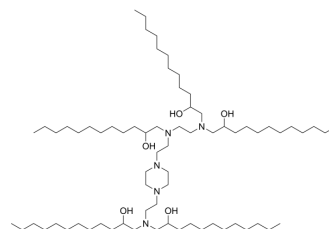


C12-200

Cat. No.:	HY-145405		
CAS No.:	1220890-25-4		
Molecular Formula:	C ₇₀ H ₁₄₅ N ₅ O ₅		
Molecular Weight:	1136.93		
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 (87.96 mM; Need ultrasonic)
 Ethanol : 100 mg/mL (87.96 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	0.8796 mL	4.3978 mL	8.7956 mL
	5 mM	0.1759 mL	0.8796 mL	1.7591 mL
	10 mM	0.0880 mL	0.4398 mL	0.8796 mL

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

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.5 mg/mL (2.20 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (2.20 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (2.20 mM); Clear solution
- Add each solvent one by one: 10% EtOH >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.5 mg/mL (2.20 mM); Clear solution
- Add each solvent one by one: 10% EtOH >> 90% (20% SBE-β-CD in saline)
Solubility: 2.5 mg/mL (2.20 mM); Suspended solution; Need ultrasonic
- Add each solvent one by one: 10% EtOH >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (2.20 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

C12-200 is an ionizable cationic lipid and auxiliary lipid. C12-200 is commonly used for mRNA delivery. Administration of human erythropoietin (EPO) mRNA or factor VII siRNA increased and decreased serum factor VII levels, respectively, in LNPs mice containing C12-200^{[1][2][3]}.

CUSTOMER VALIDATION

- Immunity. 2022 Dec 13;S1074-7613(22)00604-5.
- Bioact Mater. 2024 Apr, 34, Pages 125-137.
- Int J Pharmaceut. 2022: 122481.
- Pharmaceutics. 2022, 14(10), 2129.

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REFERENCES

- [1]. Kauffman KJ, et al. Optimization of Lipid Nanoparticle Formulations for mRNA Delivery in Vivo with Fractional Factorial and Definitive Screening Designs. Nano Lett. 2015 Nov 11;15(11):7300-6.
- [2]. Khare P, et al. Development of Lipidoid Nanoparticles for siRNA Delivery to Neural Cells. AAPS J. 2021;24(1):8. Published 2021 Dec 6.
- [3]. DeRosa F, et al. Therapeutic efficacy in a hemophilia B model using a biosynthetic mRNA liver depot system. Gene Ther. 2016;23(10):699-707.

Caution: Product has not been fully validated for medical applications. For research use only.

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