

PRODUCT INFORMATION

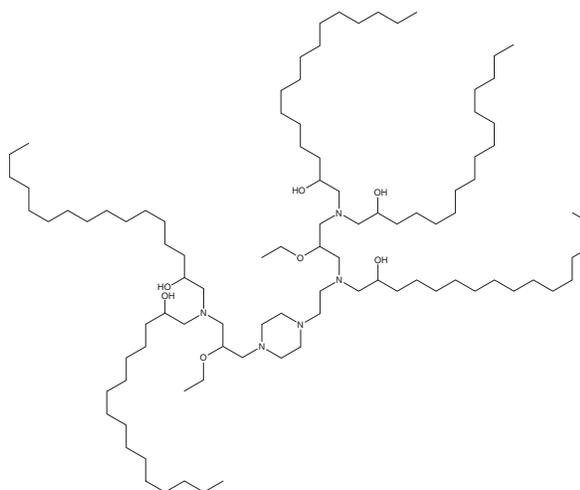


Lipid C3

Item No. 39516

CAS Registry No.: 2639634-93-6
Formal Name: 1,1'-[[3-[4-[2-[[3-[bis(2-hydroxyhexadecyl)amino]-2-ethoxypropyl)](2-hydroxyhexadecyl)amino]ethyl]-1-piperazinyl]-2-ethoxypropyl]imino]bis-2-hexadecanol

Synonym: C16-6
MF: C₉₆H₁₉₇N₅O₇
FW: 1,533.6
Purity: ≥95%
Supplied as: A 10 mg/ml solution in ethanol
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Lipid C3 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. Lipid C3 is soluble in methanol and chloroform.

Description

Lipid C3 is an ionizable cationic lipid (pKa = 5.05-5.671).^{1,2} It has been used in the formation of lipid nanoparticles (LNPs) for the delivery of mRNA *in vitro* and *in vivo*.¹ Intracerebroventricular administration of LNPs containing lipid C3 and encapsulating mRNA encoding α -L-iduronidase (*Idua*) to neonates increase midbrain and hippocampal α -L-iduronidase enzyme activity and decrease forebrain, midbrain, and hippocampal glycosaminoglycan levels in an *Idua*-W392X mouse model of the lysosomal storage disorder mucopolysaccharidosis type I, also known as Hurler syndrome. Intracerebroventricular administration of LNPs containing lipid C3 and encapsulating an mRNA reporter to fetal macaques *in utero* increase brain GFP expression.

References

1. Palanki, R., Bose, S.K., Dave, A., *et al.* Ionizable lipid nanoparticles for therapeutic base editing of congenital brain disease. *ACS Nano* **17**(14), 13594-13610 (2023).
2. Billingsley, M.M., Singh, N., Ravikumar, P., *et al.* Ionizable lipid nanoparticle-mediated mRNA delivery for human CAR T cell engineering. *Nano Lett.* **20**(3), 1578-1589 (2020).

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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