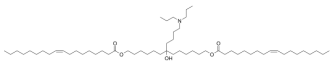
CL4H6

Cat. No.:	HY-139305
CAS No.:	2256087-35-9
Molecular Formula:	$C_{59}H_{113}NO_5$
Molecular Weight:	916.53
Target:	Liposome
Pathway:	Metabolic Enzyme/Protease
Storage:	Pure form -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (109.11 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.0911 mL	5.4554 mL	10.9107 mL
	5 mM	0.2182 mL	1.0911 mL	2.1821 mL
	10 mM	0.1091 mL	0.5455 mL	1.0911 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 2.5 mg/mL (2.73 mM); Suspended solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (2.73 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

CL4H6 is a pH-sensitive cationic lipid. CL4H6 is the main component of lipid nanoparticles (LNPs), which can be used to target and deliver siRNA, and induces a potent gene-silencing response[1][2].

In Vitro

CL4H6 potent targeting of hepatocytes and endosomal escape, to safely and efficiently deliver a myocardin-related transcription factor/serum response factor (MRTF/SRF)-B siRNA into human conjunctival fibroblasts[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

The optimized siRNA-loaded CL4H6-LNPs are selectively and efficiently taken up and showed strong gene silencing activity in tumor-associated macrophages (TAMs) in a human tumor xenograft model in nude mice. The anti-tumor therapeutic response is obtained through the silencing of the STAT3 and HIF-1α, which resulted in an increase in the level of infiltrated

macrophage (CD11b+ cells) into the tumor-microenvironment (TME) as well as a tendency to increase the concentration of M1 macrophages (CD169+ cells). The treatment also resulted in reversing the pro-tumorous functions of TAMs -mainly angiogenesis and tumor cell activation-, as evidenced by a decrease in the related gene expression at the mRNA level[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Amisha Sanghani, et al. Novel PEGylated Lipid Nanoparticles Have a High Encapsulation Efficiency and Effectively Deliver MRTF-B siRNA in Conjunctival Fibroblasts. Pharmaceutics. 2021 Mar 13;13(3):382.

[2]. Nour Shobaki, et al. Manipulating the function of tumor-associated macrophages by siRNA-loaded lipid nanoparticles for cancer immunotherapy. J Control Release. 2020 Sep 10;325:235-248.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA