Creative Enzymes®

Native Sphingomyelinase from Streptomyces sp.

Cat. No. NATE-1160

Lot. No. (See product label)

Introduction

Description	Sphingomyelin phosphodiesterase is a hydrolase enzyme that is involved in sphingolipid metabolism reactions. SMase is a member of the DNase I superfamily of enzymes and is responsible for breaking sphingomyelin (SM) down into phosphocholine and ceramide. The activation of SMase has been suggested as a major route for the production of ceramide in response to cellular stresses.
Applications	This enzyme is useful for enzymatic determination of sphingomyelin when coupled With alkaline phosphatase and choline oxidase.
Synonyms	Sphingomyelin phosphodiesterase; EC 3.1.4.12; neutral sphingomyelinase; 9031-54-3; sphingomyelin cholinephosphohydrolase; sphingomyelinase; Smase

Product Information

Source	Streptomyces sp.
Appearance	White to brownish amorphous powder，lyophilized
Form	Freeze dried powder
EC Number	EC 3.1.4.12
CAS No.	9031-54-3
Molecular Weight	37.5 kDa (SDS–PAGE)
Activity	> 500 U/mg
Isoelectric point	8.6
pH Stability	5.0–8.0
Optimum pH	7.0–8.0
Thermal stability	Stable at 40°C and below
Michaelis Constant	Sphingomyelin 0.45 × 10–3M
Activators	Mg2+, Mn2+, Non–ionic detergents
Inhibitors	EDTA
Stabilizers	Mg2+
Unit Definition	One unit is defined as the amount of enzyme which hydrolyzes 1 μmole of sphingomyelin per minute at 37°C under the conditions specified in the assay procedure.

Storage and Shipping Information

Storage	Storage at −20°C in the presence of a desiccant is recommended.
Stability	At least one year at −20°C