

## DOPE

## Chemical Properties

CAS No. : 4004-05-1

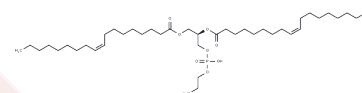
Formula: C<sub>41</sub>H<sub>78</sub>N<sub>2</sub>O<sub>8</sub>P

Molecular Weight: 744.03

Store at low temperature

Storage: Pure form: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



## Biological Description

Description	DOPE (DOPE) is a neutral helper lipid for cationic liposomes. It is used in combination with cationic phospholipids to increase efficiency during DNA transfection studies as a non-viral method of gene delivery.
Targets(IC50)	Others, Endogenous Metabolite, Liposome
In vitro	Each siRNA is encapsulated in LNP (cationic lipid-A: PEG2000-DMPE: DOPE = 47.8: 5.18: 47.1 molar percent). With the neutral lipid for the LNP is DOPE, LNP exerts knock-down (KD) effect on macrophages and DCs and Liposome-containing DOPE shows fusogenicity. LNP/siRNA significantly suppresses CD45 protein expression at an inhibition rate of 30% on macrophages and DCs but not on monocytes, neutrophils, plasmacytoid DCs, or B cells.

## Solubility Information

Solubility	Ethanol: 10 mg/mL (13.44 mM), Sonication and heating are recommended. DMSO: < 1 mg/mL (insoluble or slightly soluble), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

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	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	1.344 mL	6.7202 mL	13.4403 mL
5 mM	0.2688 mL	1.344 mL	2.6881 mL
10 mM	0.1344 mL	0.672 mL	1.344 mL
50 mM	0.0269 mL	0.1344 mL	0.2688 mL

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Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

Uemura Y, et al. The efficiency of lipid nanoparticles with an original cationic lipid as a siRNA delivery system for macrophages and dendritic cells. *Pharm Dev Technol.* 2019 Mar;24(3):263-268.

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