



DSPE-PEG2000-triGalNAc

Cat. No.:	OB0626WX-4067
Appearance:	Powder
Purity:	>99%
Size:	1 mg; 2 mg; 5 mg; 10 mg

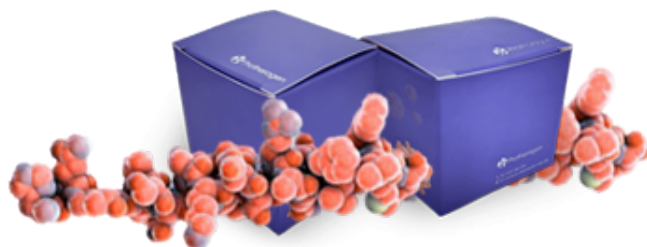
This product is for research use only and is not intended for diagnostic use.

Product Overview

Description	DSPE-PEG2000-triGalNAc is an advanced, targeted pegylated lipid conjugate comprising a hydrophobic distearoylphosphatidylethanolamine anchor, a 2000-dalton polyethylene glycol spacer, and a terminal trivalent N-acetylgalactosamine (triGalNAc) targeting ligand. This engineered architecture is designed to integrate seamlessly into the lipid bilayer of nucleic acid delivery vehicles, orienting the high-affinity cluster toward the aqueous exterior to exploit receptor-mediated uptake mechanisms via asialoglycoprotein receptors.
Synonyms	1,2-distearoyl-sn-glycero-3-phosphoethanolamine-N-[carboxy(polyethylene glycol)-2000]-N-tri(N-acetylgalactosamine), ammonium salt; DSPE-PEG2000-triGalNAc ammonium; 2936651-86-2
CAS No.	2936651-86-2
Compound CID	172880631
Formula	$C_{183}H_{355}N_{10}O_{81}P$ (average MW due to polydispersity of PEG)
Formula Weight	4022.82

Specification

Hygroscopic	Yes
Light Sensitive	No



IUPAC Name

azanium;2-[[2-[2-[2-[6-[2-[2-[2-[(2S,3S,4S,5S,6S)-3-acetamido-4,5-dihydroxy-6-(hydroxymethyl)oxan-2-yl]oxyethoxy]ethoxy]ethylamino]-5-bis[2-[2-[2-[2-[(2S,3S,4S,5S,6S)-3-acetamido-4,5-dihydroxy-6-(hydroxymethyl)oxan-2-yl]oxyethoxy]ethoxy]ethylamino]-2-oxoethyl]amino]-6-oxohexyl]amino]-2-oxoethoxy]ethoxy]acetyl]amino]ethyl [(2R)-2,3-di(octadecanoyloxy)propyl] phosphate;azane

InChI

InChI=1S/C99H184N9O39P.2H3N/c1-6-8-10-12-14-16-18-20-22-24-26-28-30-32-34-39-85(119)141-69-76(144-86(120)40-35-33-31-29-27-25-23-21-19-17-15-13-11-9-7-2)70-143-148(128,129)142-49-45-103-84(118)72-137-57-56-136-71-83(117)100-41-37-36-38-77(96(127)104-44-48-132-52-55-135-60-63-140-99-89(107-75(5)114)95(126)92(123)80(68-111)147-99)108(64-81(115)101-42-46-130-50-53-133-58-61-138-97-87(105-73(3)112)93(124)90(121)78(66-109)145-97)65-82(116)102-43-47-131-51-54-134-59-62-139-98-88(106-74(4)113)94(125)91(122)79(67-110)146-98;;/h76-80,87-95,97-99,109-111,121-126H,6-72H2,1-5H3,(H,100,117)(H,101,115)(H,102,116)(H,103,118)(H,104,127)(H,105,112)(H,106,113)(H,107,114)(H,128,129);2*1H3/t76-,77?,78+,79+,80+,87+,88+,89+,90-,91-,92-,93+,94+,95+,97+,98+,99+;;/m1../s1

InChI Key

MOIJTESHIJEHHP-UYKAYZGUSA-N

Canonical SMILES

CCCCCCCCCCCCCCCCCCCC(=O)OC[C@H](COP(=O)([O-])OCCNC(=O)COCCOCC(=O)NCCCCC(C(=O)NCCOC COCCO[C@H]1[C@H]([C@@H]([C@@H]([C@@H]([C@@H](O1)CO)O)O)NC(=O)C)N(CC(=O)NCCOCCOCCO[C@@H]2[C@H]([C@@H]([C@@H]([C@@H](O2)CO)O)O)NC(=O)C)CC(=O)NCCOCCOCCO[C@H]3[C@H]([C@@H]([C@@H]([C@@H]([C@@H](O3)CO)O)O)NC(=O)C)OC(=O)CCCCCCCCCCCCCCCCC.[NH4+].N

Stability

1 year

Storage

Storage at -20°C.

Applications

DSPE-PEG2000-triGalNAc serves as a functional PEGylated phospholipid for constructing ligand-targeted lipid nanoparticles through triGalNAc surface presentation. It supports nanoparticle functionalization, targeted delivery research, formulation optimization, and studies of ligand-directed lipid nanocarriers.