

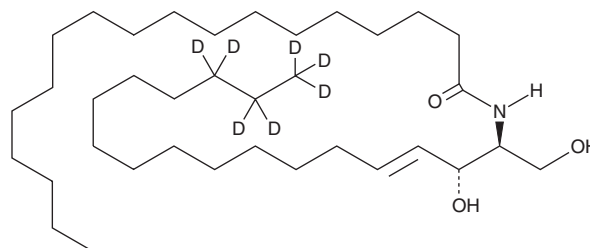
PRODUCT INFORMATION



C18 Ceramide-d₇ (d18:1-d₇/18:0)

Item No. 22788

CAS Registry No.: 1840942-14-4
Formal Name: N-[(1S,2R,3E)-2-hydroxy-1-(hydroxymethyl)-3-heptadecen-1-yl-d₇]-octadecanamide
Synonyms: C18 Ceramide-d₇, Cer-d₇ (d18:1-d₇/18:0), Ceramide-d₇ (d18:1-d₇/18:0), N-Stearoyl-D-Sphingosine-d₇
MF: C₃₆H₆₄D₇NO₃
FW: 573.0
Chemical Purity: ≥95% (C18 Ceramide)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₇); ≤1% d₀
Supplied as: A solution in methanol:chloroform (10:90)
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

C18 Ceramide-d₇ (d18:1-d₇/18:0) is intended for use as an internal standard for the quantification of C18 ceramide (Item No. 19556) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

C18 Ceramide-d₇ (d18:1-d₇/18:0) is supplied as a solution in methanol:chloroform (10:90). To change the solvent, simply evaporate the methanol:chloroform under a gentle stream of nitrogen and immediately add the solvent of choice. C18 Ceramide-d₇ (d18:1-d₇/18:0) is soluble in the organic solvent dimethyl formamide at a concentration of approximately 0.15 mg/ml.

Description

C18 Ceramide is an endogenous bioactive sphingolipid. It is the primary short-chain ceramide found in brain tissue whose synthesis is regulated by longevity-assurance homologue 1 (Lass1) in mice.¹ Increased expression of C18 ceramide reduces cell growth in UM-SCC-22A squamous cell carcinoma cells.² It is selectively down-regulated in 32 human head and neck squamous cell carcinoma tumor tissues as compared to non-squamous tumor tissues. C18 Ceramide concentration is significantly higher in muscle tissue of type 2 diabetic patients compared with non-diabetic patients and is positively correlated to body mass index and inversely related to insulin sensitivity.³

References

1. Mizutani, Y., Kihara, A., and Igarashi, Y. Mammalian Lass6 and its related family members regulate synthesis of specific ceramides. *Biochem J.* **390**(Pt. 1), 263-271 (2005).
2. Koybasi, S., Senkal, C.E., Sundararaj, K., et al. Defects in cell growth regulation by C18:0-ceramide and longevity assurance gene 1 in human head and neck squamous cell carcinomas. *J. Biol. Chem.* **279**(43), 44311-44319 (2004).
3. Bergman, B.C., Brozinick, J.T., Strauss, A., et al. Muscle sphingolipids during rest and exercise: A C18:0 signature for insulin resistance in humans. *Diabetologia* **59**(3), 785-791 (2016).

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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