

## DMG-PEG 2000

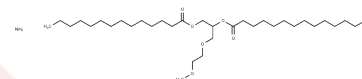
## Chemical Properties

CAS No. : 160743-62-4

Formula: (C<sub>2</sub>H<sub>4</sub>O)<sub>n</sub>C<sub>32</sub>H<sub>62</sub>O<sub>5</sub>

Molecular Weight: 2526

Storage: Store at low temperature, Keep away from direct sunlight, Keep away from moisture  
 Powder: -20°C for 3 years | In solvent: -80°C for 1 year  
 Actual storage temperature shall be subject to the COA.



## Biological Description

Description	DMG-PEG 2000 (DMG-PEG2000) can be used for the preparation of lipid nanoparticles for the in vivo delivery of plasmid DNA via oral administration, enhancing the mucosal permeability and delivery efficiency of the nanoparticles. DMG-PEG 2000 can be used for the preparation of liposomes for siRNA transfection, improving transfection efficiency.
Targets(IC50)	Others, Liposome
In vivo	<b>METHODS:</b> To study the permeability of NP-3, a single dose of NP-3 (150 µg DNA per mouse) was administered orally to mice. <b>RESULTS:</b> The NP-3 group maintained high luciferase expression in the liver, lung, and intestinal regions within 12 to 24 hours after administration. In addition, NP-3 showed a 1.5-fold higher signal intensity than the NP-1 or NP-2 groups within 12 to 24 hours after oral administration. [1]

## Solubility Information

Solubility	Ethanol: 100 mg/mL (39.59 mM), Sonication is recommended. DMSO: 60 mg/mL (23.75 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: 2 mg/mL (0.79 mM), Sonication is recommended. <i>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.</i>

### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	0.3959 mL	1.9794 mL	3.9588 mL
5 mM	0.0792 mL	0.3959 mL	0.7918 mL
10 mM	0.0396 mL	0.1979 mL	0.3959 mL
50 mM	0.0079 mL	0.0396 mL	0.0792 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

ianqi Nie, et al. Surface Coating Approach to Overcome Mucosal Entrapment of DNA Nanoparticles for Oral Gene Delivery of Glucagon-like Peptide 1. ACS Appl Mater Interfaces. 2019 Aug 21;11(33):29593-29603.

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