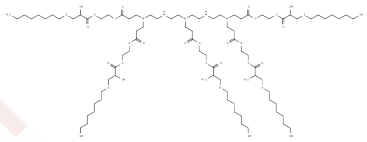
Data Sheet (Cat.No.T74450)

TargetMol

5A2-SC8

Chemical Properties



CAS No. : 1857341-90-2

Formula: C93H173N5O20S5

Molecular Weight: 1841.71

Storage: Keep away from moisture
Pure form: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	5A2-SC8 is an ionizable cationic lipid that is an ideal vehicle for the delivery of small RNAs, interacts with negatively charged cell membranes, and can be used for gene delivery and drug delivery.
Targets(IC50)	Liposome
In vitro	5A2-SC8 is taken up by hepatocytes by binding to the LDL receptor (LDL-R) on the surface of hepatocytes and undergoing receptor-mediated endocytosis with the aid of a crown of surface-adsorbed ApoE protein. [2]
In vivo	A single dose of 75 mg/kg 5A2-SC8 administered intravenously was well tolerated in chronically ill mice with invasive hepatocellular carcinoma and did not adversely affect survival. [1] Intravenous injection of 0.5 mg/kg 5A2-SC8 was effective in crossing the first barrier of hepatic Kupffer cells and was internalized by hepatocytes after 6 hours in the presence of siFVII labeled with Cy5.5 dye. [2]

Solubility Information

Solubility	DMSO: 80 mg/mL (43.44 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.543 mL	2.7149 mL	5.4297 mL
5 mM	0.1086 mL	0.543 mL	1.0859 mL
10 mM	0.0543 mL	0.2715 mL	0.543 mL
50 mM	0.0109 mL	0.0543 mL	0.1086 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Zhou K, et al. Modular degradable dendrimers enable small RNAs to extend survival in an aggressive liver cancer model. Proc Natl Acad Sci U S A. 2016 Jan 19;113(3):520-5.
Johnson LT, et al. Lipid Nanoparticle (LNP) Chemistry Can Endow Unique In Vivo RNA Delivery Fates within the Liver That Alter Therapeutic Outcomes in a Cancer Model. Mol Pharm. 2022 Nov 7;19(11):3973-3986.
Johnson, et al. The Impact of Lipid Nanoparticle Chemistry on RNA Delivery and Therapeutic Outcomes. Diss. 2022.