

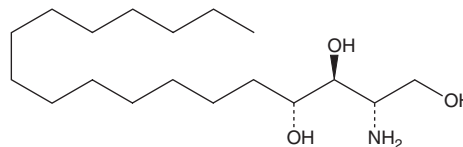
PRODUCT INFORMATION



Phytosphingosine (yeast)

Item No. 20217

CAS Registry No.: 554-62-1
Formal Name: 2S-amino-1,3S,4R-octadecanetriol
Synonyms: D-ribo Phytosphingosine,
4-D-hydroxy Sphinganine
MF: C₁₈H₃₉NO₃
FW: 317.5
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

Phytosphingosine (yeast) is supplied as a crystalline solid. A stock solution may be made by dissolving the phytosphingosine (yeast) in the solvent of choice, which should be purged with an inert gas. Phytosphingosine (yeast) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of phytosphingosine (yeast) in these solvents is approximately 2 and 10 mg/ml, respectively. Phytosphingosine (yeast) is also miscible in ethanol.

Description

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 (Item No. 22679) 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.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 mammals. *Annu. Rev. Biochem.* **67**, 27-48 (1998).
2. Schürer, N.Y., Plewig, G., Elias, P.M., *et al.* Stratum corneum lipid function. *Dermatologica* **183**(2), 77-94 (1991).
3. Kondo, N., Ohno, Y., Yamagata, M., *et al.* Identification of the phytosphingosine metabolic pathway leading to odd-numbered fatty acids. *Nat. Commun.* **5**, 5338 (2014)
4. Lee, J.S., Min, D.S., Park, C., *et al.* Phytosphingosine and C2-phytoceramide induce cell death and inhibit carbachol-stimulated phospholipase D activation in Chinese hamster ovary cells expressing the *Caenorhabditis elegans* muscarinic acetylcholine receptor. *FEBS. 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 signaling. *Biochemistry* **40**(16), 4893-4903 (2001).

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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