

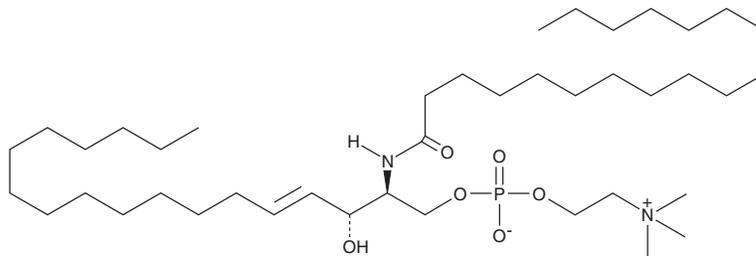
# PRODUCT INFORMATION



## Sphingomyelin (bovine spinal cord)

Item No. 22674

**CAS Registry No.:** 85187-10-6  
**Synonym:** SMs (from bovine spinal cord)  
**MF:** C<sub>41</sub>H<sub>83</sub>N<sub>2</sub>O<sub>6</sub>P (for stearyl)  
**FW:** 731.1  
**Purity:** ≥95% (natural bovine mixture)  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

This mixture of sphingomyelins (SMs) (from bovine spinal cord) is supplied as a crystalline solid. A stock solution may be made by dissolving the mixture of SMs (from bovine spinal cord) in the solvent of choice, which should be purged with an inert gas. This mixture of SMs (from bovine spinal cord) is soluble in the organic solvent ethanol at a concentration of approximately 10 mg/ml.

### Description

SMs are bioactive sphingolipids found in mammalian cell membranes.<sup>1</sup> SMs make up 2-15% of the total organ phospholipid population but are found at higher concentrations in the brain and myelin sheaths surrounding peripheral nerves. They interact with cholesterol to control its distribution within cellular membranes and maintain cholesterol homeostasis in cells. SMs undergo hydrolysis by sphingomyelinase to form ceramides, which are sphingolipid mediators of intracellular signaling.<sup>2</sup> This product contains SM molecular species with primarily C18:0, C24:1, and C22:0 fatty acyl chain lengths. As this product is derived from a natural source, there may be variations in the sphingoid backbone.

### References

1. Slotte, J.P. and Ramstedt, B. The functional role of sphingomyelin in cell membranes. *Eur. J. Lipid Sci. Technol.* **109(10)**, 977-981 (2007).
2. Shayman, J.A. Sphingolipids. *Kidney Int.* **58(1)**, 11-26 (2000).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

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