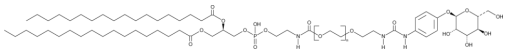
Product Data Sheet

Product Name: DSPE-PEG(2000)-Mannose
Cat. No.: GC91884

Chemical Properties

Cas. No.	1829524-73-3		
Chemical Name	α-[(9R)-6-hydroxy-6-oxido-1,12-dioxo-9-[(1-oxooctadecyl)oxy]-5,7,11-trioxa-2-aza-6-phosphanonacos-1-yl]-ω-[2-[[[[4-(α-D-mannopyranosyloxy)phenyl]amino]thioxomethyl]amino]ethoxy]-poly(oxy-1,2-ethanediyl)		
SMILES	O=C(NCCOP(O)(OCC(COC(CCCCCCCCCCCCCCCCC)=O)OC(CCCCCCCCCCCCCCCCC)=O)=O)OCCOCCNC(NC1=CC=C(OC2[C@@H](O)[C@@H](O)[C@H](O)[C@@H](CO)O2)C=C1)=S		
Formula	$(C_2H_4O)nC_{57}H_{102}N_3O_{16}PS$	M.Wt	2000Da
Solubility	DMF: Slightly soluble: 0.1-1 mg/ml,DMSO: Slightly soluble: 0.1-1 mg/ml,Ethanol: Soluble: 10 mg/ml	Storage	-20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure			

Background

DSPE-PEG(2000)-mannose is a PEGylated and mannosylated form of 1,2-distearoyl-*rac*-glycero-3-PE (DSPE) that has been used in the generation of liposomes and mixed micelles for the delivery of anticancer agents to tumor-associated macrophages (TAMs) *in vitro* and *in vivo*.[1,2] Fluorescently labeled mixed micelles containing DSPE-PEG(2000)-mannose selectively accumulate in the liver and tumor in a 4T1 murine mammary carcinoma model.[2] Mixed micelles containing DSPE-PEG(2000)-mannose and encapsulating dasatinib decrease the viability of TAMs isolated from a 4T1 mammary tumor but not RAW 264.7 macrophages. DSPE-PEG(2000)-mannose-containing and dasatinib-

encapsulating mixed micelles also reduce tumor volume in a 4T1 murine mammary carcinoma model.

References:

[1]. Peng, H., Chen, B., Huang, W., et al.Reprogramming Tumor-Associated Macrophages To Reverse EGFRT790M Resistance by Dual-Targeting Codelivery of Gefitinib/VorinostatNano Lett.17(12)7684-7690(2017).
[2]. Zhang, X., Zang, X., Qiao, M., et al.Targeted delivery of dasatinib to deplete tumor-associated macrophages by mannosylated mixed micelles for tumor immunotherapyACS Biomater. Sci. Eng.6(10)5675-5684(2020).