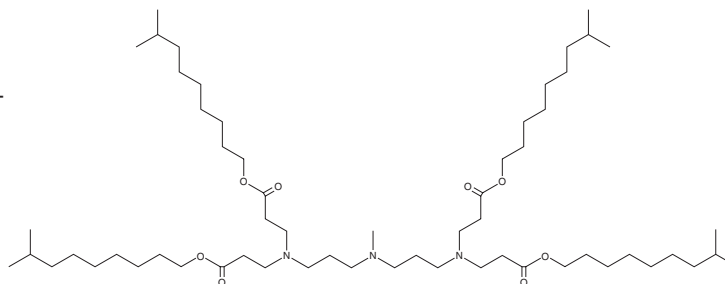


# PRODUCT INFORMATION



**306O<sub>i10</sub>**  
Item No. 36698

**CAS Registry No.:** 2322290-93-5  
**Formal Name:** tetrakis(8-methylnonyl) 3,3',3'',3'''-(((methylazanediy))bis(propane-3,1-diyl))bis(azanetriyl))tetrapropionate  
**MF:** C<sub>59</sub>H<sub>115</sub>N<sub>3</sub>O<sub>8</sub>  
**FW:** 994.6  
**Purity:** ≥95%  
**Supplied as:** A solution in ethanol  
**Storage:** -20°C  
**Stability:** ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

## Laboratory Procedures

306O<sub>i10</sub> is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide (DMF) purged with an inert gas can be used. The solubility of 306O<sub>i10</sub> in DMF is approximately 20 mg/ml and approximately 33 mg/ml in ethanol and DMSO.

## Description

306O<sub>i10</sub> is a branched-chain ionizable cationic lipidoid.<sup>1</sup> 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<sub>a</sub> value of 6.4 when encapsulating mRNA. LNPs containing 306O<sub>i10</sub> and encapsulating an mRNA reporter accumulate primarily in the mouse liver and those encapsulating erythropoietin increase serum erythropoietin levels in mice. LNPs containing 306O<sub>i10</sub> 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.<sup>2</sup>

## References

- Hajj, K.A., Ball, R.L., Deluty, S.B., *et al.* Branched-tail lipid nanoparticles potently deliver mRNA *in vivo* due to enhanced ionization at endosomal pH. *Small* **15(6)**, e1805097 (2019).
- 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).

### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

### WARRANTY AND LIMITATION OF REMEDY

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