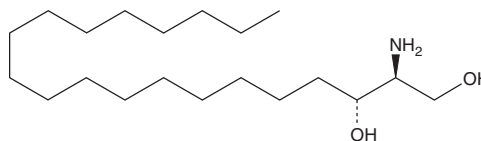


PRODUCT INFORMATION

Sphinganine (d20:0)

Item No. 22509

CAS Registry No.: 24006-62-0
Formal Name: 2S-amino-1,3R-eicosanediol
Synonyms: D-erythro-C20-Dihydrosphingosine, Eicosasphinganine, D-erythro-Sphinganine C20
MF: $C_{20}H_{43}NO_2$
FW: 329.6
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

Sphinganine (d20:0) is supplied as a solid. A stock solution may be made by dissolving the Sphinganine (d20:0) in the solvent of choice. Sphinganine (d20:0) is soluble in a 5:1 solution of chloroform:methanol. Sphinganine (d20:0) is also soluble in ethanol (warm).

Description

Sphinganine (d20:0) is a natural isomer of dihydro-D-erythro-sphinganine (sphinganine (d18:0); Item No. 10007945) that is a precursor of ceramide and sphingosine as well as a substrate for sphingosine kinases, which generate sphingosine-1-phosphate (d18:1) (Item No. 62570). In *S. cerevisiae*, the amount of sphinganine (d20:0) increases 10.8-fold in response to heat stress, indicating it is involved in heat stress adaptation.¹ Sphinganine levels increase significantly in response to certain mycotoxins, including fumonisins as well as in some cancers.²⁻⁴ Sphinganine can block protein kinase C activation in some cases but not others.^{5,6}

References

- Jenkins, G.M., Richards, A., Wahl, T., et al. Involvement of yeast sphingolipids in the heat stress response of *Saccharomyces cerevisiae*. *J. Biol. Chem.* **272**(51), 32566-32572 (1997).
- Yin, J., Miyazaki, K., Shaner, R.L., et al. Altered sphingolipid metabolism induced by tumor hypoxia - new vistas in glycolipid tumor markers. *FEBS Lett.* **584**(9), 1872-1878 (2010).
- Pruett, S.T., Bushnev, A., Hagedorn, K., et al. Biodiversity of sphingoid bases ("sphingosines") and related amino alcohols. *J. Lipid Res.* **49**, 1621-1639 (2008).
- Shephard, G.S., van der Westhuizen, L., and Sewram, V. Biomarkers of exposure to fumonisin mycotoxins: A review. *Food Addit. Contam.* **24**(10), 1196-1201 (2007).
- Merrill, A.H., Jr., Sereni, A.M., Stevens, V.L., et al. Inhibition of phorbol ester-dependent differentiation of human promyelocytic leukemic (HL-60) cells by sphinganine and other long-chain bases. *J. Biol. Chem.* **261**(27), 12610-12615 (1986).
- Merrill, A.H., Jr., Nimkar, S., Menaldino, D., et al. Structural requirements for long-chain (shingoid) base inhibition of protein kinase C *in vitro* and for the cellular effects of these compounds. *Biochemistry* **28**, 3138-3145 (1989).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/22/2022

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM