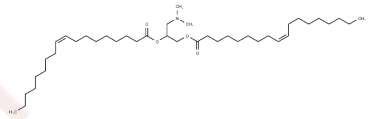
Data Sheet (Cat.No.T38679)

TargetMol

DODAP

Chemical Properties



CAS No. : 127512-29-2

Formula: C41H77NO4

Molecular Weight: 648.05

Storage: Store at low temperature,Store under nitrogen
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	DODAP is an ionic cationic lipid with low cytotoxicity and high transfection efficiency that can be used to synthesize liposomes and encapsulate biologically active molecules such as mRNA, siRNA and plasmid DNA.
Targets(IC50)	Liposome
In vitro	DODAP-based LNPs delivered luciferase mRNA to HEK293T cells for 24 h; luciferase expression was lower than MC3-LNPs, indicating reduced transfection efficiency[1].
In vivo	Mice were injected with DODAP-LNPs (0.5 mg/kg mRNA, 200 μL); after 24 h, luciferase expression was mainly in liver and spleen but lower than MC3-LNPs[1].

Solubility Information

Solubility	DMSO: 80 mg/mL (123.45 mM),Sonication is recommended. Ethanol: 80 mg/mL (123.45 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 3.3 mg/mL (5.09 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.5431 mL	7.7155 mL	15.4309 mL
5 mM	0.3086 mL	1.5431 mL	3.0862 mL
10 mM	0.1543 mL	0.7715 mL	1.5431 mL
50 mM	0.0309 mL	0.1543 mL	0.3086 mL

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

Carrasco MJ, et al. Ionization and structural properties of mRNA lipid nanoparticles influence expression in intramuscular and intravascular administration. Commun Biol. 2021 Aug 11;4(1):956.
Hamzah J, et al. Targeted liposomal delivery of TLR9 ligands activates spontaneous antitumor immunity in an autochthonous cancer model. J Immunol. 2009;183(2):1091-1098.
Liu Q, et al. Biotinylated cyclen-contained cationic lipids as non-viral gene delivery vectors. Chem Biol Drug Des. 2013;82(4):376-383.

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