

DC82102 | PPZ-A10

Instructions for Use

PPZ-A10 is an ionizable cationic lipid. It has been used in the generation of lipid nanoparticles (LNPs) for the delivery of siRNA and mRNA in vitro and in vivo. Intraperitoneal administration of LNPs containing PPZ-A10 and encapsulating an mRNA reporter preferentially accumulates in hepatic Kupffer cells and splenic macrophages in mice.

Product information

CAS No.	Not available
Chemical Name	PPZ-A10
Formula	C ₅₆ H ₁₁₄ N ₆ O ₂
M.Wt	903.6
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: 903.6 g/mol. Volumes are final solution volumes.

Mass	1 mM	5 mM	10 mM
10 mg	11.067 mL	2.213 mL	1.107 mL
25 mg	27.667 mL	5.533 mL	2.767 mL

Mass	1 mM	5 mM	10 mM
50 mg	55.334 mL	11.067 mL	5.533 mL
100 mg	110.668 mL	22.134 mL	11.067 mL
250 mg	276.671 mL	55.334 mL	27.667 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

1. Subhan, M.A., and Torchilin, V.P. Biopolymer-based nanosystems for siRNA drug delivery to solid tumors including breast cancer. *Pharmaceutics* 15(1), 153 (2023).
2. Ni, H., Hatit, M.Z.C., Zhao, K., et al. Piperazine-derived lipid nanoparticles deliver mRNA to immune cells in vivo. *Nat. Commun.* 13(1), 4766 (2022).