

Product Data Sheet

Product Name: 4A3-SCC-10

Cat. No.: GC92111

Chemical Properties

Cas. No.

Chemical Name ((methylazanediyl)bis(propane-3,1-diyl))bis(8,14-dioxo-7,15-dioxo-3,4,18,19-tetrathia-11-azahenicosane-11,1,21-triyl) tetrakis(3-(decylthio)-2-methylpropanoate)

SMILES CN(CCCN(CCC(OCCSSCCOC(C(C)CSCCCCCCCCCC)=O)=O)CCC(OCCSSCCOC(C(C)CSCCCCCCCCCC)=O)=O)CCCN(CCC(OCCSSCCOC(C(C)CSCCCCCCCCCC)=O)=O)CCC(OCCSSCCOC(C(C)CSCCCCCCCCCC)=O)=O)CCC(OCCSSCCOC(C(C)CSCCCCCCCCCC)=O)=O

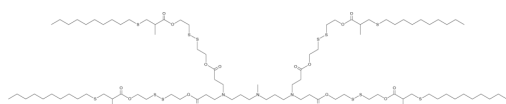
Formula $C_{91}H_{171}N_3O_{16}S_{12}$ M.Wt 1948.1

Solubility Ethanol: Sparingly soluble: 1-10 mg/ml Storage $-20^{\circ}C$

General tips For obtaining a higher solubility, please warm the tube at $37^{\circ}C$ and shake it in the ultrasonic bath for a while. Stock solution can be stored below $-20^{\circ}C$ 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

4A3-SCC-10 is a disulfide bond-containing biodegradable ionizable cationic lipid ($pK_a = 6.22$) that has been used in the generation of lipid nanoparticles (LNPs) for the delivery of mRNA *in vitro* and *in vivo*.¹ LNPs containing 4A3-SCC-10 and encapsulating a Cy5-RNA reporter have improved endosomal escape ability over Cy5-RNA-encapsulated LNPs containing 4A3-SC-10, which does not contain disulfide bonds, in HeLa cells. Intravenous administration of LNPs containing 4A3-SCC-10 and encapsulating an mRNA luciferase reporter selectively accumulate in mouse liver.

References:

[1]. Chen, Z., Tian, Y., Yang, J., et al. Modular design of biodegradable ionizable lipids for improved

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

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mRNA delivery and precise cancer metastasis delineation in vivo J. Am. Chem. Soc. 145(44)24302-24314(2023).

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