

DC60489 | LIPID 331

Instructions for Use

Lipid 331 is a biodegradable cyclic ionizable lipid. LNPs containing Lipid 331 result in robust transfection in the nasal and lung tissues of mice and efficient transfection of lung epithelial cells and lung-resident APCs. Lipid 331 is a promising candidate for mRNA vaccine delivery, offering the potential for further enhancing the potency of mRNA vaccines.

Product information

CAS No.	Not available
Chemical Name	LIPID 331
Formula	C ₆₁ H ₁₀₇ N ₃ O ₆
M.Wt	978.52
Purity	>95%
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: 978.52 g/mol. Volumes are final solution volumes.

Mass	1 mM	5 mM	10 mM
10 mg	10.220 mL	2.044 mL	1.022 mL
25 mg	25.549 mL	5.110 mL	2.555 mL

Mass	1 mM	5 mM	10 mM
50 mg	51.098 mL	10.220 mL	5.110 mL
100 mg	102.195 mL	20.439 mL	10.220 mL
250 mg	255.488 mL	51.098 mL	25.549 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

Enhancing the immunogenicity of lipid-nanoparticle mRNA vaccines by adjuvanting the ionizable lipid and the mRNA--Nature Biomedical Engineering (2023)