

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

