**PRODUCT DATA SHEET**

**N-(30-Linoleoyloxy-triacontanoyl)-sphingosine**

**Catalog number:** 2084  
**Synonyms:** Ceramide (EOS); EOS Ceramide 1; O-Acylceramide  
**Source:** synthetic  
**Solubility:** chloroform; methanol; DMF  
**CAS number:** 97040-38-5

**Molecular Formula:** C_{66}H_{125}NO_{5}  
**Molecular Weight:** 1013  
**Storage:** -20°C  
**Purity:** TLC: >98%; HPLC>98%; identity confirmed by MS  
**TLC System:** chloroform/methanol, (97:3 by vol.)  
**Appearance:** solid

**Application Notes:**

This product is a high purity omega-esterified ceramide that is ideal as a standard and for studies involving skin-barrier lipids. It is found almost exclusively in the epidermal layer, especially in the stratum corneum. The stratum corneum is the outermost cellular layer of the epidermis and functions as the permeability barrier in mammals. It contains 12 extractable ceramide fractions containing sphingosine, 6-hydroxysphingosine, dihydro sphingosine and phytosphingosine bases. The omega-esterified ceramides are formed from glucosylceramide and sphingomyelin in special lamellar bodies in epidermal cells from which they are excreted into the extracellular domain of the outermost cell layer of the epidermis. Mammalian skin contains significant amounts of sphingolipids (as much as 50% of the total lipids), particularly very long chain linoleoyl esterified ceramide and glucosylceramide (also called O-acylceramide and O-acylglucosylceramide). These lipids, which are mostly found in the extracellular domains, are vital to the water permeability barrier to prevent lethal loss of water and pathogen invasion. The omega-esterified ceramides can be covalently bound to proteins of the cornified envelope where they form a hydrophobic layer. A deficiency of linoleoyl omega-esterified ceramides is strongly correlated with skin diseases such as psoriasis and atopic dermatitis.

**Selected References:**


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