

PRODUCT INFORMATION



C12 Sphingomyelin (d18:1/12:0)

Item No. 46184

CAS Registry No.: 474923-21-2

Formal Name: 4-hydroxy-7S-[(1R,2E)-1-hydroxy-2-hexadecen-1-yl]-N,N,N-trimethyl-9-oxo-3,5-dioxo-8-aza-4-phosphaeicosan-1-aminium, inner salt, 4-oxide

Synonyms: N-Dodecanoyl-D-erythro-Sphingosylphosphorylcholine, Lauroyl Sphingomyelin, SM(d18:1/12:0), Sphingomyelin (d18:1/12:0)

MF: $C_{35}H_{71}N_2O_6P$

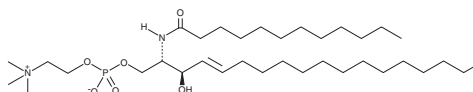
FW: 646.9

Purity: $\geq 98\%$

Supplied as: A 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

C12 Sphingomyelin (d18:1/12:0) is supplied as a solid. A stock solution may be made by dissolving the C12 sphingomyelin (d18:1/12:0) in the solvent of choice, which should be purged with an inert gas. C12 Sphingomyelin (d18:1/12:0) is soluble in a 2:1 solution of chloroform:methanol.

Description

C12 Sphingomyelin is a sphingolipid. It increases IL-1 α , IL-6, and TNF- α levels in RAW 264.7 cells, mouse bone marrow-derived macrophages (BMDMs), and mouse bone marrow-derived dendritic cells (BMDCs) and induces pyroptosis in RAW 264.7 macrophages and mouse BMDMs but not mouse BMDCs.¹ It activates NF- κ B signaling in a reporter assay in LPS-stimulated cells expressing mouse or human toll-like receptor 4 (TLR4) and myeloid differentiation 2 (MD-2).

Reference

1. Huang, X., Kanoh, H., Ueno, J., *et al.* Modulation function of sphingomyelin molecular species in TLR4 signaling and cell death. *Cell Rep.* **44**(12), 116568 (2025).

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.

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