

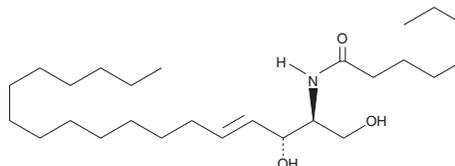
# PRODUCT INFORMATION



## C8 Ceramide (d18:1/8:0)

Item No. 62540

**CAS Registry No.:** 74713-59-0  
**Formal Name:** N-[(1S,2R,3E)-2-hydroxy-1-(hydroxymethyl)-3-heptadecen-1-yl]-octanamide  
**Synonyms:** C8 Ceramide, Cer(d18:1/8:0), N-octanoyl-D-erythro-Sphingosine, N-Octanoylsphingosine  
**MF:** C<sub>26</sub>H<sub>51</sub>NO<sub>3</sub>  
**FW:** 425.7  
**Purity:** ≥98%  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



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

### Laboratory Procedures

C8 Ceramide (d18:1/8:0) is supplied as a crystalline solid. A stock solution may be made by dissolving the C8 ceramide (d18:1/8:0) in the solvent of choice. C8 Ceramide (d18:1/8:0) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of C8 ceramide (d18:1/8:0) in these solvents is approximately 20 mg/ml.

C8 Ceramide (d18:1/8:0) is not directly soluble in aqueous solutions. If an aqueous solution of C8 ceramide (d18:1/8:0) is needed, further dilutions of the stock solution into aqueous buffers or isotonic saline must be made. Dilutions of the stock solution should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant since organic solvents may have physiological effects at low concentrations. Store aqueous solutions of C8 ceramide (d18:1/8:0) on ice and use within 12 hours of preparation.

### Description

C8 Ceramide (d18:1/8:0) is a cell-permeable analog of naturally occurring ceramides. Unlike C2 ceramide, it is metabolized within cells to generate natural ceramides, often causing a dramatic increase in cellular ceramide levels.<sup>2</sup> For this reason, treatment of cells with C8 Ceramide (d18:1/8:0) may more closely mimic the effects of ceramide elevation than does treatment with shorter chain ceramide analogs. C8 Ceramide (d18:1/8:0) likely mediates many diverse biological activities, as do natural ceramides. It promotes the differentiation of human keratinocytes and induces apoptosis of both human leukemia cells and the U937 cell line.<sup>1-3</sup>

### References

1. Wakita, H., Tokura, Y., Yagi, H., *et al.* Keratinocyte differentiation is induced by cell-permeant ceramides and its proliferation is promoted by sphingosine. *Arch. Dermatol. Res.* **286**, 350-354 (1994).
2. Karasavvas, N., Erukulla, R.K., Bittman, R., *et al.* Stereospecific induction of apoptosis in U937 cells by N-octanoyl-sphingosine stereoisomers and N-octyl-sphingosine. The ceramide amide group is not required for apoptosis. *Eur. J. Biochem.* **236**, 729-737 (1996).
3. Geley, S., Hartmann, B. L., Kofler, R., *et al.* Ceramides induce a form of apoptosis in human acute lymphoblastic leukemia cells that is inhibited by Bcl-2, but not by CrmA. *FEBS Letters* **400**, 15-18 (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.

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