

Product Data Sheet

Product Name: 306Oi10
Cat. No.: GC52090

Chemical Properties

Cas. No. 2322290-93-5

SMILES O=C(CCN(CCCN(CCCN(CCC(OCCCCCCCC(C)C)=O)CCC(OCCCCCCCC(C)C)=O)C)CCC(OCCCCCCCC(C)C)=O)OCCCCCCCC(C)C

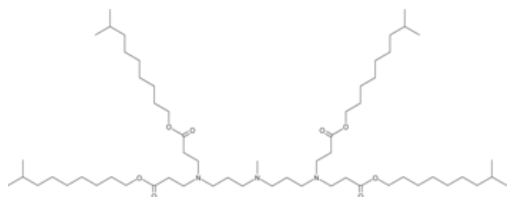
Formula C₅₉H₁₁₅N₃O₈ M.Wt 994.6

Solubility DMF: 20 mg/ml, DMSO: 33 mg/ml, Ethanol: 33 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

306O_{i10} is a branched-chain ionizable lipidoid.¹ It has been used in the generation of lipid nanoparticles (LNPs). It has strong surface ionization at pH 5, which is the pH in the late endosomal compartment, and a surface pK_a value of 6.4 when encapsulating mRNA. LNPs containing 306O_{i10} and encapsulating an mRNA reporter accumulate primarily in the mouse liver and those encapsulating erythropoietin increase serum erythropoietin levels in mice. LNPs containing 306O_{i10} and encapsulating mRNA encoding the Cas9 nuclease (mCas9) and single-guide RNA targeting LoxP (sgLoxP) have been used to induce CRISPR-mediated gene editing in Ai9 mice that express a floxed STOP codon to prevent tdTomato expression.²

1. Hajj, K.A., Ball, R.L., Deluty, S.B., et al. Branched-tail lipid nanoparticles potently deliver mRNA in

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

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vivo due to enhanced ionization at endosomal pH *Small* 15(6):e1805097(2019) 2. Hajj, K.A., Melamed, J.R., Chaudhary, N., et al. A potent branched-tail lipid nanoparticle enables multiplexed mRNA delivery and gene editing in vivo *Nano Lett.* 20(7):5167-5175(2020)

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