

Product Data Sheet

Product Name: DSPE-PEG(2000)-amine

Cat. No.: GC43578

Chemical Properties

Cas. No. 474922-26-4

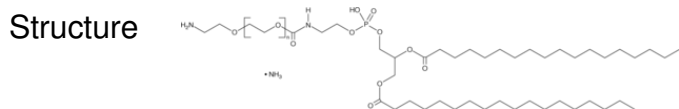
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Formula $(C_2H_4O)_n$ $C_{44}H_{87}N_2O_{10}P \cdot NH_3$ M.Wt 2000(Average)

Solubility DMF: 11 mg/ml, Ethanol: 20 mg/ml Storage Store at -20°C

General For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the tips ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Evaluation sample solution : ship with blue ice All other available size: ship with RT, or Condition blue ice upon request.



Background

DSPE-PEG(2000)-amine is the amine derivative of phospholipid poly ethylene glycol with biocompatible and biodegradable properties [1]. DSPE-PEG(2000)-amine can be used to encapsulate liposomes and facilitate the passage of liposomes through the blood-brain barrier [2]. DSPE-PEG(2000)-amine can self-assemble into micelles and are easily modified, which participates in lipid transfer to design targeted liposomes, thereby protecting the targeting ligands during circulation [3]. DSPE-PEG(2000)-amine has been widely used in the preparation of liposomes and polymer nanoparticles to reduce the in vivo clearance rate and plasma protein adsorption of cholesterol-free lipid formulations, prolong the in vivo circulation time, increase targeting ability and improve bioavailability [4].

References:

[1] Sun F, Jaspers T C C, van Hasselt P M, et al. A Mixed Micelle Formulation for Oral Delivery of Vitamin K: Sun et al[J]. Pharmaceutical research, 2016, 33(9): 2168-2179.

Caution: Product has not been fully validated for medical applications. For research use only.

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- [2] Vijayakumar M R, Kosuru R, Vuddanda P R, et al. Trans resveratrol loaded DSPE PEG 2000 coated liposomes: an evidence for prolonged systemic circulation and passive brain targeting[J]. Journal of drug delivery science and technology, 2016, 33: 125-135.
- [3] Li W M, Xue L, Mayer L D, et al. Intermembrane transfer of polyethylene glycol-modified phosphatidylethanolamine as a means to reveal surface-associated binding ligands on liposomes[J]. Biochimica et Biophysica Acta (BBA)-Biomembranes, 2001, 1513(2): 193-206.
- [4] Wang R, Xiao R, Zeng Z, et al. Application of poly (ethylene glycol)–distearoylphosphatidylethanolamine (PEG-DSPE) block copolymers and their derivatives as nanomaterials in drug delivery[J]. International journal of nanomedicine, 2012: 4185-4198.

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