

DC60462 | MIC1

Instructions for Use

MIC1 is a set of multi-charged lipids with four tertiary amino nitrogen atoms (4N4T) which could be constructed and applied to form novel lipid nanoparticles. 4N4T-LNPs based on MIC1 exhibit much higher mRNA translation efficiency than the approved SM-102-LNPs. 4N4T-LNPs are successfully applied to DS mRNA vaccine and the vaccines worked well against SARS-CoV-2 and its variants, including Delta and Omicron.

Product information

CAS No.	Not available
Chemical Name	MIC1
Formula	C70H142N6O6
M.Wt	1,163.9
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: 1163.9 g/mol. Volumes are final solution volumes.

Mass	1 mM	5 mM	10 mM
10 mg	8.592 mL	1.718 mL	0.859 mL

Mass	1 mM	5 mM	10 mM
25 mg	21.480 mL	4.296 mL	2.148 mL
50 mg	42.959 mL	8.592 mL	4.296 mL
100 mg	85.918 mL	17.184 mL	8.592 mL
250 mg	214.795 mL	42.959 mL	21.480 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