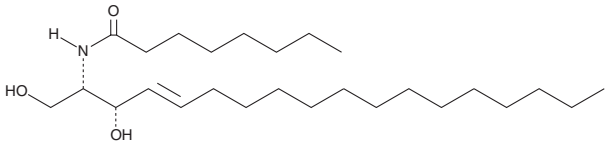
PRODUCT INFORMATION

C8 L-*threo* Ceramide (d18:1/8:0)

Item No. 24392

CAS Registry No.: 175892-44-1
Formal Name: N-[(1S,2S,3E)-2-hydroxy-1-(hydroxymethyl)-3-heptadecen-1-yl]-octanamide
Synonyms: L-*threo* Cer(d18:1/8:0), L-*threo* Ceramide (d18:1/8:0), N-octanoyl-L-*threo*-Sphingosine
MF: $C_{26}H_{51}NO_3$
FW: 425.7
Purity: ≥98%
Supplied as: A 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 L-*threo* Ceramide (d18:1/8:0) is supplied as a solid. A stock solution may be made by dissolving the C8 L-*threo* ceramide (d18:1/8:0) in the solvent of choice, which should be purged with an inert gas. C8 L-*threo* ceramide (d18:1/8:0) is soluble in chloroform, ethanol, DMSO, and dimethyl formamide (DMF). The solubility of C8 L-*threo* ceramide (d18:1/8:0) in DMF is approximately C8 L-*threo* ceramide 5 mg/ml.

Description

C8 L-*threo* Ceramide is a bioactive sphingolipid and cell-permeable analog of naturally occurring ceramides.[1] It is cytotoxic to U937 cells (IC_{50} = 10 µM) and, like C8 D-*threo* ceramide (Item No. 24391), induces nuclear DNA fragmentation 5- to 6-fold more potently than C8 D-*erythro* ceramide (Item No. 62540).[1,2] C8 L-*threo* Ceramide also enhances *V. cholerae* cytolysin pore formation in liposome lipid membranes, as measured by calcein release, with a 50% release dose (RD_{50}) value of ~30 µg/ml.[3]

References

1. 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(2)**, 729-737 (1996).
2. Chang, Y.-T., Choi, J., Ding, S., *et al.* The synthesis and biological characterization of a ceramide library. *J. Am. Chem. Soc.* **124(9)**, 1856-1857 (2002).
3. Zitzer, A., Bittman, R., Verbicky, C.A., *et al.* Coupling of cholesterol and cone-shaped lipids in bilayers augments membrane permeabilization by the cholesterol-specific toxins streptolysin O and *Vibrio cholerae* cytolysin. *J. Biol. Chem.* **276(18)**, 14628-14633 (2001).

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