DSPE-PEG-Amine, MW 2000 ammonium

Cat. No.: HY-125924

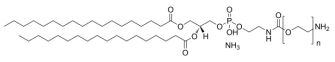
CAS No.: 474922-26-4

Molecular Formula: $(C_2H_4O)_nC_{44}H_{87}N_2O_{10}P.NH_3$

Target: Liposome

Pathway: Metabolic Enzyme/Protease

Storage: 4°C, sealed storage, away from moisture
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro	Ethanol : 16.67 mg/mL (Need ultrasonic) DMSO : 7.14 mg/mL (ultrasonic and warming and heat to 60°C)
In Vivo	1. Add each solvent one by one: 10% EtOH >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 1.67 mg/mL (Infinity mM); Clear solution 2. Add each solvent one by one: 10% EtOH >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 1.67 mg/mL (Infinity mM); Clear solution 3. Add each solvent one by one: 10% EtOH >> 90% corn oil Solubility: ≥ 1.67 mg/mL (Infinity mM); Clear solution 4. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 0.71 mg/mL (Infinity mM); Clear solution 5. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 0.71 mg/mL (Infinity mM); Clear solution 6. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 0.71 mg/mL (Infinity mM); Clear solution

BIOLOGICAL ACTIVITY

Description	DSPE-PEG-Amine, MW 2000 (ammonium), an amine derivative of phospholipid poly ethylene glycol, is used in the synthesis of solid lipid and thermosensitive liposomal nanoparticles for the delivery of anticancer agents[1][2][3].
In Vitro	DSPE-PEG-Amine (MW 2000) (ammonium) is coated on the surface of the fluorescein diacetate (FDA) nanocrystals to provide a interface for the antibody coupling. The DSPE-PEG-Amine (MW 2000) (ammonium)-modified biolabels have a highly stable colloidal suspension with minimized nonspecific interactions. The adsorbed DSPE-PEG-Amine (MW 2000) (ammonium) layer causes the FDA nanocrystals to disperse in water and prevents their aggregation, hence conferring colloidal stability[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Feilong Sun, et al. A Mixed Micelle Formulation for Oral Delivery of Vitamin K. Pharm Res. 2016 Sep;33(9):2168-79.

[2]. Brian R Sloat, et al. In Vitro and in Vivo Anti-Tumor Activities of a Gemcitabine Derivative Carried by Nanoparticles. Int J Pharm. 2011 May 16;409(1-2):278-88.

[3]. Cangel Pui-yee Chan, et al. Nanocrystal Biolabels With Releasable Fluorophores for Immunoassays. Anal Chem. 2004 Jul 1;76(13):3638-45.

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