

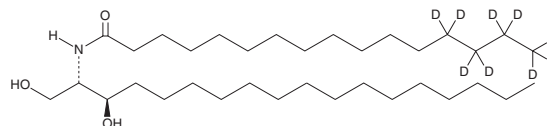
# PRODUCT INFORMATION



## C16 dihydro Ceramide-d<sub>9</sub> (d18:0/16:0-d<sub>9</sub>)

Item No. 39389

**CAS Registry No.:** 2260669-52-9  
**Formal Name:** N-[(1S,2R)-2-hydroxy-1-(hydroxymethyl)heptadecyl]-hexadecanamide-13,13,14,14,15,15,16,16,16-d<sub>9</sub>  
**Synonyms:** Cer(d18:0/16:0-d<sub>9</sub>), Ceramide (d18:0/16:0-d<sub>9</sub>), N-hexadecanoyl-D-erythro-Dihydrosphingosine-d<sub>9</sub>, N-Palmitoyl Sphinganine-d<sub>9</sub>  
**MF:** C<sub>34</sub>H<sub>60</sub>D<sub>9</sub>NO<sub>3</sub>  
**FW:** 549.0  
**Chemical Purity:** ≥98% (C16 dihydro Ceramide (d18:0/16:0))  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>9</sub>); ≤1% d<sub>0</sub>  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

C16 dihydro Ceramide-d<sub>9</sub> (d18:0/16:0-d<sub>9</sub>) is intended for use as an internal standard for the quantification of C16 dihydro ceramide (Item No. 24369) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

C16 dihydro Ceramide-d<sub>9</sub> (d18:0/16:0-d<sub>9</sub>) is supplied as a solid. A stock solution may be made by dissolving the C16 dihydro ceramide-d<sub>9</sub> (d18:0/16:0-d<sub>9</sub>) in the solvent of choice, which should be purged with an inert gas. C16 dihydro Ceramide-d<sub>9</sub> (d18:0/16:0-d<sub>9</sub>) is soluble in ethanol and DMSO.

### Description

C16 dihydro Ceramide is a bioactive sphingolipid and precursor in the *de novo* synthesis of C16 ceramide (d18:0/16:0) (Item No. 10681) that lacks the 4,5-*trans* double bond.<sup>1</sup> C16 dihydro Ceramide (46 nM) inhibits C16 ceramide-induced membrane permeabilization, measured as cytochrome c oxidation, in rat liver mitochondria in a concentration-dependent manner. It also inhibits C16 ceramide-induced channel formation in liposomes. C16 dihydro ceramide is biologically inactive as a single agent, lacking the ability to induce apoptosis, cytochrome c release, or channel formation in phospholipid membranes in the absence of C16 ceramide.

### Reference

1. Stiban, J., Fistere, D., and Colombini, M. Dihydroceramide hinders ceramide channel formation: Implications on apoptosis. *Apoptosis* **11**(5), 773-780 (2006).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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