bio-techne
TOCRIS

Print Date: May 9th 2025

Certificate of Analysis

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Product Name: **DLin-KC2-DMA** **Catalog No.: 8895** **Batch No.: 1**

CAS Number: 1190197-97-7

IUPAC Name: 2-[2,2-Di-[(9*Z*,12*Z*)-octadeca-9,12-dienyl]-1,3-dioxolan-4-yl]-*N*,*N*-dimethylethanamine

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{43}H_{79}NO_2$

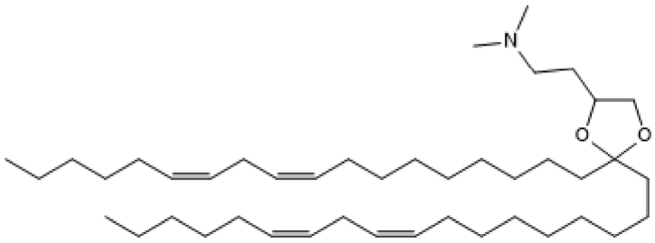
Batch Molecular Weight: 642.11

Physical Appearance: Colourless liquid

Solubility: Soluble in ethanol (supplied pre-dissolved in anhydrous ethanol, 100mg/mL)

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.6% purity

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Description:

DLin-KC2-DMA is an ionizable cationic lipid (pKa = 6.7), used in the formulation of lipid nanoparticles (LNPs) encapsulating siRNA or plasmid DNA for non-toxic delivery into cells in vitro and in vivo. For more information on LNPs and available components see our Lipid Nanoparticles page.

Physical and Chemical Properties:

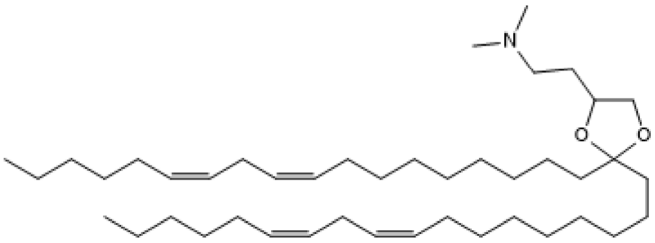
Batch Molecular Formula: $C_{43}H_{79}NO_2$

Batch Molecular Weight: 642.11

Physical Appearance: Colourless liquid

Minimum Purity: ≥95%

Batch Molecular Structure:



Storage: Store at -20°C. This product is packaged under an inert atmosphere.

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

Soluble in ethanol (supplied pre-dissolved in anhydrous ethanol, 100mg/mL)

This product is supplied dissolved in anhydrous ethanol at a concentration of 100mg/mL

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

Other Information:

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References:

Kulkarni *et al* (2017) Design of lipid nanoparticles for *in vitro* and *in vivo* delivery of plasmid DNA. Nanomedicine ***13*** 1377. PMID: 28038954.

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