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- Mindermengenzuschlag
- Trockeneiszuschlag
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- Expressversand

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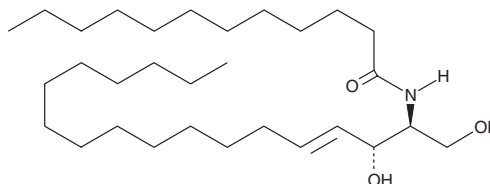
PRODUCT INFORMATION



C12 Ceramide (d18:1/12:0)

Item No. 22530

CAS Registry No.: 74713-60-3
Formal Name: N-[(1S,2R,3E)-2-hydroxy-1-(hydroxymethyl)-3-heptadecen-1-yl]-dodecanamide
Synonyms: Cer(d18:1/12:0), C12 Ceramide, Ceramide (d18:1/12:0), N-Lauroyl-D-erythro-Sphingosine
MF: C₃₀H₅₉NO₃
FW: 481.8
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

C12 Ceramide (d18:1/12:0) is supplied as a solid. A stock solution may be made by dissolving the C12 ceramide (d18:1/12:0) in the solvent of choice. C12 Ceramide (d18:1/12:0) is soluble in organic solvents such as chloroform, ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of C12 ceramide (d18:1/12:0) in these solvents is approximately >33, 20, and 22 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of C12 ceramide (d18:1/12:0) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of C12 ceramide (d18:1/12:0) in PBS, pH 7.2, is approximately <50 µg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

C12 ceramide is a naturally occurring ceramide that is formed when C12 sphingomyelin is hydrolyzed by acid sphingomyelinase (ASM).¹ It is a substrate for acid ceramidase, an enzyme that has 2- to 12-fold higher activity in fibroblasts from patients with Farber disease, a lipid storage disorder.² C12 ceramide is found in the Wharton's jelly, a protective coating that surrounds umbilical cord vessels, of babies born to women with pre-eclampsia.³ BODIPY C12 ceramide has been used to assess levels of ASM activity in plasma of patients with type A or B Niemann-Pick disease.¹

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. Momoi, T., Ben-Yoseph, Y., and Nadler, H.L. Substrate-specificities of acid and alkaline ceramidases in fibroblasts from patients with Farber disease and controls. *Biochem. J.* **205**(2), 419-425 (1982).
3. Romanowicz, L. and Bańkowski, E. Altered sphingolipid composition in Wharton's jelly of pre-eclamptic newborns. *Pathobiology* **77**(2), 78-87 (2010).

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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