

PRODUCT INFORMATION



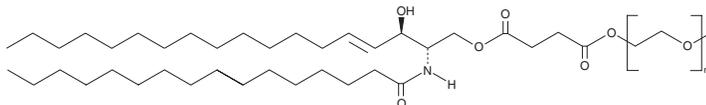
C16 Ceramide-mPEG(2000)

Item No. 41955

CAS Registry No.: 212116-78-4

Formal Name: α -[4-[[[(2S,3R,4E)-3-hydroxy-2-[(1-oxohexadecyl)amino]-4-octadecen-1-yl]oxy]-1,4-dioxobutyl]- ω -methoxy-poly(oxy-1,2-ethanediyl)

Synonyms: Cer(d18:1/16:0) MPEG(2000),
MPEG(2000) Ceramide (d18:1/16:0),
N-Hexadecanoyl-D-erythro-Sphingosine
mPEG(2000), N-Palmitoyl-D-erythro-Sphingosine
mPEG(2000), Palmitoyl Ceramide Methoxy
Polyethylene Glycol-2000



MF: $(C_2H_4O)_n C_{39}H_{73}NO_6$

Purity: $\geq 90\%$

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

C16 Ceramide-mPEG(2000) is supplied as a solid. A stock solution may be made by dissolving the C16 ceramide-mPEG(2000) in the solvent of choice, which should be purged with an inert gas. C16 Ceramide-mPEG(2000) is sparingly soluble (1-10 mg/ml) in methanol.

Description

C16 Ceramide-mPEG(2000) is a PEGylated form of C16 ceramide (Item No. 10681) that has been used in the generation of microspheres, lipid nanoparticles (LNPs), and liposomes for the delivery of small molecules, mRNA, and plasmid DNA *in vitro* and *in vivo*.¹⁻³ Liposomes containing C16 ceramide-mPEG(2000) and a stearylated derivative of the endosomal escape inducer INF7 have been used to transfect plasmid DNA into MFLM-4 cells.¹ Microspheres containing C16 ceramide-mPEG(2000) and encapsulating oxaliplatin (Item No. 13106) increase survival and decrease the number of small intestine, colon, and cecum polyps in an *Apc*^{+/Min} spontaneous colorectal adenoma mouse model.²

References

1. Kusumoto, K., Akita, H., El-Sayed, A., *et al.* Effect of the anchor in polyethylene glycol-lipids on the transfection activity of PEGylated cationic liposomes encapsulating DNA. *Biol. Pharm. Bull.* **35(4)**, 445-448 (2012).
2. Urbanska, A.M., Karagiannis, E.D., Guajardo, G., *et al.* Therapeutic effect of orally administered microencapsulated oxaliplatin for colorectal cancer. *Biomaterials* **33(18)**, 4752-4761 (2012).
3. Lee, Y., Jeong, M., Lee, G., *et al.* Development of lipid nanoparticle formulation for the repeated administration of mRNA therapeutics. *Biomater. Res.* **28**, 0017 (2024).

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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