

Product Data Sheet

Product Name: Phytosphingosine-d7

Cat. No.: GC91729

Chemical Properties

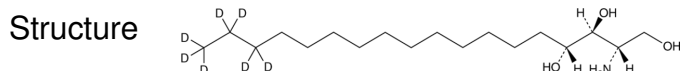
Cas. No. N/A

Formula $C_{18}H_{32}D_7NO_3$ M.Wt 324.6

Solubility Methanol: Soluble Storage $-20^{\circ}C$

General tips For obtaining a higher solubility, please warm the tube at $37^{\circ}C$ and shake it in the ultrasonic bath for a while. Stock solution can be stored below $-20^{\circ}C$ for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.



Background

Phytosphingosine-d7 is intended for use as an internal standard for the quantification of phytosphingosine by GC- or LC-MS. Phytosphingosine is a sphingolipid with a hydroxyl group at the C4 position that is found mainly in fungi and plants but also in animals, including humans.^{[1],[2]} It is metabolized to odd-numbered fatty acids with 2-hydroxy palmitic acid as an intermediate.^[3] Phytosphingosine dose-dependently induces cell death of CHO cells and inhibits carbachol-induced activation of phospholipase D (PLD) in CHO cells transfected with *C. elegans* muscarinic acetylcholine receptors (mAChRs).^[4] It is essential in the heat stress response in *S. cerevisiae*.^[5]

References:

- [1].Dickson, R.C.Sphingolipid functions in *Saccharomyces cerevisiae*: Comparison to mammalsAnnu. Rev. Biochem.6727-48(1998).
- [2].Schürer, N.Y., Plewig, G., and Elias, P.M.Stratum corneum lipid functionDermatologica183(2)77-94(1991).
- [3].Kondo, N., Ohno, Y., Yamagata, M., et al.Identification of the phytosphingosine metabolic pathway leading to odd-numbered fatty acidsNat. Commun.55338(2014).
- [4].Lee, J.S., Min, D.S., Park, C., et al.Phytosphingosine and C2-phytoceramide induce cell death

Caution: Product has not been fully validated for medical applications. For research use only.

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and inhibit carbachol-stimulated phospholipase D activation in Chinese hamster ovary cells expressing the *Caenorhabditis elegans* muscarinic acetylcholine receptorFEBS. Lett.499(1-2)82-86(2001).

[5].Hannun, Y.A., Luberto, C., and Argraves, K.M.Enzymes of sphingolipid metabolism: From modular to integrative signalingBiochemistry40(16)4893-4903(2001).

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