

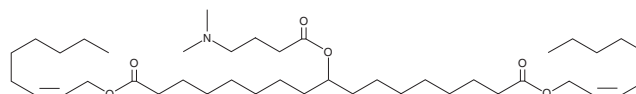
# PRODUCT INFORMATION



## L-319

Item No. 35051

**CAS Registry No.:** 1351586-50-9  
**Formal Name:** 9-[4-(dimethylamino)-1-oxobutoxy]-heptadecanedioic acid, 1,17-di-(2Z)-2-nonen-1-yl ester  
**MF:** C<sub>41</sub>H<sub>75</sub>NO<sub>6</sub>  
**FW:** 678.0  
**Purity:** ≥95%  
**Supplied as:** A 10 mg/ml solution in ethanol  
**Storage:** -20°C  
**Stability:** ≥4 years



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

### Laboratory Procedures

L-319 is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. L-319 is soluble in chloroform.

### Description

L-319 is an ionizable cationic (pKa = 6.38) and biodegradable lipid derivative of DLin-MC3-DMA (Item No. 34364) that has been used in the formation of lipid nanoparticles (LNPs).<sup>1</sup> LNPs containing L-319 and encapsulating siRNA encoding Factor VII (FVII) reduce serum levels of FVII in mice. LNPs containing L-319 in combination with cKK-E12 (Item No. 36700) and encapsulating varicella-zoster virus (VZV) mRNA encoding glycoprotein E (gE) increase the lymph node and spleen levels of CD11c<sup>+</sup>CD80<sup>+</sup> and CD11c<sup>+</sup>CD86<sup>+</sup> cells and total serum IgG titers in mice, as well as decrease the number of VZV-induced rashes and the epithelial levels of VZV DNA, in a guinea pig model of VZV-induced shingles.<sup>2</sup>

### Reference

1. Maier, M.A., M., J., Matsuda, S., *et al.* Biodegradable lipids enabling rapidly eliminated lipid nanoparticles for systemic delivery of RNAi therapeutics. *Mol. Ther.* **21(8)**, 1570-1578 (2013).
2. Cheng, X., Liu, S., Sun, J., *et al.* A synergistic lipid nanoparticle encapsulating mRNA shingles vaccine induces potent immune responses and protects guinea pigs from viral challenges. *Adv. Mat.* **36(13)**, e2310886 (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.

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