# PRODUCT INFORMATION

## CL4H6

*Item No. 37279*

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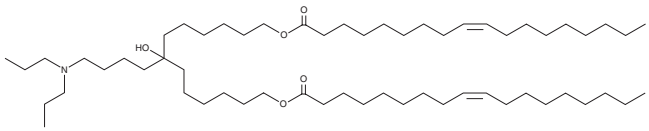
|---|---|
| **CAS Registry No.:** | 2256087-35-9 |
| **Formal Name:** | 9-octadecenoic acid, 1,1′-[7-[4-(dipropylamino)butyl]-7-hydroxy-1,13-tridecanediyl] ester |
| **MF:** | $C_{59}H_{113}NO_5$ |
| **FW:** | 916.5 |
| **Purity:** | ≥95% |
| **Supplied as:** | A solution in ethanol |
| **Storage:** | -20°C |
| **Stability:** | ≥2 years |



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

### Laboratory Procedures

CL4H6 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. Solvents such as DMSO purged with an inert gas can be used.

### Description

CL4H6 is an ionizable cationic lipid (apparent $pK_a$ = 6.35) that has been used in the generation of lipid nanoparticles (LNPs) encapsulating siRNA for use *in vivo*.[1] LNPs containing CL4H6 and encapsulating siRNA targeting mRNA encoding Factor VII decrease hepatic levels of Factor VII in mice. Intravenous administration of LNPs containing CL4H6 and encapsulating a reporter protein selectively accumulate in the liver, spleen, and tumors over the lungs and kidneys, as well as selectively accumulate in tumor-associated macrophages (TAMs) over tumor cells, neutrophils, and other leukocytes, in an OS-RC-2 renal cancer mouse xenograft model.[2] LNPs containing CL4H6 and encapsulating siRNAs targeting mRNA encoding Stat3 and Hif-1α increase the levels of M1 macrophages in the tumor microenvironment and decrease tumor volume in the same model.[2]

### References


1. Sato, Y., Hashiba, K., Sasaki, K., *et al.* Understanding structure-activity relationships of pH-sensitive cationic lipids facilitates the rational identification of promising lipid nanoparticles for delivering siRNAs *in vivo*. *J. Control. Release* **295**, 140-152 (2019).
2. Shobaki, N., Sato, Y., Suzuki, Y., *et al.* Manipulating the function of tumor-associated macrophages by siRNA-loaded lipid nanoparticles for cancer immunotherapy. *J. Control. Release* **325**, 235-248 (2020).





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