

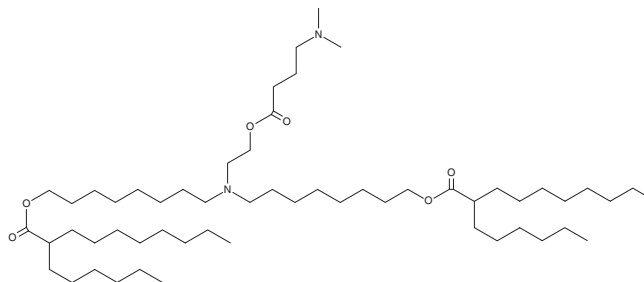
PRODUCT INFORMATION



Lipid 14

Item No. 38589

CAS Registry No.: 2430034-05-0
Formal Name: ((2-((4-(dimethylamino)butanoyl)oxy)ethyl)azanediyloxy)bis(octane-8,1-diyl)bis(2-hexyldecanoate)
MF: C₅₆H₁₁₀N₂O₆
FW: 907.5
Purity: ≥95%
Supplied as: A 25 mg/ml solution in methyl acetate
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

Lipid 14 is supplied as a solution in methyl acetate. To change the solvent, simply evaporate the methyl acetate under a gentle stream of nitrogen and immediately add the solvent of choice, which should be purged with an inert gas. Lipid 14 is soluble in ethanol.

Description

Lipid 14 is an ionizable cationic amino lipid that has been used in the formation of lipid nanoparticles (LNPs).¹ LNPs containing lipid 14 and encapsulating mRNA encoding severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) spike glycoprotein receptor-binding domain (RBD), also known as the surface glycoprotein RBD, increase anti-RBD antibody levels in mice, as well as increase the number of isolated mouse splenocytes secreting IFN- γ and IL-2, but not IL-4 or IL-10, when incubated with the SARS-CoV-2 spike glycoprotein. LNPs containing lipid 14 and encapsulating mRNA encoding the bacterial Caf1 (F1) capsule antigen from *Y. pestis*, the bacteria that causes bubonic plague, induces anti-F1 cellular and humoral responses and protects against lethal *Y. pestis* infection in mice.²

References

1. Elia, U., Ramishetti, S., Rosenfeld, R., *et al.* Design of SARS-CoV-2 hFc-conjugated receptor-binding domain mRNA vaccine delivered via lipid nanoparticles. *ACS Nano* **15**(6), 9627-9637 (2021).
2. Kon, E., Levy, Y., Elia, U., *et al.* A single-dose F1-based mRNA-LNP vaccine provides protection against the lethal plague bacterium. *Sci. Adv.* **9**(10), eadg1036 (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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