

DC67524 | Nitto Lipid 19

Instructions for Use

Lipid 19 is an engineered cationic lipid designed to optimize the delivery of RNA within lipid nanoparticles (LNPs) developed by Nitto. Its unique structure—featuring a dual-hydroxyl headgroup and tailored hydrophobic chains—enables highly efficient encapsulation of these fragile genetic payloads, protecting them from degradation. The resulting LNPs exhibit exceptional stability (<100 nm size), target the liver specifically for enhanced therapeutic impact, and support applications ranging from mRNA vaccines to gene-silencing therapies. This makes lipid 19 a pivotal advancement in precision nanomedicine for liver-related disorders.

Product information

CAS No.	Not available
Chemical Name	Nitto Lipid 19
Formula	C51H94O7N2
M.Wt	847.32
Purity	>98%
Storage	Original product: up to 1 year under the storage conditions stated on the vial, kept tightly sealed. Stock solutions: aliquots at -20°C, generally up to one month.
Shipping condition	Ships from Shanghai. Pure lipid is stable during ice-pack transport.

Formulation & study context

Literature values apply to the cited study only. Administration routes describe research, not clinical instructions.

A complete product-specific formulation has not been verified. No standard ratio is substituted.

N/P ratio	Not reported in the verified record
Cargo	Not available in the verified record
Administration route	Not available in the verified record
Animal model	Not available in the verified record
Formulation process	Not available in the verified record

N/P is a nitrogen-to-phosphate molar ratio. Lipid:cargo mass ratio is a different quantity and must not be used as N/P.

Stock-solution preparation table

Calculated using product-page MW: 847.32 g/mol. Volumes are final solution volumes.

Mass	1 mM	5 mM	10 mM
10 mg	11.802 mL	2.360 mL	1.180 mL
25 mg	29.505 mL	5.901 mL	2.950 mL
50 mg	59.010 mL	11.802 mL	5.901 mL
100 mg	118.019 mL	23.604 mL	11.802 mL
250 mg	295.048 mL	59.010 mL	29.505 mL

Volume (mL) = mass (mg) × 1000 / [MW (g/mol) × concentration (mM)]. Mathematical conversions only; not measured solubility. Confirm solvent compatibility and the exact material before preparation.

Handling & storage

Provided that storage conditions are as stated on the product vial and the vial is kept tightly sealed, the product can be stored for up to 1 year.

Wherever possible, prepare and use solutions on the same day. If stock solutions must be prepared in advance, store them as aliquots in tightly sealed vials at -20°C. Generally, these will be usable for up to one month.

Before use, and prior to opening the vial, allow the product to equilibrate to room temperature for at least 1 hour.

References

Not available