

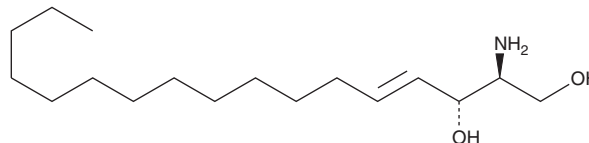
PRODUCT INFORMATION



Sphingosine (d17:1)

Item No. 10007902

CAS Registry No.: 6918-48-5
Formal Name: 2S-amino-4E-heptadecene-1,3R-diol
Synonym: D-erythro-Sphingosine C-17
MF: C₁₇H₃₅NO₂
FW: 285.5
Purity: ≥98%
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

Sphingosine (d17:1) is supplied as a crystalline solid. A stock solution may be made by dissolving the sphingosine (d17:1) in the solvent of choice. Sphingosine (d17:1) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of sphingosine (d17:1) is miscible in ethanol, whereas the solubility is approximately 2 and 10 mg/ml in DMSO and DMF, respectively.

Description

Sphingosine is an amino alcohol most commonly characterized by an 18-carbon unsaturated hydrocarbon chain sphingosine (d18:1) (Item No. 10007907). However, the hydrocarbon chain length of sphingosine, and the related dihydrosphingosine, can vary from 12-26 carbons in mammalian tissues.^{1,2} Sphingosine (d17:1) is a naturally-occurring but uncommon form of sphingosine, accounting for approximately 13% of the sphingosine in human skin.³ It can be phosphorylated by sphingosine kinases to produce C-17 sphingosine-1-phosphate.³ More commonly, sphingosine C-17 is used as an internal standard in the analysis of sphingoid compounds by chromatographic or spectrometric methods.⁴⁻⁶

References

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3. Hong, J.H., Youm, J.-K., Kwon, M.J., et al. K6PC-5, a direct activator of sphingosine kinase 1, promotes epidermal differentiation through intracellular Ca²⁺ signaling. *J. Invest. Dermatol.* **128**, 2166-2178 (2008).
4. Choi, C.-H., Jeong, J.-S., Yoo, B., et al. Sphingosine 1-phosphate and sphingosine kinase activity during chicken embryonic development. *Arch. Pharm. Res.* **30(4)**, 502-506 (2007).
5. Paugh, S.W., Paugh, B.S., Rahmani, M., et al. A selective sphingosine kinase 1 inhibitor integrates multiple molecular therapeutic targets in human leukemia. *Blood* **112**, 1382-1391 (2008).
6. Takabe, K., Kim, R.H., Allegood, J.C., et al. Estradiol induces export of sphingosine 1-phosphate from breast cancer cells via ABCC1 and ABCG2. *J. Biol. Chem.* **285(14)**, 10477-10486 (2010).

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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