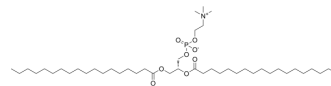


DSPC

Cat. No.:	HY-W040193		
CAS No.:	816-94-4		
Molecular Formula:	C ₄₄ H ₈₈ NO ₈ P		
Molecular Weight:	790.15		
Target:	Liposome		
Pathway:	Metabolic Enzyme/Protease		
Storage:	Powder	-20°C	3 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

Ethanol : 12.5 mg/mL (15.82 mM); ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg	10 mg
	Concentration				
	1 mM		1.2656 mL	6.3279 mL	12.6558 mL
	5 mM		0.2531 mL	1.2656 mL	2.5312 mL
	10 mM		0.1266 mL	0.6328 mL	1.2656 mL

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

In Vivo

- Add each solvent one by one: 10% EtOH >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: 1.25 mg/mL (1.58 mM); Suspended solution; Need ultrasonic
- Add each solvent one by one: 10% EtOH >> 90% (20% SBE-β-CD in saline)
Solubility: 1.25 mg/mL (1.58 mM); Suspended solution; Need ultrasonic
- Add each solvent one by one: 10% EtOH >> 90% corn oil
Solubility: ≥ 1.25 mg/mL (1.58 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

DSPC (1,2-Distearoyl-sn-glycero-3-phosphorylcholine) is a cylindrical-shaped lipid. DSPC is used to synthesize liposomes, and is the lipid component in the lipid nanoparticle (LNP) system^{[1][2]}.

In Vitro

In empty lipid nanoparticle (LNP) systems that do not contain siRNA, DSPC-cholesterol resides in outer layers, whereas in loaded systems a portion of the DSPC-cholesterol is internalised together with siRNA^[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Andrew D Miller. Delivery of RNAi therapeutics: work in progress. Expert Rev Med Devices. 2013 Nov;10(6):781-811.

[2]. Jayesh A Kulkarni, et al. On the role of helper lipids in lipid nanoparticle formulations of siRNA. Nanoscale. 2019 Nov 21;11(45):21733-21739.

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

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