

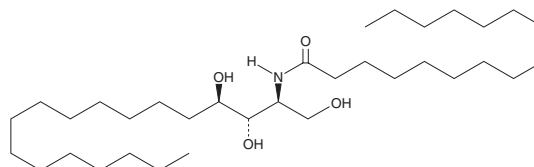
PRODUCT INFORMATION



C16 Phytoceramide (t18:0/16:0)

Item No. 22826

CAS Registry No.: 111149-09-8
Formal Name: N-[(1S,2S,3R)-2,3-dihydroxy-1-(hydroxymethyl)heptadecyl]-hexadecanamide
Synonyms: Armillaramide, Ceramide (t18:0/16:0), Cer(t18:0/16:0), C16:0 Phytoceramide, N-hexadecanoyl Phytosphingosine, N-Palmitoyl Phytosphingosine
MF: C₃₄H₆₉NO₄
FW: 555.9
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

C16 Phytoceramide (t18:0/16:0) is supplied as a solid. A stock solution may be made by dissolving the C16 phytoceramide (t18:0/16:0) in the solvent of choice. C16 Phytoceramide (t18:0/16:0) is soluble in a 5:1 solution of chloroform:methanol.

Description

C16 Phytoceramide (t18:0/16:0) is a phytoceramide, which is a family of sphingolipids found in the intestine, kidney, and extracellular spaces of the stratum corneum of the mammalian epidermis.¹⁻³ C16 Phytoceramide (t18:0/16:0) is composed of a phytosphingosine (Item No. 20217) backbone amine-linked to a C16 fatty acid chain. The levels of C16 phytoceramide (t18:0/16:0) increase following heat stress in *S. cerevisiae*.⁴ It has been used with other ceramides to create stratum corneum substitutes to study percutaneous penetration and psoriasis *in vitro*.^{5,6}

References

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2. Omae, F., Miyazaki, M., Enomoto, A., *et al.* DES2 protein is responsible for phytoceramide biosynthesis in the mouse small intestine. *Biochem J.* **379**(Pt. 3), 687-695 (2004).
3. Mizutani, Y., Kihara, A., and Igarashi, Y. Identification of the human sphingolipid C4-hydroxylase, hDES2, and its up-regulation during keratinocyte differentiation. *FEBS Lett.* **563**(1-3), 93-97 (2004).
4. Montefusco, D.J., Chen, L., Matmati, N., *et al.* Distinct signaling roles of ceramide species in yeast revealed through systematic perturbation and systems biology analyses. *Sci. Signal* **6**(299), rs14 (2013).
5. de Jager, M., Groenink, W., van der Spek, J., *et al.* Preparation and characterization of a stratum corneum substitute for *in vitro* percutaneous penetration studies. *Biochim Biophys. Acta.* **1758**(5), 636-644 (2006).
6. Basse, L.H., Groen, D., and Bouwstra, J.A. Permeability and lipid organization of a novel psoriasis stratum corneum substitute. *Int. J. Pharm.* **457**(1), 275-282 (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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