

# PRODUCT INFORMATION



## BODIPY-C12 Sphingomyelin

Item No. 45795

CAS Registry No.: 956294-43-2

Formal Name: (T-4)-[(7S)-20-[5-[(3,5-dimethyl-2H-pyrrol-2-ylidene-κN)methyl]-1H-pyrrol-2-yl-κN]-4-hydroxy-7-[(1R,2E)-1-hydroxy-2-hexadecen-1-yl]-N,N,N-trimethyl-9-oxo-3,5-dioxo-8-aza-4-phosphaeicosan-1-amium 4-oxidato(2-)]difluoro-boron

Synonyms: BODIPY-N-Dodecanoyl-D-erythro-Sphingosylphosphorylcholine, BODIPY-Lauroyl Sphingomyelin, BODIPY-SM(d18:1/12:0), BODIPY-Sphingomyelin (d18:1/12:0), B12SPM

MF:  $C_{46}H_{80}BF_2N_4O_6P$

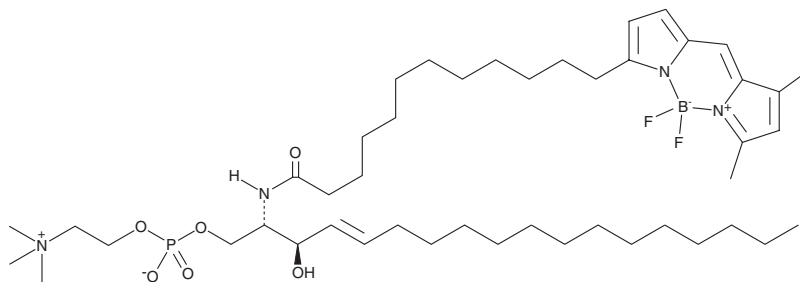
FW: 864.9

Purity: ≥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

BODIPY-C12 Sphingomyelin is supplied as a solid. A stock solution may be made by dissolving the BODIPY-C12 sphingomyelin in the solvent of choice, which should be purged with an inert gas. BODIPY-C12 Sphingomyelin is soluble (≥10 mg/ml) in a 2:1 solution of chloroform:methanol.

### Description

BODIPY-C12 Sphingomyelin is a fluorescently tagged form of C12 sphingomyelin (Item No. 46184). Upon hydrolysis by acid sphingomyelinase, BODIPY-C12 ceramide (B12Cer; Item No. 25997) is released and its fluorescence can be used to quantify acid sphingomyelinase activity.<sup>1</sup> BODIPY-C12 Sphingomyelin has been used to quantify acid sphingomyelinase activity in plasma from patients with Niemann-Pick disease and in the cerebrospinal fluid (CSF) of mice and humans.<sup>1,2</sup> It can also be used for studying sphingomyelin cellular transport and signaling pathways.

### References

1. He, X., Chen, F., Dagan, A., *et al.* A fluorescence-based, high-performance liquid chromatographic assay to determine acid sphingomyelinase activity and diagnose types A and B Niemann-Pick disease. *Anal. Biochem.* **314**(1), 116-120 (2003).
2. Mühle, C., Huttner, H.B., Walter, S., *et al.* Characterization of acid sphingomyelinase activity in human cerebrospinal fluid. *PLoS One* **8**(5), e62912 (2013).

#### 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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#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897  
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM