

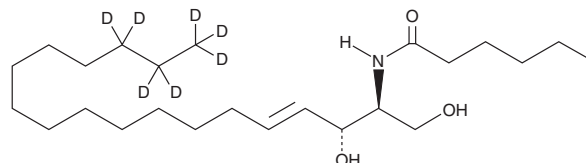
# PRODUCT INFORMATION



## C6 Ceramide-d<sub>7</sub> (d18:1-d<sub>7</sub>/6:0)

Item No. 24826

**CAS Registry No.:** 2692624-22-7  
**Formal Name:** N-[(1S,2R,3E)-2-hydroxy-1-(hydroxymethyl)-3-heptadecen-1-yl-15,15,16,16,17,17,17-d<sub>7</sub>]-hexanamide  
**Synonyms:** N-Caproyl-C18-Sphingosine-d<sub>7</sub>, Cer-d<sub>7</sub>(d18:1-d<sub>7</sub>/6:0), C6 Ceramide-d<sub>7</sub>, Ceramide-d<sub>7</sub> (d18:1-d<sub>7</sub>/6:0), N-hexanoyl-D-erythro-Sphingosine-d<sub>7</sub>  
**MF:** C<sub>24</sub>H<sub>40</sub>D<sub>7</sub>NO<sub>3</sub>  
**FW:** 404.7  
**Chemical Purity:** ≥98% (C6 Ceramide)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>7</sub>); ≤1% d<sub>0</sub>  
**Supplied as:** A solution in methanol  
**Storage:** -20°C  
**Stability:** ≥2 years



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

### Laboratory Procedures

C6 Ceramide-d<sub>7</sub> (d18:1-d<sub>7</sub>/6:0) is intended for use as an internal standard for the quantification of short-chain ceramides, such as C2 ceramide (Item Nos. 62510 | 24386 | 24387), C6 ceramide (Item No. 62525), and C8 ceramide (Item Nos. 62540 | 24391 | 24392), 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).

C6 Ceramide-d<sub>7</sub> (d18:1-d<sub>7</sub>/6:0) is supplied as a solution in methanol. To change the solvent, simply evaporate the methanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. C6 Ceramide-d<sub>7</sub> (d18:1-d<sub>7</sub>/6:0) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of C6 ceramide-d<sub>7</sub> (d18:1-d<sub>7</sub>/6:0) in these solvents is approximately 33, 20, and 22 mg/ml, respectively.

### Description

C6 Ceramide is a cell-permeable analog of naturally occurring ceramides. With a longer carbon chain than C2 ceramide, it is somewhat more hydrophobic, and may more closely mimic the effects of natural ceramides.<sup>1</sup> C6 Ceramide mediates many diverse biological activities including apoptosis, activation of protein phosphatase 2A, and inhibition of the mitochondrial respiratory chain.<sup>1-4</sup> It also enhances the expression of COX-2 in rat granulosa cells and stimulates the growth of bovine aortic smooth muscle cells.<sup>5,6</sup> C6 Ceramide acts in neuronal axons to inhibit neurite growth.<sup>7</sup>

### References

1. Dobrowsky, R.T. and Hannun, Y.A. *J. Biol. Chem.* **267**(8), 5048-5051 (1992).
2. Cai, Z., Bettaieb, A., El Mahdani, N., et al. *J. Biol. Chem.* **272**(11), 6918-6926 (1997).
3. Dobrowsky, R.T., Kamibayashi, C., Mumby, M.C., et al. *J. Biol. Chem.* **268**(21), 15523-15530 (1993).
4. Gudz, T.I., Tserng, K.Y., and Hoppel, C.L. *J. Biol. Chem.* **272**(39), 24154-24158 (1997).
5. Santana, P., Llanes, L., Hernandez, I., et al. *Endocrinology* **137**(6), 2480-2489 (1996).
6. Augé, N., Andrieu, N., Nègre-Salvayre, A., et al. *J. Biol. Chem.* **271**(32), 19251-19255 (1996).
7. Posse de Chaves, E.I., Bussière, M., Vance, D.E., et al. *J. Biol. Chem.* **272**(4), 2038-3035 (1997).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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