

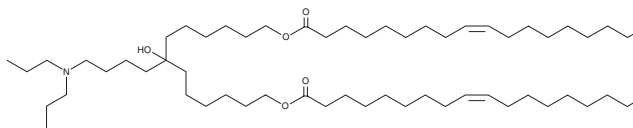
# PRODUCT INFORMATION



## CL4H6

Item No. 37279

**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<sub>59</sub>H<sub>113</sub>NO<sub>5</sub>  
**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*.<sup>1</sup> 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.<sup>2</sup> LNPs containing CL4H6 and encapsulating siRNAs targeting mRNA encoding Stat3 and Hif-1 $\alpha$  increase the levels of M1 macrophages in the tumor microenvironment and decrease tumor volume in the same model.<sup>2</sup>

### 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).

#### 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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