

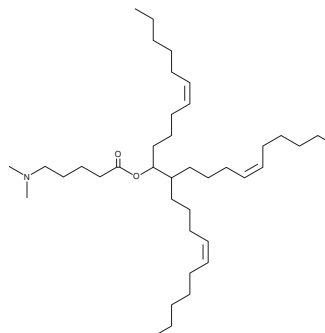
# PRODUCT INFORMATION



## Lipid CL1

Item No. 38320

**CAS Registry No.:** 1450888-71-7  
**Formal Name:** 5-(dimethylamino)-pentanoic acid, (6Z)-1,2-di-(4Z)-4-decen-1-yl-6-dodecen-1-yl ester  
**MF:** C<sub>39</sub>H<sub>73</sub>NO<sub>2</sub>  
**FW:** 588.0  
**Purity:** ≥95%  
**Supplied as:** A 25 mg/ml solution in ethanol  
**Storage:** -20°C  
**Stability:** ≥1 year



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

### Description

Lipid CL1 is an ionizable cationic trialkyl lipid (pKa = 6.3) that has been used in the formation of lipid nanoparticles (LNPs) for delivering mRNA *in vivo*.<sup>1,2</sup> LNPs containing lipid CL1 and encapsulating mRNA encoding human erythropoietin (EPO) increase blood EPO protein levels in mice.<sup>2</sup> LNPs containing lipid CL1 and encapsulating mRNA encoding a reporter protein increase reporter expression in the liver to a greater extent than LNPs containing the ionizable lipids DLin-DMA (Item No. 36701), KC2 (DLin-KC2-DMA; Item No. 34363), MC3 (DLin-MC3-DMA; Item No. 34364), or LP-01 (Item No. 37278) in mice.<sup>1</sup> LNPs containing lipid CL1 and encapsulating mRNA encoding influenza A hemagglutinin (HA) increase anti-HA IgG antibody titers to a greater extent than LNPs containing the ionizable cationic lipid SM-102 (Item No. 33474) in a mouse model of HA vaccination.

### References

1. Lam, K., Leung, A., Martin, A., *et al.* Unsaturated, trialkyl ionizable lipids are versatile lipid-nanoparticle components for therapeutic and vaccine applications. *Adv. Mater.* **35**(15), e2209624 (2023).
2. Hayes, J., Judge, A., Lam, K.M., *et al.* Lipid nanoparticles. *Genevant Sciences GMBH.* **US2022/0168222A1** (2022).

#### 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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#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
**WWW.CAYMANCHEM.COM**