PRODUCT DATA SHEET

N-Hexanoyl-L-threo-sphingosine

**Catalog number:** 1828

**Common names:** N-C6:0-L-threo-Ceramide

**Source:** synthetic

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

**CAS number:** N/A

**Molecular Formula:** C_{24}H_{47}NO_{3}

**Molecular Weight:** 398

**Storage:** -20°C

**Purity:** TLC >98%, GC >98%

**TLC System:** chloroform/methanol (90:10)

**Appearance:** solid

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**Application Notes:**

This product is the non-natural L-threo stereoisomer of ceramide. Natural D-erythro ceramide is a critical compound in cells both as a free ceramide and incorporated into more complex sphingolipids. L-threo-ceramides demonstrate a different metabolic functionality from natural ceramides. They have been shown to be metabolized to sphingomyelin but not to glucosylceramide. Another non-natural stereoisomer, L-erythro ceramide, is not metabolized to any sphingolipid. In contrast to natural ceramides L-threo ceramides are unable to antagonize the disruptive effects of fumonisin B1 on axon growth but it is able to activate intracellular pathways and induces apoptosis. The deacylated form of ceramide, sphingosine, also has many critical cellular functions. L-threo-sphingosine, along with other sphingosine isomers, has been found to be an activator of 3-Phosphoinositide-dependent kinase-1 and inhibits protein kinase C a little more potently than D-erythro-sphingosine.

**Selected References:**


5. V. Stevens et al. “Structural requirements for long-chain (sphingoid) base inhibition of protein kinase C in vitro and for the cellular effects of these compounds” *Biochemistry*, vol. 28, 3138-3145, 1989

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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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