

DC86601 | Lipid 8

Instructions for Use

Lipid 8 iLNPs were used to deliver CRISPR-Cas9 mRNA and sgRNA which targeted to the PLK1 gene. The safety and excellent intracerebral diffusion performance of lipid 8 iLNPs ensured that the survival of murine glioblastoma multiforme (GBM) mice was extended. The median survival was extended by approximately 50% and the overall survival was increased by 30%. The treatment of metastatic adenocarcinoma was executed by the EGFRtargeted lipid 8 iLNPs. These iLNPs possessed the ability of tumor targeting, which could increase the accumulation of CRISPR-Cas9 mRNA and sgRNA within the tumor cells. After a single intraperitoneal administration, 80% PLK1 gene was edited and the overall survival of mice with high-grade ovarian cancer malignant ascites was enhanced by 80%. These results demonstrate the clinical potential of CRISPR-Cas9 gene editing system can be delivered by iLNPs for treating tumors, and provide new ideas for tumor gene therapy.

Product information

CAS No.	Not available
Chemical Name	Lipid 8
Formula	C44H82N2O2
M.Wt	671.13
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: 671.13 g/mol. Volumes are final solution volumes.

Mass	1 mM	5 mM	10 mM
10 mg	14.900 mL	2.980 mL	1.490 mL
25 mg	37.251 mL	7.450 mL	3.725 mL
50 mg	74.501 mL	14.900 mL	7.450 mL
100 mg	149.002 mL	29.800 mL	14.900 mL
250 mg	372.506 mL	74.501 mL	37.251 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

Dual-Targeted Lipid Nanotherapeutic Boost for Chemo-Immunotherapy of Cancer-Adv. Mater. 2022, 34, 2106350