**PRODUCT DATA SHEET**

**D,L-C16-Dihydrosphingosine, (mixed isomers)**

**Catalog number:** 1326  
**Synonyms:** D,L-Sphinganine, with C16:0 chain  
**Source:** synthetic  
**Solubility:** chloroform, methanol, ethanol, DMSO  
**CAS number:** N/A  
**Molecular Formula:** C\(_{16}\)H\(_{35}\)NO\(_2\)  
**Molecular Weight:** 273  
**Storage:** -20°C  
**Purity:** TLC >98% (90% erythro, 10% threo)  
**TLC System:** chloroform/methanol/DI water/ammonium hydroxide (70:20:1:1 by vol.)  
**Appearance:** solid

**Application Notes:**
This dihydrosphingosine standard is a mixture of D and L isomers and contains approximately 90% erythro and 10% threo isomers. It is a 16 carbon chain, two carbons shorter than the most prevalent dihydrosphingosine in most animals. However, some animals, such as *Drosophila melanogaster*, have the shorter C16 dihydrosphingosine base.\(^1\) Dihydrosphingosine (Sphinganine) 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.\(^2\) Inhibition of dihydroceramide synthesis by some fungal toxins that have a similar structure causes an increase in sphinganine and sphinganine-1-phosphate and a decrease in other sphingolipids leading to a number of diseases including oesophageal cancer.\(^3\) Sphinganine has been found to mediate fumonisin (a toxic sphinganine analog) induced hypotension.\(^4\)

**Selected References:**
2. W. Zheng “Fenretinide increases dihydroceramide and dihydrosphingolipids due to inhibition of dihydroceramide desaturase” Georgia Institute of Technology, 2006  

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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.

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