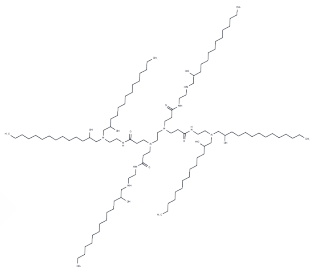
Data Sheet (Cat.No.T75027)

TargetMol

G0-C14

Chemical Properties



CAS No. : 1510653-27-6

Formula: C106H216N10O10

Molecular Weight: 1790.91

Storage: Store at low temperature
Pure form: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	G0-C14 is a cationic lipid-like molecule commonly used for synthesizing nanoparticles and vaccine delivery.
Targets(IC50)	Liposome
In vitro	G0-C14 has a highly efficient encapsulation ability for mRNA and pDNA, and the encapsulation efficiency can reach more than 95%. [1] The nanoparticles were prepared as follows:[1] 1. PolyHCPT and DSPE-PEG3K were dissolved in DMF and prepared into a homogeneous solution with a concentration of 5 mg/mL. 2. a mixture of siRNA (0.1 nmol/μL in water) and G0-C14 (5 mg/mL, dissolved in DMF) was prepared and mixed according to different N/P molar ratios. Subsequently, this mixture is combined with PolyHCPT and DSPE-PEG3K solutions. 3. The above mixture was added dropwise to 5 mL of deionized water at 1000 rpm with vigorous stirring. 4. The resulting NPs dispersion was transferred to an ultrafiltration unit. 5. Centrifuge at 2800 rpm for 8 minutes at room temperature to remove organic solvents and free compounds.

Solubility Information

Solubility	DMSO: 80 mg/mL (44.67 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween-80+45% Saline: 3.3 mg/mL (1.84 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.5584 mL	2.7919 mL	5.5838 mL
5 mM	0.1117 mL	0.5584 mL	1.1168 mL
10 mM	0.0558 mL	0.2792 mL	0.5584 mL
50 mM	0.0112 mL	0.0558 mL	0.1117 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Li S, et al. Redox-responsive polyprodrug nanoparticles for targeted siRNA delivery and synergistic liver cancer therapy. Biomaterials. 2020 Mar;234:119760.
Chen Q, et al. Biodegradable nanoparticles decorated with different carbohydrates for efficient macrophage-targeted gene therapy. J Control Release. 2020 Jul 10;323:179-190.