

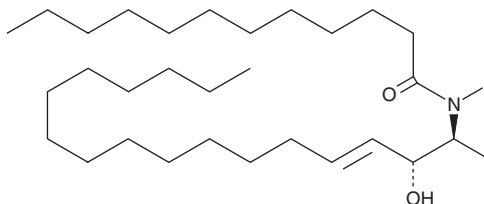
PRODUCT INFORMATION



C12 1-Deoxyceramide (m18:1/12:0)

Item No. 30028

CAS Registry No.: 1246298-54-3
Formal Name: N-[(1S,2R,3E)-2-hydroxy-1-methyl-3-heptadecen-1-yl]-dodecanamide
Synonyms: C12:0 1-Deoxyceramide, C12:0 Ceramide (m18:1/12:0), Cer(m18:1/12:0), N-Dodecanoyl-1-deoxy-4,5-dihydro-Sphingosine
MF: C₃₀H₅₉NO₂
FW: 465.8
Purity: ≥95%
Supplied as: A crystalline 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 1-Deoxyceramide (m18:1/12:0) is supplied as a crystalline solid. A stock solution may be made by dissolving the C12 1-deoxyceramide (m18:1/12:0) in the solvent of choice, which should be purged with an inert gas. C12 1-Deoxyceramide (m18:1/12:0) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of C12 1-deoxyceramide (m18:1/12:0) in these solvents is approximately 30 mg/ml in ethanol and approximately 20 mg/ml in DMSO and DMF.

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 1-deoxyceramide (m18:1/12:0) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of C12 1-deoxyceramide (m18:1/12:0) in PBS, pH 7.2, is approximately 50 µg/ml. We do not recommend storing the aqueous solution for more than one day.

C12 1-Deoxyceramide (m18:1/12:0) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, C12 1-deoxyceramide (m18:1/12:0) should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. C12 1-Deoxyceramide (m18:1/12:0) has a solubility of approximately 0.5 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

C12 1-Deoxyceramide (m18:1/12:0) is a medium-chain atypical ceramide containing a 1-deoxysphingosine (m18:1(4E)) (Item No. 24687) backbone. 1-Deoxysphingolipids are formed when serine palmitoyltransferase condenses palmitoyl-CoA with alanine instead of serine during sphingolipid synthesis.^{1,2}

References

- Steiner, R., Saied, E.M., Othman, A., *et al.* Elucidating the chemical structure of native 1-deoxysphingosine. *J. Lipid Res.* **57(7)**, 1194-1203 (2016).
- Alecu, I., Othman, A., Penno, A., *et al.* Cytotoxic 1-deoxysphingolipids are metabolized by a cytochrome P450-dependent pathway. *J. Lipid Res.* **58(1)**, 60-71 (2017).

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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