

DSPE-PEG-Maleimide (MW 5000)

Chemical Properties

CAS No. :

Formula:

Molecular Weight:

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

Biological Description

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| Description | DSPE-PEG-Maleimide (MW 5000) is a functionalized phospholipid derivative commonly used in the construction of liposomes and nanoparticles. Its terminal maleimide group allows for stable chemical conjugation with thiol-containing biomolecules. |
| Targets(IC50) | Others |
| In vitro | DSPE-PEG-Maleimide (MW 5000) functions as a reactive linker for conjugating thiolated ligands like p53 peptides [1]. It also enables the covalent attachment of thiolated monoclonal antibodies (e.g., OX26-SH) to liposomes to create targeted immunoliposomes [2]. |
| In vivo | Liposomes containing 3% DSPE-PEG-Maleimide (MW 5000) demonstrate high physical stability with a constant diameter of 120 nm over two weeks [3]. This stability ensures reliable drug delivery and consistent pharmacokinetics in brain targeting models [2][3]. |

Solubility Information

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| Solubility | DMSO: 40.00 mg/mL, Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble) |
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Reference

- Schnorenberg MR, et, al. Synthesis and Purification of Homogeneous Lipid-Based Peptide Nanocarriers by Overcoming Phospholipid Ester Hydrolysis. ACS Omega. 2018 Oct 31;3(10):14144-14150.
- Huwylar J, et, al. Brain drug delivery of small molecules using immunoliposomes. Proc Natl Acad Sci U S A. 1996 Nov 26;93(24):14164-9.
- Wholey WY, et al. Synthetic Liposomal Mimics of Biological Viruses for the Study of Immune Responses to Infection and Vaccination. Bioconjug Chem. 2020 Mar 18;31(3):685-697.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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