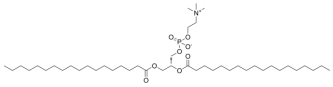
DSPC

Cat. No.:	HY-W040193
CAS No.:	816-94-4
Molecular Formula:	$C_{44}H_{88}NO_8P$
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	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	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

1. 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
2. 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
3. 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.

CUSTOMER VALIDATION

- Int J Nanomedicine. 2023 Oct 31.
- Nanomedicine. 2024 Mar 16:102745.

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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.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA