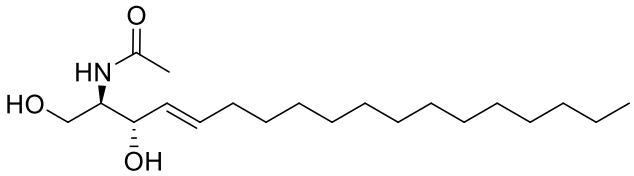
PRODUCT DATA SHEET

N-Acetyl-L-*erythro*-sphingosine

Catalog number: 1847
Common names: N-C2:0-L-*erythro*-Ceramide
Source: synthetic
Solubility: chloroform, methanol, ethanol, DMSO, DMF (up to 5 mg/ml)
CAS number: 150338-90-2

Molecular Formula: $C_{20}H_{39}NO_3$
Molecular Weight: 342
Storage: -20°C
Purity: TLC: >98%, GC: >98%; identity confirmed by MS
TLC System: chloroform/methanol (90:10)
Appearance: solid



Application Notes:

This product contains an L-*erythro*-sphingosine containing an acetic amide linkage and is useful for comparison studies against the natural D-*erythro* isomer. This product is also very useful as an internal standard[1,2] and contains a short-chain fatty acid enabling it to enter easily into cells. L-*erythro*-Sphingosine is an inactive or less active isomer of the naturally occurring D-*erythro*-sphingosine. Natural sphingosine induces dephosphorylation of retinoblastoma gene product and inhibits cell growth while L-*erythro*-sphingosine is 5-8-fold less active. However, the L-*erythro*-sphingosine is taken up by cells to the same extent as the natural sphingosine indicating that cellular uptake was not the factor influencing activity.[3] L-*erythro*-sphingosine, along with other sphingosine isomers, has been found to be an activator of 3-Phosphoinositide-dependent kinase 1.

Selected References:

1. T. Cunningham et al. “Product inhibition of secreted phospholipase A2 may explain lysophosphatidylcholines' unexpected therapeutic properties” Journal of Inflammation, 5:17 doi:10.1186/1476-9255-5-17, 2008
2. T. Cunninghame et al “Uncompetitive Phospholipase A2 Inhibition by CHEC Sequences Including
Oral Treatment of Experimental Autoimmune Myeloencephalitis” *The Open Enzyme Inhibition Journal*, vol. 2 pp. 1-7, *2009*
3. Y. Hannun et al. “Stereoselectivity of Induction of the Retinoblastoma Gene Product (pRb) Dephosphorylation by D-erythro-Sphingosine Supports a Role for pRb in Growth Suppression by Sphingosine” *Biochemistry*, vol. 34 pp. 1885-1892, *1995*

2178 High Tech Road, State College, PA 16803
www.matreya.com · Phone (814) 355-1030 · Fax (814) 355-1031