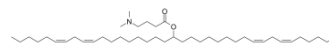


D-Lin-MC3-DMA

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 : 100 mg/mL (155.74 mM; Need ultrasonic)
 Ethanol : ≥ 60 mg/mL (93.44 mM)
 H₂O : < 0.1 mg/mL (insoluble)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent 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

- Add each solvent one by one: 1% DMSO >> 99% saline
Solubility: ≥ 0.62 mg/mL (0.97 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.5 mg/mL (3.89 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: 2.5 mg/mL (3.89 mM); Suspended solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (3.89 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% saline
Solubility: 6.25 mg/mL (9.73 mM); Suspended solution; Need ultrasonic
- Add each solvent one by one: 5% DMSO >> 40% PEG300 >> 5% Tween-80 >> 50% saline
Solubility: 5 mg/mL (7.79 mM); Suspended solution; Need ultrasonic
- Add each solvent one by one: 5% DMSO >> 95% (20% SBE-β-CD in saline)
Solubility: 5 mg/mL (7.79 mM); Suspended solution; Need ultrasonic

8. Add each solvent one by one: 5% DMSO >> 95% saline
Solubility: 3.12 mg/mL (4.86 mM); Suspended solution; Need ultrasonic

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].

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

CUSTOMER VALIDATION

- Sci Adv. 2021 Jan 13;7(3):eaba1028.

See more customer validations on www.MedChemExpress.com

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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