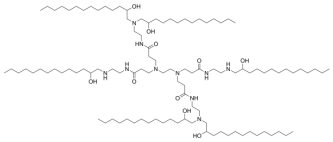
G0-C14

Cat. No.:	HY-152229
CAS No.:	1510653-27-6
Molecular Formula:	$C_{106}H_{216}N_{10}O_{10}$
Molecular Weight:	1790.91
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 (55.84 mM; ultrasonic and warming and heat to 80°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	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

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: 2.5 mg/mL (1.40 mM); Clear solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 2.5 mg/mL (1.40 mM); Clear solution; Need ultrasonic
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: 2.5 mg/mL (1.40 mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

G0-C14 is a cationic lipid-like compound alkyl-modified polyamidoamine (PAMAM) dendrimer. G0-C14 involves in the preparation of a series of macrophage-targeted nanoparticles (NPs). NPs can be used for agent and vaccine delivery[1][2].

In Vitro

G0-C14 exhibits strong entrapment of mRNA and pDNA with an encapsulation efficiency of above 95%[1].
Preparation of NPs[1]:1.Dissolve PolyHCPT and DSPE-PEG3K in DMF to form a homogenous solution at a concentration of 5 mg/mL.2.Prepare a mixture of 1 nmol of siRNA (0.1 nmol/μL aqueous solution) and G0-C14 (5 mg/mL in DMF) in different N/P molar ratios. Mixed them with the polyHCPT and DSPE-PEG3K solution.3.Under vigorous stirring (1000 rpm), add the mixture

	dropwise to 5 mL of deionized water. 4.Transferr the formed NP dispersion to an ultrafiltration device.5.Ccentrifug at room temperature (2800 rpm×8 min) to remove the organic solvent and free compounds. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Li S, et al. Redox-responsive polyprodrug nanoparticles for targeted siRNA delivery and synergistic liver cancer therapy. Biomaterials. 2020 Mar;234:119760.

[2]. 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.

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