

Description

Ready-to-use stabilized **DiO-labeled and Cy5-mRNAFLuc encapsulated LNPs.**

Concentration: 0.1 mg/mL RNA in LNPs containing 1 mole % of DiO

Buffer: PBS, 10 % sucrose

mRNA Cat. number #mRNA16

LNPs represent one of the most effective and safe delivery systems for the translational success of nucleic acid drugs. LNPs are lipidic spherical vesicles formed by a combination of four main components: an ionizable cationic lipid, a helper phospholipid, cholesterol & a pegylated lipid, each having distinct functions. LNPs not only protect RNA from degradation but also facilitate intracellular uptake and thus potentiate its efficacy.

NanOZ Dual Fluo LNP (DiO/Cy5-mRNAFLuc) (Fig.1) is designed for the effective monitoring and imaging of intracellular trafficking and biodistribution of LNPs *in vitro* and *in vivo* respectively **NanOZ Dual Fluo LNP (DiO/Cy5-mRNAFLuc)** contains a lipophilic carbocyanine dye DiO having an excitation max. at 487 nm, and emission max. at 501 nm and Cy5 mRNA having excitation max. at 651 nm, and emission max. at 670 nm

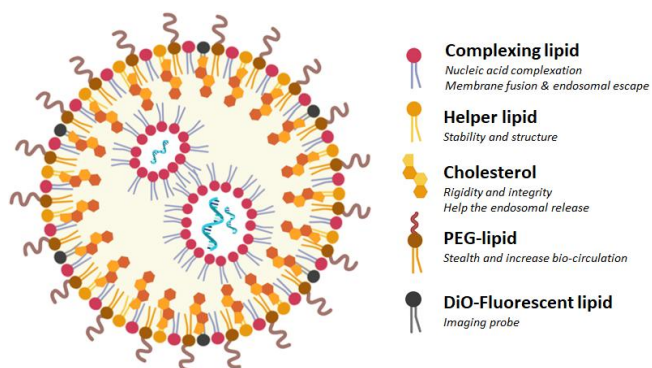


Fig.1. Schematic representation dual labelled Fluorescent LNPs-DiO encapsulated with red-fluorescent Cy5-mRNAFLuc

Applications

DiO detection

The DiO and Cy5-mRNA has an excitation peak at 487, 651 nm and emission peak at 501 and 670 nm respectively and can be monitored by flow cytometer, plate readers and confocal microscopy.

Quality Controls

Items	Specification	Standard QC	Superior Grade QC*
Identity	Size	✓	✓
	Charge	✓	✓
Content	Encapsulation efficiency	✓	✓
	RNA concentration	✓	✓
Safety	Sterility	✓	✓
	Endotoxin		✓
	Mycoplasma detection		✓
Characterization	Lipid content		✓

* Contact us to get a quote.

Certificate of analysis on demand.

Use, handling and storage

For Research Use Only. Not for use in humans. Not for use in diagnostic or therapeutic purposes.

Long term storage (6 months): -80°C.

Short term storage (2 months): +4°

We recommend minimizing freeze-thaw cycles to preserve LNPs integrity.

Kit contents

LDFO11000: 1mL (4*250µL) of LNP-DiO, (4.5 mM) encapsulated with 0.1 mg/ mL Cy5-mRNAFLuc having composition as described in table below:

Lipid mix components	Molecular weight	Molar ratio
FP105	731.2	50.0
DSPC	790.2	9.0
Cholesterol	386.7	38.5
DMG-PEG 2000	2509.2	1.5
DiO	782	1.0
Total		100.0

Related Products

Ref	Description
#LNP10500	Empty LNP
#LNP10500mRNA11	NanOZ-LNP/mRNA (GFP).
#LNP10500mRNA12	NanOZ-LNP/mRNA (LUC).
#LNP10500mRNA41	NanOZ-LNP/mRNA (OVA).

Custom LNPs & mRNAs are also available now!

Purchaser Notification | Conditions of Sale

This product is sold in accordance with our general conditions of sale that you can find on our website: <https://ozbiosciences.com/content/3-terms-and-conditions>.