Product datasheet

LNP mRNA Delivery Kit

Short overview

Cat. No.	PR6104
Quantity	1 kit

Product description

Reconstitution

Formulate in Ethanol 96% and 10 mM Citrate Buffer, pH 3 per protocol.

Application	Nanoparticle reagent kit for mRNA delivery
Specificity	mRNA
Stability	Do not freeze mRNA Delivery LNPs. Do not heat up mRNA Delivery LNPs.
Synomym	LNP
Storage before reconstitution	-20ºC (avoid freeze/thaw cycles)
Storage after reconstitution	Up to 24 hours at 2-8 ºC
Intended use	Research use only

Background

Nanoparticle reagent kit for nucleic acid delivery

A breakthrough in gene therapy and molecular biology enabling efficient mRNA and Antisense Oligonucleotides (ASOs) transfection in cells, including primary cultures and organoids.

Applications

In vitro:Delivery
of different types of oligonucleotides for:- Gene addition or replacement: for example, mRNA encapsulation.
- Gene expression control: e.g. interference studies with Antisense Oligonucleotides (ASOs) in living-and fixed cells. Additionally, our customized solutions can also deliver siRNA, miRNA and circRNA (available upon request).
- Gene editing: customized solutions suitable for delivery of CRISPRCas9 gene editing or base-editing systems (available upon request).

In vivo:

Delivery of different types of oligonucleotides for:- Gene addition or replacement: for example, mRNA encapsulation.
- Gene expression control: e.g. interference studies with Antisense Oligonucleotides (ASOs) in living-and fixed cells. Additionally, our customized solutions can also deliver siRNA, miRNA and circRNA (available upon request).
- Gene editing: customized solutions suitable for delivery of CRISPRCas9 gene editing or base-editing systems (available upon request).

Protein expressionInnovative RNA therapeutics and precision medicine research

About the LNP mRNA Delivery Kit:

PROGENs mRNA Delivery LNPs come as a dryed lipid emulsion easy to formulate by bench-top reconstitution with ethanol and citrate buffer for adequate mRNA and ASOs encapsulation. The formulation can be subjected to pH 7 buffer exchange by ultrafiltration. This kit is a key tool for RNA-based therapeutics, as it may also be customized for delivering many different types of oligonucleotides, such as siRNA, miRNA or circRNA, upon request.The high biocompatibility of the LNP mRNA Delivery Kit enables an efficient internalization of the mRNA or ASOs whilst yielding good cell viabilities in a broad range of mammalian cells, even in difficult-to-transfect cells, including primary cells and organoids. They enable delivery in living-and fixed cells, which is essential for studies in gene expression, RNA interference, and gene therapy. With its rapid cellular uptake, it is an ideal tool in fields like genetic engineering, personalized medicine.LNP mRNA Delivery Kit is suitable for transfecting up to 20 µg of mRNA, for a maximum loading capacity of 5 µg per vial, with a recommended lipid nanoparticles concentration of 1 µg/ml. If necessary, PROGEN can offer increased loading capacities in the form of a custom formulation. Additionally, customized nanoparticles with surface-decoration of specific ligands for selective targeting can be delivered upon request, as well as tagging of different fluorophores such as Cy3, Cy5, Cy7 for optimal cell tracking or uptake control purposes. Moreover, PROGEN can also provide solutions for co-encapsulation of different nucleic acids (e.g., for CRISPR/Cas9 systems).

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Product images

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