

PRODUCT INFORMATION



4-O10b1

Item No. 40603

Formal Name: tetra(decan-2-yl) 3,3',3'',3'''-((piperazine-1,4-diylbis(propane-3,1-diyl))bis(azanetriyl)) tetrapropionate

MF: $C_{62}H_{120}N_4O_8$

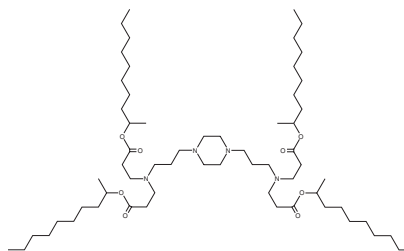
FW: 1,049.7

Purity: $\geq 95\%$

Supplied as: A 50 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.

Description

4-O10b1 is an ionizable cationic lipid ($pK_a = 5.148$) that has been used in the generation of lipid nanoparticles (LNPs) for the delivery of siRNA *in vitro* and *in vivo*.¹ LNPs containing 4-O10b1, conjugated to an antibody targeting the mouse macrophage marker F4/80 (anti-F4/80), and encapsulating siRNA targeting the mRNA encoding TGF- β -activated kinase 1 (Tak1) inhibit poly(I:C)-induced production of IL-1 β , IL-6, and TNF- α in RAW 264.7 macrophages. *In vivo*, intranasal administration of these LNPs decreases lung injury and reduces total protein levels and myeloperoxidase (Mpo) activity in bronchoalveolar lavage fluid (BALF) in a mouse model of influenza A-induced pneumonia.

Reference

1. Zhao, G., Xue, L., Geisler, H.C., *et al.* Precision treatment of viral pneumonia through macrophage-targeted lipid nanoparticle delivery. *Proc. Natl. Acad. Sci. USA* **121**(7), e2314747121 (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.

WARRANTY AND LIMITATION OF REMEDY

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