



## UCNPs@LNP, upconversion nanoparticles loaded on lipid nanoparticles

Cat. No. R-MHDS04

Lot. No. (See product label)

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Alias</b>              | upconversion nanoparticles@lipid nanoparticles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Appearance</b>         | Dispersion                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Molecular Formula</b>  | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Solubility</b>         | Water, phosphate buffer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Storage</b>            | 4°C, protected from light                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Purity</b>             | 95%+                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Shelf Life</b>         | 1 year                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Shipping Condition</b> | low temperature transport                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Application</b>        | Drug and gene delivery                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Specification</b>      | 10mg : Inquiry<br>20mg : Inquiry<br>50mg : Inquiry                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Description</b>        | UCNPs@LNP is a composite nanomaterial in which upconversion nanoparticles (UCNPs) are loaded inside or on the surface of lipid nanoparticles (LNP). Upconversion nanoparticles are a type of nanomaterial with upconversion luminescence properties that can absorb low-energy near-infrared light and then emit high-energy visible light. This property makes it potentially useful in fields such as biological imaging. Lipid nanoparticles are nanoscale carrier systems composed of lipid materials such as phospholipids, cholesterol, and ionizable lipids. It has good biocompatibility, biodegradability, and the |

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ability to effectively wrap and protect biologically active substances such as nucleic acids and drugs. Loading upconversion nanoparticles into lipid nanoparticles can, on the one hand, take advantage of the carrier advantages of lipid nanoparticles to protect the upconversion nanoparticles from rapid clearance in the body and enable targeted delivery; on the other hand, the upconversion nanoparticles impart optical signals to the lipid nanoparticles, which can be used to monitor the distribution, metabolism and other processes of lipid nanoparticles in the body in real time.

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**Supplier**

Xi'an Ruixi

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