

DC67651 | CICL-238

Instructions for Use

Based on the data from patent US 20250127728A1, CICL-238 emerges as a highly promising ionizable lipid candidate, demonstrating notable advantages for targeted delivery applications. It achieves exceptional transfection efficiency—reaching approximately 90% of CICL-207's performance in splenic T-cells even at a reduced lipid ratio of 50% in LNP formulations. Additionally, CICL-238 exhibits minimal off-target expression in hepatocytes (<8%, comparable to CICL-207), underscoring its enhanced specificity for immune cells over liver tissues. Its optimized structure likely contributes to efficient endosomal escape and reduced Kupffer cell uptake, making it ideal for liver-related therapies (e.g., siRNA silencing for metabolic diseases) and potentially broadening applications to genetic medicine where precision and safety are paramount. Further validation in disease models could solidify its role as a versatile, low-toxicity alternative to benchmark lipids.

Product information

CAS No.	Not available
Chemical Name	CICL-238
Formula	C ₅₆ H ₁₀₀ O ₁₄ N ₂
M.Wt	1,025.42
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: 1025.42 g/mol. Volumes are final solution volumes.

Mass	1 mM	5 mM	10 mM
10 mg	9.752 mL	1.950 mL	0.975 mL
25 mg	24.380 mL	4.876 mL	2.438 mL
50 mg	48.761 mL	9.752 mL	4.876 mL
100 mg	97.521 mL	19.504 mL	9.752 mL
250 mg	243.803 mL	48.761 mL	24.380 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