DC60475 | CL4F8-6

Instructions for Use

CL4F8-6 is an ionizable cationic lipid (pKa = 6.14) that has been used in combination with other lipids in the formation of lipid nanoparticles (LNPs).1 LNPs containing CL4F8-6 and encapsulating an mRNA reporter accumulate specifically in the mouse liver after intravenous administration. LNPs containing CL4F8-6 and encapsulating mRNA encoding the Cas9 nuclease (mCas9) and single-guide RNA (sgRNA) targeting Ttr (sgTtr), the gene encoding transthyretin, have been used to induce CRISPR-mediated gene knockdown in mice resulting in a reduction of serum levels of TTR.

Product information

CAS No.	Not available
Chemical Name	CL4F8-6
Formula	C51H101NO5
M.Wt	808.35
Purity	>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: 808.35 g/mol. Volumes are final solution volumes.

Mass	1 mM	5 mM	10 mM
10 mg	12.371 mL	2.474 mL	1.237 mL

Mass	1 mM	5 mM	10 mM
25 mg	30.927 mL	6.185 mL	3.093 mL
50 mg	61.854 mL	12.371 mL	6.185 mL
100 mg	123.709 mL	24.742 mL	12.371 mL
250 mg	309.272 mL	61.854 mL	30.927 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]. Kazuki Hashiba, et al. Branching Ionizable Lipids Can Enhance the Stability, Fusogenicity, and Functional Delivery of mRNA. Small Science. 09 November 2022.