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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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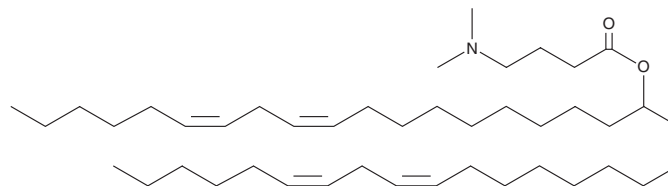
PRODUCT INFORMATION



DLin-MC3-DMA

Item No. 34364

CAS Registry No.: 1224606-06-7
Formal Name: 4-(dimethylamino)-butanoic acid, (10Z,13Z)-1-(9Z,12Z)-9,12-octadecadien-1-yl-10,13-nonadecadien-1-yl ester
Synonyms: Dilinoleyl-methyl-4-dimethylaminobutyrate, MC3
MF: C₄₃H₇₉NO₂
FW: 642.1
Purity: ≥95%
UV/Vis.: λ_{max}: 204 nm
Supplied as: A solution in ethanol
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

DLin-MC3-DMA is supplied as a solution in ethanol. A stock solution may be made by dissolving the DLin-MC3-DMA in the solvent of choice, which should be purged with an inert gas. DLin-MC3-DMA is soluble in DMSO.

Description

DLin-MC3-DMA is an ionizable cationic lipid (apparent $pK_a = 6.44$) that has been used in the generation of lipid nanoparticles (LNPs) encapsulating siRNA, mRNA, or plasmid DNA for use *in vitro* and *in vivo*.¹⁻³ LNPs containing DLin-MC3-DMA accumulate in the muscle and non-draining lymph nodes after intramuscular administration and in the spleen after intravenous administration in mice.³ DLin-MC3-DMA-containing LNPs encapsulating siRNA targeting *F7*, the gene encoding Factor VII, reduce hepatic and plasma Factor VII levels in mice without increasing serum levels of alanine transaminase (ALT), aspartate aminotransferase (AST), or bile acids, which are all markers of liver toxicity.⁴ Formulations containing DLin-MC3-DMA have been used in LNPs encapsulating transthyretin-directed siRNA for the treatment of hereditary transthyretin-mediated amyloidosis-induced polyneuropathy.

References

1. Jayaraman, M., Ansell, S.M., Mui, B.L., *et al.* Maximizing the potency of siRNA lipid nanoparticles for hepatic gene silencing *in vivo*. *Angew. Chem. Int. Ed. Engl.* **51(34)**, 8529-8533 (2012).
2. Li, Z., Yang, Z., Lapidus, R.G., *et al.* IKK phosphorylation of NF- κ B at serine 536 contributes to acquired cisplatin resistance in head and neck squamous cell cancer. *Am. J. Cancer Res.* **5(10)**, 3098-3110 (2015).
3. Algarni, A., Pilkington, E.H., Suys, E.J.A., *et al.* *In vivo* delivery of plasmid DNA by lipid nanoparticles: The influence of ionizable cationic lipids on organ-selective gene expression. *Biomater. Sci.* **10(11)**, 2940-2952 (2022).
4. Ferraresso, F., Strilchuk, A.W., Juang, L.J., *et al.* Comparison of DLin-MC3-DMA and ALC-0315 for siRNA delivery to hepatocytes and hepatic stellate cells. *Mol. Pharm.* **19(7)**, 2175-2182 (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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