

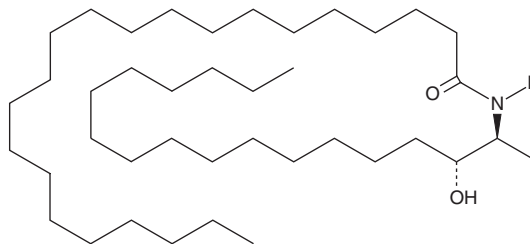
PRODUCT INFORMATION



C22 dihydro 1-Deoxyceramide (m18:0/22:0)

Item No. 27018

CAS Registry No.: 2754280-71-0
Formal Name: N-[(1S,2R)-2-hydroxy-1-methylheptadecyl]-docosanamide
Synonyms: C22:1 dihydro 1-Deoxyceramide (m18:0/22:0), C22 deoxyDHCer, C22 deoxyDHCeramide, C22 deoxy Dihydroceramide, N-docosanoyl-1-deoxy-Sphinganine
MF: C₄₀H₈₁NO₂
FW: 608.1
Purity: ≥95%
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

C22 dihydro 1-Deoxyceramide (m18:0/22:0) is supplied as a crystalline solid. A stock solution may be made by dissolving the C22 dihydro 1-deoxyceramide (m18:0/22:0) in the solvent of choice, which should be purged with an inert gas. C22 dihydro 1-Deoxyceramide (m18:0/22:0) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of C22 dihydro 1-deoxyceramide (m18:0/22:0) in ethanol is approximately 30 mg/ml and approximately 20 mg/ml in DMSO and DMF.

C22 dihydro 1-Deoxyceramide (m18:0/22:0) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, C22 dihydro 1-deoxyceramide (m18:0/22:0) should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. C22 dihydro 1-Deoxyceramide (m18:0/22:0) 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

C22 dihydro 1-Deoxyceramide (m18:0/22:0) is a very long-chain atypical ceramide containing a 1-deoxysphinganine (m18:0; Item No. 13511) backbone. 1-Deoxysphingolipids are formed when serine palmitoyltransferase condenses palmitoyl-CoA with alanine instead of serine during sphingolipid synthesis.^{1,2} C22 dihydro 1-Deoxyceramide (m18:0/22:0) has been found in mouse embryonic fibroblasts (MEFs) following application of 1-deoxysphinganine alkyne or 1-deoxysphinganine-d₃.³ It has also been found as the most prevalent dihydro deoxyceramide species in mouse brain, spinal cord, and sciatic nerve at one, three, and six months of age.⁴

References

1. 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).
2. 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).
3. Alecu, I., Tedeschi, A., Behler, N., *et al.* Localization of 1-deoxysphingolipids to mitochondria induces mitochondrial dysfunction. *J. Lipid. Res.* **58(1)**, 42-59 (2017).
4. Schwartz, N.U., Mileva, I., Gurevich, M., *et al.* Quantifying 1-deoxydihydroceramides and 1-deoxyceramides in mouse nervous system tissue. *Prostaglandins Other Lipid Mediat.* **141**, 40-48 (2019).

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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