

DC60917 | BHD-C2C2-PipZ

Instructions for Use

BHD-C2C2-PipZ, as an efficient ionizable cationic lipid, achieves high encapsulation efficiency and controllable release of mRNA through its unique chemical structure. In PEG-free 3P-LNPs, its electrostatic interaction with tripolyphosphate successfully replaces the steric stabilization effect of traditional PEG, offering a new strategy to circumvent PEG immunogenicity. Its hepatic distribution pattern further indicates that LNP design should take into account the heterogeneity of the organ microenvironment.

Product information

CAS No.	Not available
Chemical Name	BHD-C2C2-PipZ
Formula	C ₄₇ H ₉₃ O ₄ N ₃
M.Wt	764.28
Purity	ELSD-HPLC>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: 764.28 g/mol. Volumes are final solution volumes.

Mass	1 mM	5 mM	10 mM
10 mg	13.084 mL	2.617 mL	1.308 mL

Mass	1 mM	5 mM	10 mM
25 mg	32.711 mL	6.542 mL	3.271 mL
50 mg	65.421 mL	13.084 mL	6.542 mL
100 mg	130.842 mL	26.168 mL	13.084 mL
250 mg	327.105 mL	65.421 mL	32.711 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

<https://www.biorxiv.org/content/10.64898/2025.12.19.695515v2.full.pdf>