NanOZ-LNP empty
(NanOZ-LNP control for LNP mRNA)

Description

Ready-to-use stabilized **NanOZ-LNP empty**

Concentration: 5 mM of total lipid

Buffer: PBS, 10 % sucrose

Lipid Nanoparticles (LNPs) represent the most effective and safe delivery systems for the translational success of nucleic acid drugs. **NanOZ-LNP** is designed to not only protect its cargo like RNA from degradation, but also facilitate intracellular uptake and thus potentiate its efficacy. LNPs are lipidic spherical vesicles formed by a combination of four main compounds: ionizable cationic lipid, helper phospholipid, cholesterol & pegylated lipid, each having distinct functions (**Fig.1**). Our **LNPs** are produced through microfluidic technology resulting in monodisperse **NanOZ-LNP** with narrow size distribution. Currently, LNPs hold great potential in diverse pharmaceutical applications including oncology, immunotherapy, regenerative medicine or chronic diseases treatment.

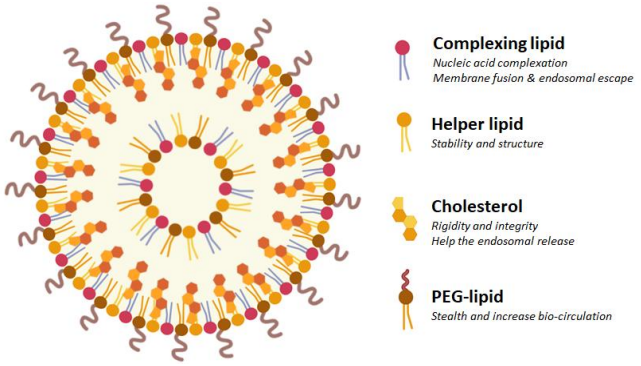

Fig.1. Schematic representation of empty LNP

Applications

NanOZ-LNP Empty: our Empty LNP are designed to serve as matched vehicle controls in experiments involving LNP-mediated nucleic acid delivery.

Each Empty LNP product is formulated to mirror the lipid composition and physicochemical properties of its corresponding active LNP counterpart. By including the appropriate NanOZ-LNP Empty control in parallel with the mRNA-encapsulated formulation, researchers can accurately distinguish on-target therapeutic effects from non-specific responses such as innate immune activation, cytotoxicity or organ-level biodistribution patterns driven by the lipid components.

Each NanOZ-LNP Empty variant is specifically matched to its active LNP product:

NanOZ-LNP Empty (In Vitro) — control for in vitro cell-based delivery applications

NanOZ-LNP Empty (Liver) — control for liver-targeted delivery applications

NanOZ-LNP Empty (Spleen) — control for spleen-targeted delivery studies

NanOZ-LNP Empty (Multi-Organ) — control for broad biodistribution and systemic delivery experiments

NanOZ-LNP Empty (Immunization) — control for vaccine and immunization studies

Quality Controls

Items	Specification	Standard QC	Superior Grade QC*
Identity	Size	✓	✓
	Charge	✓	✓
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.

LNPs have a composition as described in table below:

Lipid mix components	Molecular weight	Molar ratio
FP105	731.2	50.0
DSPC	790.2	10.0
Cholesterol	386.7	38.5
DMG-PEG 2000	2509.2	1.5
Total		100.0

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Kit contents

NanOZ-LNP Empty (in vitro)
- **LNPEV0500:** 0,5mL (2*250µL) of empty LNP
- **LNPEV1000:** 1mL (4*250µL) of empty LNP
- **LNPEV5000:** 5ml (10*500µL) of empty LNP

NanOZ-LNP Empty (Liver)
- **LNPEL0500:** 0,5mL (2*250µL) of empty LNP
- **LNPEL1000:** 1mL (4*250µL) of empty LNP
- **LNPEL5000:** 5ml (10*500µL) of empty LNP

NanOZ-LNP Empty (Spleen)
- **LNPES0500:** 0,5mL (2*250µL) of empty LNP
- **LNPES1000:** 1mL (4*250µL) of empty LNP
- **LNPES5000:** 5ml (10*500µL) of empty LNP

NanOZ-LNP Empty (Multi-Organ)
- **LNPEMO0500:** 0,5mL (2*250µL) of empty LNP
- **LNPEMO1000:** 1mL (4*250µL) of empty LNP
- **LNPEMO5000:** 5ml (10*500µL) of empty LNP

NanOZ-LNP Empty (Immunization)
- **LNPEIM0500:** 0,5mL (2*250µL) of empty LNP
- **LNPEIM1000:** 1mL (4*250µL) of empty LNP
- **LNPEIM5000:** 5ml (10*500µL) of empty LNP

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.