

PRODUCT DATA SHEET

D-threo-Dihydrosphingosine

Catalog number: 1851

Synonyms: D-threo-sphinganine, C18 chain

Source: synthetic

Solubility: chloroform, methanol, ethanol,
DMSO

CAS number: 6036-86-8

Molecular Formula: C₁₈H₃₉NO₂

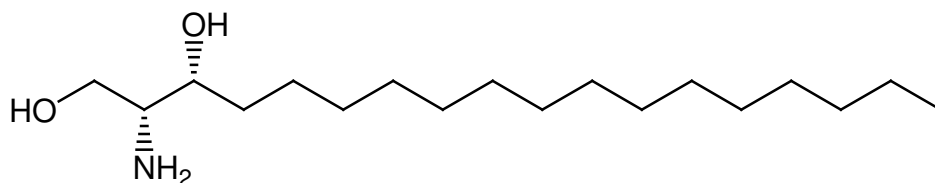
Molecular Weight: 301

Storage: -20°C

Purity: TLC: >98%, GC: >98%; identity
confirmed by MS

TLC System: chloroform/methanol/DI water/
2.5N ammonium hydroxide
(70:20:1:1)

Appearance: solid



Application Notes:

This product is a high purity, well-defined, D-threo-dihydrosphingosine which demonstrates unique properties as compared with the natural D-erythro isomer and is therefore ideal for use in comparison studies of dihydrosphingosine. Sphinganine (dihydrosphingosine) is the precursor of dihydroceramide which is then desaturated to form ceramide. It is a critical intermediate in the synthesis of many complex sphingoid bases and ceramide analogs. It has been found that sphinganine can induce cell death in a number of types of malignant cells and is being tested for its pharmacological properties.¹ While both D-threo and L-threo-C2-dihydroceramide induced apoptosis in cells neither D-erythro nor L-erythro-C2-dihydroceramide showed activity.² A report has concluded that only the erythro isomers of dihydrosphingosine act as substrates for the enzyme sphingosine kinase with both of the threo isomers inhibiting its activity.³

Selected References:

1. W. Zheng "Fenretinide increases dihydroceramide and dihydrosphingolipids due to inhibition of dihydroceramide desaturase" Georgia Institute of Technology, 2006
2. A. Bielawska "Selectivity of Ceramide-Mediated Biology Lack of Activity of erythro-Dihydroceramide" *Journal of Biological Chemistry*, vol. 268 pp. 26226-26232, 1993
3. B. Buehrer and R. Bell "Inhibition of Sphingosine Kinase *in Vitro* and in Platelets Implications for Signal Transduction Pathways" *Journal of Biological Chemistry*, vol. 267 pp. 3154-3159, 1992

This product is to be used for research only. It is not intended for drug or diagnostic use, human consumption or to be used in food or food additives. Matreya assumes no liability for any use of this product by the end user. We believe the information, offered in good faith, is accurate.