

## 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<sup>-3</sup>M
- Activators** Mg<sup>2+</sup>, Mn<sup>2+</sup>, Non-ionic detergents
- Inhibitors** EDTA
- Stabilizers** Mg<sup>2+</sup>
- 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  $-20^{\circ}\text{C}$  in the presence of a desiccant is recommended.

**Stability** At least one year at  $-20^{\circ}\text{C}$