

## Certificate of Analysis

***www.tocris.com***

**Product Name:** MC3 LNP Luciferase

**Catalog No.:** 8889

**Batch No.:** 1

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Solubility:** Soluble in TBS buffer solution (10% sucrose, pH 7.5). Supplied in 200 µL aliquots, 0.05 µg/µL RNA concentration

**Storage:** Store at -80°C

### 2. ANALYTICAL DATA

**Polydispersity:** 0.08

**Size:** 94nm

**RNA Encapsulated:** >90%

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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**Product Name:** MC3 LNP Luciferase

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**Description:**

MC3 LNP Luciferase is a fully formulated lipid nanoparticle (LNP) composed of DLin-MC3-DMA (Cat. No. 7946), DSPC (Cat. No. 7943), Cholesterol (Cat. No. 7945), DMG-PEG 2000 (Cat. No. 7944) with the molar ratio 50:10:38.5:1.5.11 providing a convenient, ready to use, benchmark LNP formulation. Contains a reporter luciferase mRNA for in vitro and in vivo bioluminescence detection when used with D-luciferin (Cat. No. 5427). For more information on how to prepare MC3 lipid nanoparticles for RNA delivery, please see our protocol. Do not use a vortex to resuspend LNPs as this can disrupt the lipid membrane and damage particle integrity. Please see product specific page on [www.tocris.com](http://www.tocris.com) for full description.

**Physical and Chemical Properties:**

**Storage:** Store at -80°C

**Solubility & Usage Info:**

Soluble in TBS buffer solution (10% sucrose, pH 7.5). Supplied in 200 µL aliquots, 0.05 µg/µL RNA concentration

**IMPORTANT:** Do not use a vortex to resuspend LNPs as this can disrupt the lipid membrane and damage particle integrity.

**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.

**References:**

**Brown et al** (2024) Safe and effective *in vivo* delivery of DNA and RNA using proteolipid vehicles. Cell **187** 5357. PMID: 39260374.

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