

# PRODUCT DATA SHEET

## N-Hexanoyl-L-erythro-sphingosine

**Catalog number:** 1848

**Common Name:** N-C6:0-L-erythro-Ceramide

**Source:** synthetic

**Solubility:** chloroform, ethanol, DMSO,  
DMF (up to 5 mg/ml)

**CAS number:** 189894-78-8

**Molecular Formula:** C<sub>24</sub>H<sub>47</sub>NO<sub>3</sub>

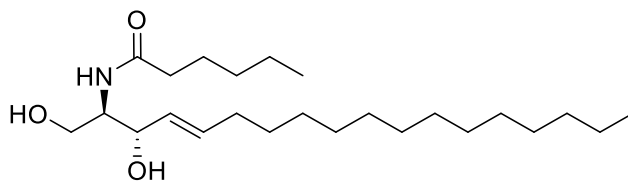
**Molecular Weight:** 398

**Storage:** -20°C

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

**TLC System:** chloroform/methanol (90:10 by vol.)

**Appearance:** solid



### Application Notes:

This product is the *L-erythro* stereoisomer of natural *D-erythro*-hexanoyl ceramide. *L-erythro* ceramides are inactive in some ceramide functions, have different activities in other functions, and exhibit the same activity in yet other functions. *L-erythro*-N-acetyl ceramide has been shown to induce accumulation of greater levels of sphingosine than in control cells.<sup>1</sup> Generation of endogenous long-chain ceramide can be induced by exogenous short chain *D-erythro*-hexanoyl-ceramide but not by non-natural *L-erythro*-hexanoyl-ceramide.<sup>2</sup> Other examples of functions demonstrated by *D-erythro*, but not *L-erythro*, ceramides are several key downstream biological activities such as growth inhibition, cell cycle arrest, and modulation of telomerase activity.<sup>2</sup> Some viruses require the presence of ceramide in a membrane to be able to fuse to that membrane and it has been demonstrated that only *D-erythro* ceramide, and not *L-erythro* or *D-* or *L-threo* ceramides, supports the viral fusion.<sup>3</sup>

### Selected References:

1. Y. Lee et al. "Sphingolipid metabolic changes during chiral C2-ceramides induced apoptosis in human leukemia cells" *Arch Pharm Res*, vol. 24 pp. 144-149, 2001
2. Y. Hannun et al. "Biochemical Mechanisms of the Generation of Endogenous Long Chain Ceramide in Response to Exogenous Short Chain Ceramide in the A549 Human Lung Adenocarcinoma Cell Line" *The Journal of Biological Chemistry*, vol. 277 pp. 12960-12969, 2002
3. J. Wilschut et al. "Sphingolipids Activate Membrane Fusion of Semliki Forest Virus in a Stereospecific Manner" *Biochemistry*, vol. 34 pp. 10319-10324, 1995

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.