

DC68212 | Lipid A3B7C2

Instructions for Use

A3B7C2 is an imidazole-based ionizable lipid, featuring dimethylamino-imidazole head group connected via ester-type degradable C2-linker to two C14 unsaturated aliphatic tails. It forms LNPs achieving 98 % splenic transfection proportion, potent for splenic dendritic cell-targeted mRNA delivery, superior to MC3, SM102.

Product information

CAS No.	Not available
Chemical Name	Lipid A3B7C2
Formula	C61H95N3O8
M.Wt	998.44
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: 998.44 g/mol. Volumes are final solution volumes.

Mass	1 mM	5 mM	10 mM
10 mg	10.016 mL	2.003 mL	1.002 mL
25 mg	25.039 mL	5.008 mL	2.504 mL

Mass	1 mM	5 mM	10 mM
50 mg	50.078 mL	10.016 mL	5.008 mL
100 mg	100.156 mL	20.031 mL	10.016 mL
250 mg	250.391 mL	50.078 mL	25.039 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

Multicomponent Synthesis of Imidazole-Based Ionizable Lipids for Highly Efficient and Spleen-Selective Messenger RNA Delivery-Journal American Chemical Society (2024) 146 (22): 15085–15095.