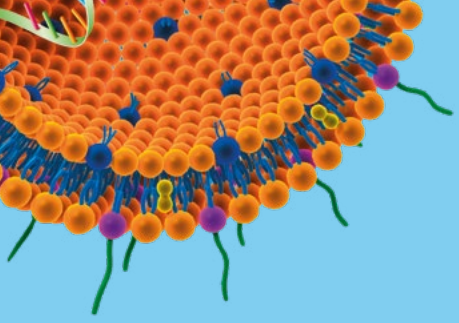
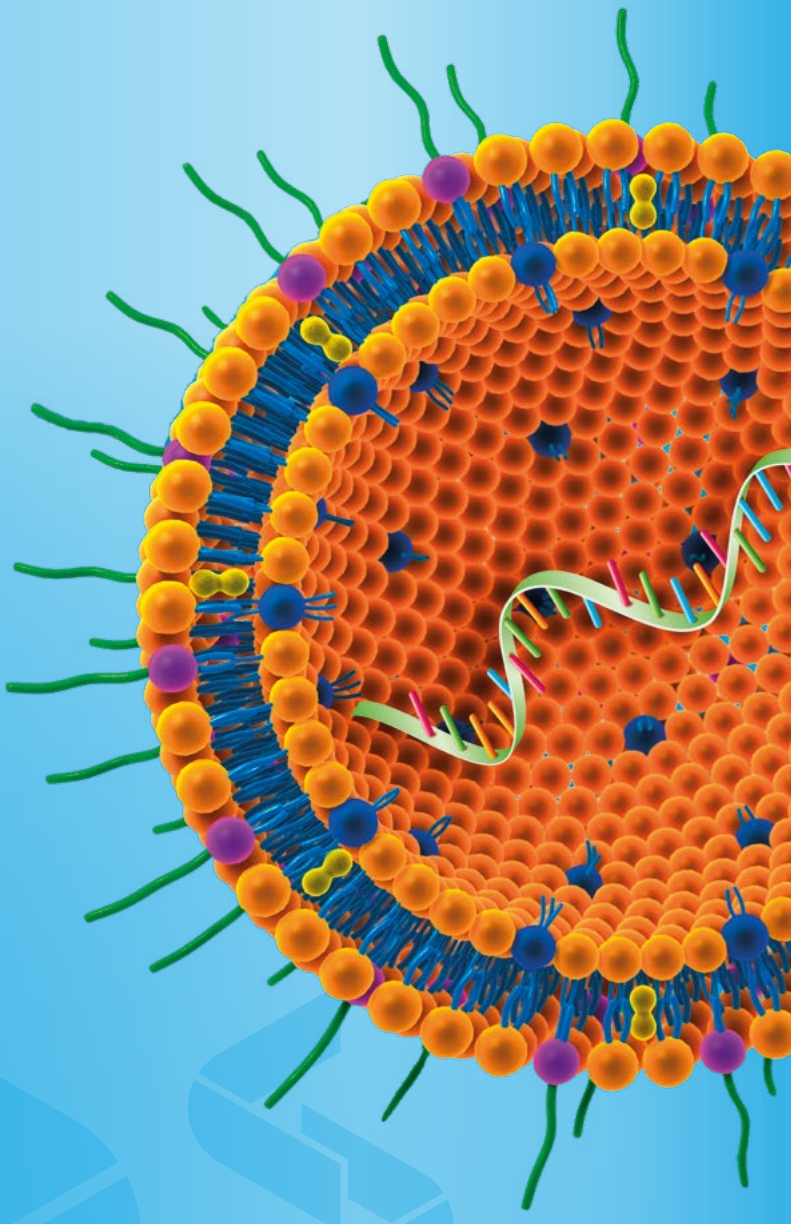


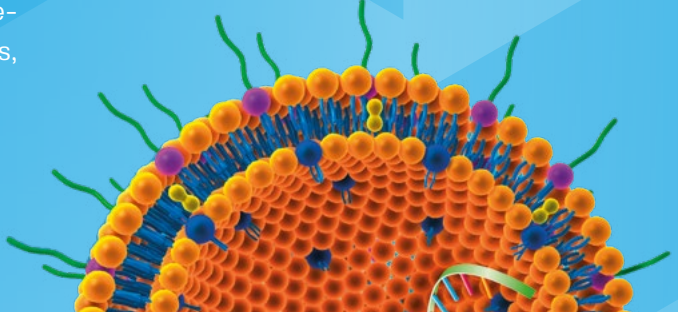
Corden Pharma

LNP
Starter Kit



The LNP starter kits are meant to facilitate easy formulation screening, enabling the generation of LNPs capable of providing efficient transfection in different cell types, including immortalized and/or primary cell cultures. The kits, which can be used for animal in-vivo applications including PK/PD studies and mRNA transfection efficacy POC/studies, have been tested in our LNP manufacturing site with GFP-mRNA as cargo, and successfully implemented for synthetic RNAs (such as siRNA) and DNA as well.

With easy-to-follow instructions included, users can fine tune the LNP formulation process to achieve the production of nanoparticles with the desired physicochemical characteristics, such as PDI ≤0.2 and a size range between 30-150 nm (depending on the specific LNP reaction conditions, lipid composition and cargo used).



Safeguard High-Value Payloads on the Road to Market

Leveraging over three decades of expertise in aiding customers with lipid excipient CMC preparation, along with recent accomplishments in scaling up critical formulation aspects of a commercialized COVID-19 vaccine, our scientific experts have mastered specialized chemical processes and purification techniques. This ensures **top-tier lipid quality** and exceptional **batch-to-batch consistency.** To pre-empt potential setbacks and safeguard against compromised payload integrity stemming from inferior lipid quality, our newly introduced LNP kits feature a meticulously selected array of four essential lipids – ionizable lipids, helper lipids, sterols, and PEGylated lipids. These kits are strategically assembled **using representative lipids sourced from commercial-scale material** produced in-house, effectively averting risks associated with transitioning lipid sources from research to clinical phases.

Figure 1.
Typical composition of LNP Starter Kit

Substances	Specifications
xRNA/xDNA	→ Active payload
Cationic / Ionizable lipid	→ 50% → Complexes the payload → Destabilizes the endosome
PEG lipid / nonPEG polymer	→ 1.5% → Controls particle size and stabilize LNP
Structural lipid	→ 10% → Enhances overall stability
Sterol	→ 38.5% → Improves encapsulation → Improves stability → Affects transfection (i.e β-sitosterol)

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→ **Larger quantity of lipids (GMP grade)** available to support clinical phases
→ **Quality is paramount:** Representative lipids sourced from commercial-scale material