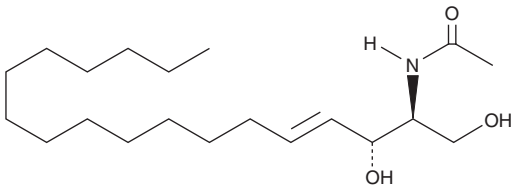
PRODUCT INFORMATION

C2 Ceramide (d18:1/2:0)

Item No. 62510

CAS Registry No.:	3102-57-6
Formal Name:	N-[(1S,2R,3E)-2-hydroxy-1-(hydroxymethyl)-3-heptadecen-1-yl]-acetamide
Synonyms:	C2 Ceramide, Ceramide (d18:1/2:0), Cer(18:1/2:0), N-acetoyl-D-*erythro*-sphingosine
MF:	$C_{20}H_{39}NO_3$
FW:	341.5
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

C2 Ceramide (d18:1/2:0) is supplied as a crystalline solid. A stock solution may be made by dissolving the C2 ceramide (d18:1/2:0) in the solvent of choice, which should be purged with an inert gas. C2 Ceramide (d18:1/2:0) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of C2 ceramide (d18:1/2:0) in these solvents is approximately 33, 20, and 22 mg/ml, respectively

Further dilutions of the stock solution into aqueous buffers or isotonic saline 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. Organic solvent-free aqueous solutions of C2 ceramide (d18:1/2:0) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of C2 ceramide (d18:1/2:0) in PBS (pH 7.2) is approximately 50 µg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

C2 ceramide is a biologically active, cell permeable, and less hydrophobic analog of natural ceramides. It has been shown to induce cell differentiation and inhibit cell growth in HL-60 cells.[2,3] C2 ceramide activates a cytosolic protein phosphatase in T9 cells at levels as low as 0.1 µM.[4]

References

1. Obeid, L.M., Linardic, C.M., Karolak, L.A., *et al.* Programmed cell death induced by ceramide. *Science* **259**, 1769-1771 (1993).
2. Okazaki, T., Bielawska, A., Bell, R.M., *et al.* Role of ceramide as a lipid mediator of 1α,25-dihydroxyvitamin D_3-induced HL-60 cell differentiation. *J. Biol. Chem.* **265**, 15823-15831 (1990).
3. Bielawska, A., Linardic, C.M., and Hannun, Y.A. Ceramide-mediated biology. Determination of structural and stereospecific requirements through the use of N-acyl-phenylaminoalcohol analogs. *J. Biol. Chem.* **267**, 18493-18497 (1992).
4. Dobrowsky, R.T. and Hannun, Y.A. Ceramide stimulates a cytosolic protein phosphatase. *J. Biol. Chem.* **267**, 5048-5051 (1992).

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