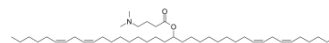


D-Lin-MC3-DMA

Cat. No.:	HY-112251		
CAS No.:	1224606-06-7		
Molecular Formula:	C ₄₃ H ₇₉ NO ₂		
Molecular Weight:	642.09		
Target:	Others		
Pathway:	Others		
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 : 250 mg/mL (389.35 mM; Need ultrasonic)

Ethanol : ≥ 60 mg/mL (93.44 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	1.5574 mL	7.7871 mL	15.5741 mL
	5 mM	0.3115 mL	1.5574 mL	3.1148 mL
	10 mM	0.1557 mL	0.7787 mL	1.5574 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: ≥ 6.5 mg/mL (10.12 mM); Clear solution

2. Add each solvent one by one: **10% DMSO >> 90% (20% SBE-β-CD in saline)**

Solubility: ≥ 6.5 mg/mL (10.12 mM); Clear solution

3. Add each solvent one by one: **10% DMSO >> 90% corn oil**

Solubility: ≥ 6.5 mg/mL (10.12 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

D-Lin-MC3-DMA, an ionizable amino lipid, is a potent siRNA delivery vehicle.

In Vivo

Lipid nanoparticles (LNPs) containing distearoylphosphatidylcholine (DSPC), and ionizable amino-lipids such as dilinoleylmethyl-4-dimethylaminobutyrate (DLin-MC3-DMA) are potent siRNA delivery vehicles in vivo. LNP-siRNA

systems optimize to achieve maximum gene silencing potency in hepatocytes following IV administration in mice contain DLin-MC3-DMA (MC3), DSPC, cholesterol and a polyethyleneglycol (PEG)-lipid at mole ratios of 50/10/38.5/1.5. DLin-MC3-DMA exhibits an optimized pK_a value that leads to dramatically enhanced potency^[1].

REFERENCES

[1]. Kulkarni JA, et al. Design of lipid nanoparticles for in vitro and in vivo delivery of plasmid DNA. Nanomedicine. 2017 May;13(4):1377-1387.

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

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