

DC31000 | LP-01

Instructions for Use

LP-01 is an ionizable cationic amino lipid ($pK_a = \sim 6.1$). It has been used in the generation of lipid nanoparticles (LNPs). LNPs containing LP-01 and encapsulating both Cas9 mRNA and modified single-guide RNA (sgRNA) for the transport protein transthyretin (Ttr) induce gene editing in liver cells in mice in a dose-dependent manner resulting in reduced serum Ttr levels for at least 12 months.

Product information

CAS No.	Not available
Chemical Name	LP-01
Formula	C ₅₀ H ₉₃ NO ₉
M.Wt	852.292
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: 852.292 g/mol. Volumes are final solution volumes.

Mass	1 mM	5 mM	10 mM
10 mg	11.733 mL	2.347 mL	1.173 mL
25 mg	29.333 mL	5.867 mL	2.933 mL

Mass	1 mM	5 mM	10 mM
50 mg	58.665 mL	11.733 mL	5.867 mL
100 mg	117.331 mL	23.466 mL	11.733 mL
250 mg	293.327 mL	58.665 mL	29.333 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

Finn, J.D., Smith, A.R., Patel, M.C., et al. A single administration of CRISPR/Cas9 lipid nanoparticles achieves robust and persistent in vivo genome editing. Cell Rep. 22(9), 2227-2235 (2018).