

DC67453 | Lipid 114

Instructions for Use

Lipid 114 (pKa ~6.8) is an ionizable cationic lipid optimized for siRNA delivery via LNPs, demonstrating predominant hepatic accumulation with secondary renal uptake in murine models. When formulated with IL-1 β -targeting siRNA, these LNPs effectively suppress pro-inflammatory cytokine expression in both macrophage cell lines and primary cells in a dose-dependent manner. In LPS/galactosamine-induced acute liver failure models, the therapeutic LNPs significantly reduce IL-1 β levels in target organs while attenuating hepatic inflammation and injury markers.

Product information

CAS No.	Not available
Chemical Name	Lipid 114
Formula	C95H186N4O10
M.Wt	1,544.5
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: 1544.5 g/mol. Volumes are final solution volumes.

Mass	1 mM	5 mM	10 mM
10 mg	6.475 mL	1.295 mL	0.647 mL

Mass	1 mM	5 mM	10 mM
25 mg	16.186 mL	3.237 mL	1.619 mL
50 mg	32.373 mL	6.475 mL	3.237 mL
100 mg	64.746 mL	12.949 mL	6.475 mL
250 mg	161.865 mL	32.373 mL	16.186 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