

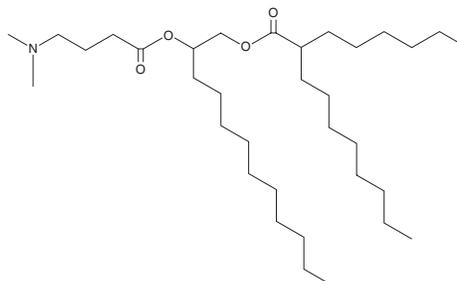
PRODUCT INFORMATION



E12CA1A3

Item No. 40415

CAS Registry No.: 2778182-26-4
Formal Name: 2-hexyl-decanoic acid, 2-[4-(dimethylamino)-1-oxobutoxy]dodecyl ester
MF: C₃₄H₆₇NO₄
FW: 553.9
Purity: ≥98%
Supplied as: A 10 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.

Laboratory Procedures

E12CA1A3 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. E12CA1A3 is sparingly soluble (1-10 mg/ml) in DMSO.

E12CA1A3 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanolic solution of E12CA1A3 should be diluted with the aqueous buffer of choice. E12CA1A3 is slightly soluble (0.1-1 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

E12CA1A3 is an ionizable cationic lipid ($pK_a = 6.4$) that has been used in the generation of lipid nanoparticles (LNPs) for the delivery of mRNA *in vitro* and *in vivo*.¹ LNPs containing E12CA1A3 and encapsulating an mRNA reporter induce luciferase reporter expression in mouse bone marrow-derived dendritic cells (BMDCs) and mice. LNPs containing E12CA1A3 are cleared more rapidly from the liver than LNPs containing DLin-MC3-DMA (Item No. 34364) in mice.

Reference

1. Xu, Y., Hu, Y., Xia, H., *et al.* Delivery of mRNA vaccine with 1, 2-diester-derived lipids elicits fast liver clearance for safe and effective cancer immunotherapy. *Adv. Healthc. Mater.* **13**(5), e2302691 (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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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