the conversion of sphingomyelin to ceramide and plays a crucial role in exporting cholesterol from intraendolysosomal membranes. Additionally, SMPD1 exhibits phospholipase C activities towards 1,2-diacylglycerolphosphocholine and 1,2-diacylglycerolphosphoglycerol. Its involvement in stress-induced apoptosis modulation is mediated through ceramide production.

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