

# PRODUCT INFORMATION



## Lipid N2-3L

Item No. 40911

**CAS Registry No.:** 2924606-55-1  
**Formal Name:** 9Z-octadecenoic acid, 3-[2-[(2-hexyl-1-oxodecyl)oxy]ethyl]-14-hydroxy-12-(2-hydroxyethyl)-7-oxo-6-oxa-3,8,12-triazatetradec-1-yl ester

**MF:** C<sub>48</sub>H<sub>93</sub>N<sub>3</sub>O<sub>8</sub>

**FW:** 840.3

**Purity:** ≥95%

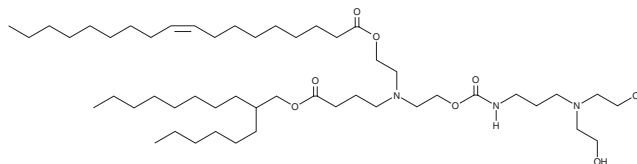
**Supplied as:** A solution in methyl acetate

**Storage:** -20°C

**Stability:** ≥1 year

**Special Conditions:** May degrade in alcohols

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



### Laboratory Procedures

Lipid N2-3L is supplied as a solution in methyl acetate. A stock solution may be made by dissolving the Lipid N2-3L in the solvent of choice, which should be purged with an inert gas. Lipid N2-3L is soluble (≥10 mg/ml) in ethanol and DMSO.

### Description

Lipid N2-3L is an ionizable cationic lipid ( $pK_a = 8.99$ ) that has been used in the generation of supramolecular lipid nanoparticles (SMLNPs) encapsulating mRNA for use *in vitro* and *in vivo*.<sup>1</sup> SMLNPs containing lipid N2-3L and encapsulating a luciferase reporter accumulate at the site of injection and in the draining lymph nodes of mice. Lipid N2-3L-containing SMLNPs encapsulating ovalbumin mRNA and the toll-like receptor 7/8 (TLR7/8) agonist R-848 (Item No. 14806) as an adjuvant promote dendritic cell maturation and antigen presentation, reduce tumor volume, and increase survival in an MC-38-OVA murine model of colon cancer.

### Reference

1. Qi, S., Zhang, X., Yu, X., *et al.* Supramolecular lipid nanoparticles based on host-guest recognition: A new generation delivery system of mRNA vaccines for cancer immunotherapy. *Adv. Mater.* **36**(23), e2311574 (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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