

DC65619 | Lipid 11-A-M

Instructions for Use

Lipid 11-A-M (LNP Lipid-8) is a specialized single-tail, multi-head ionizable cationic lipid engineered for targeted nucleic acid delivery to T cells. Unlike traditional lipids that exhibit strong liver tropism, 11-A-M formulations successfully bypass hepatocytes, resulting in negligible liver accumulation and toxicity. Upon intravenous administration, it naturally localizes to peripheral immune organs, enabling robust gene silencing and transfection specifically within splenic CD3⁺ T cells, with a higher efficiency in CD8⁺ cytotoxic T cells over CD4⁺ helper T cells. This liver-evading, T cell-specific targeting profile makes it a premier tool for in vivo immunotherapy and in situ cell reprogramming.

Product information

CAS No.	Not available
Chemical Name	Lipid 11-A-M
Formula	C42H71NO7
M.Wt	702.02
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: 702.02 g/mol. Volumes are final solution volumes.

Mass	1 mM	5 mM	10 mM
10 mg	14.245 mL	2.849 mL	1.424 mL
25 mg	35.612 mL	7.122 mL	3.561 mL
50 mg	71.223 mL	14.245 mL	7.122 mL
100 mg	142.446 mL	28.489 mL	14.245 mL
250 mg	356.115 mL	71.223 mL	35.612 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

Lokugamage, M. P., Sago, C. D., Gan, Z., Krupczak, B. R., & Dahlman, J. E. (2019). Constrained nanoparticles deliver siRNA and sgRNA to T cells in vivo without targeting ligands. *Advanced Materials*, 31(41), e1902251. doi.org