# Dihydroceramide

SIH-398-5MG

StressMarq Biosciences INC.
Discovery through partnership | Excellence through quality

## Overview

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| **Product Name** | Dihydroceramide Small Molecule |
| **Unit Size** | 5mg |
| **Description** | Autophagy inducer |
| **Purity** | ≥98% |

## Technical Data

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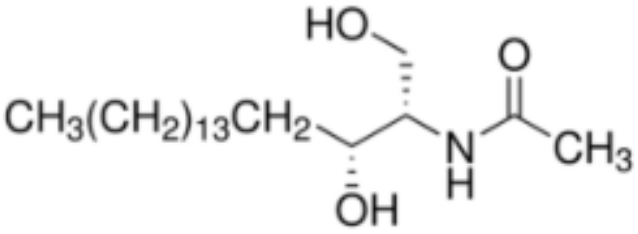
| **Alternative Name(s)** | C2 Dihydroceramide, D-erythro-N-Acetylsphinganine |
| **Formula** | C20H41NO3 |
| **CAS#** | 13031-64-6 |
| **Molecular Weight** | 343.54 |
| **Chemical Structure** |  |
| **Solubility** | Soluble in ethanol (5mg/mL) or DMSO (5mg/mL: dissolve in hot DMSO, then cool to RT). |
| **Source** | Synthetic |
| **Appearance** | White solid. |
| **Storage Conditions** | -20°C; 1 year+ |
| **Shipping Temperature** | Shipped Ambient |
| **SMILES** | [C@@H](NC(=O)C)([C@H](O)CCCCCCCCCCCCCCC)CO |
| **Research Area(s)** | Autophagy |

## Biological Description

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| **Function** | Both in yeast and mammalian systems, dihydroceramide is the reaction intermediate found immediately prior to the final reaction product in the de novo synthesis of ceramide lipids. Recent studies have revealed that an accumulation of dihydroceramide will induce autophagy. Accumulation of dihydroceramide occurs due to inhibition of dihydroceramide desaturase, the enzyme responsible for the conversion of dihydroceramide into ceramide.<br><br>1. Gagliostro, V. et al. (2012). Int J Biochem Cell Biol, 44(12): 2135-43.<br>2. Jiang, Q. et al. (2012). Int J Cancer, 130(3): 685-93.<br>3. Signorelli, P. et al. (2009). Cancer Lett, 282(2): 238-43. |
| **Product Citations** | PubMed ID: N/A |

# Material Safety Data Sheet
## Dihydroceramide SIH-398-5MG

This product is for *in vitro* research use only and is not intended for use in humans or animals

The below information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. StressMarq shall not be held liable for any damage resulting from handling or from contact with the above product. See the Technical Specification, Packing Slip, Invoice, and Product Catalogue for additional terms and conditions of sale.

### Regulatory Information

Classification: Not WHMIS controlled.
Safety Phrases:
S22 - Do not breathe dust.
S24/25 - Avoid contact with skin and eyes.
S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.

### Physical Data

This product consists of powder, shipped at ambient temperatures. The physical properties of this product have not been investigated thoroughly. CAS Number: 13031-64-6

### Fire and Explosion Hazard and Reactivity Data

NOT APPLICABLE

### Toxicological Properties

May be harmful by inhalation, ingestion, or skin absorption. The toxicological properties of this product have not been investigated thoroughly. Exercise due caution.

### Preventative Measures

Wear chemical safety goggles and compatible chemical-resistant gloves. Avoid inhalation, contact with eyes, skin or clothing.

### Spill and Leak Procedures

Observe all federal, state and local environmental regulations.

- Wear protective equipment.
- Absorb on sand or vermiculite and place in closed containers for disposal.
- Dispose or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

### First Aid Measures

- If swallowed, wash out mouth with water, provided person is conscious. Call a physician.
- In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. If a rash or other irritation develops, call a physician.
- If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.
- In case of eye contact, flush with copious amounts of water for at least 15 minutes while separating the eyelids with fingers. Call a physician.

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