

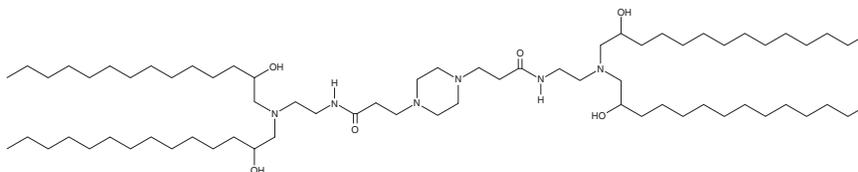
# PRODUCT INFORMATION



## Lipid C2

Item No. 39783

**CAS Registry No.:** 3003022-09-8  
**Formal Name:** N<sup>1</sup>,N<sup>4</sup>-bis[2-[bis(2-hydroxytetradecyl)amino]ethyl]-1,4-piperazinedipropanamide  
**Synonym:** MIC1  
**MF:** C<sub>70</sub>H<sub>142</sub>N<sub>6</sub>O<sub>6</sub>  
**FW:** 1,163.9  
**Purity:** ≥95% (mixture of diastereomers)  
**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

Lipid C2 is supplied as a solid. A stock solution may be made by dissolving the lipid C2 in the solvent of choice, which should be purged with an inert gas. Lipid C2 is soluble in DMSO and chloroform.

### Description

Lipid C2 is an ionizable cationic lipid that has been used in the formation of lipid nanoparticles (LNPs) for mRNA delivery *in vivo*.<sup>1</sup> LNPs containing lipid C2 and encapsulating an mRNA reporter selectively accumulate in the liver and spleen but not the heart, lungs, or kidneys in mice. LNPs containing lipid C2 and encapsulating mRNA encoding the Epstein-Barr virus (EBV) protein latent membrane protein 2 (LMP-2), in combination with an anti-programmed cell death protein 1 (PD-1) antibody, decrease tumor volume and reverse T cell exhaustion, as well as increase the percentage of CD3<sup>+</sup>CD8<sup>+</sup> central and CD3<sup>+</sup>CD8<sup>+</sup> effector memory T cells and decrease the percentage of CD3<sup>+</sup> T cells expressing Pd-1, in the spleen in a CT26 murine EBV-infected colon cancer model.

### Reference

1. Xiang, Y., Tian, M., Huang, J., *et al.* LMP2-mRNA lipid nanoparticle sensitizes EBV-related tumors to anti-PD-1 therapy by reversing T cell exhaustion. *J. Nanobiotechnology* **21(1)**, 324 (2023).

#### 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

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