

DC67812 | CL15F 6-4

Instructions for Use

CL15F 6-4 is a short-tail ionizable lipid from the piperidine-based CL15F series, characterized by its symmetric branched structure with a 6-carbon main chain and 4-carbon side chain. This specific tail length critically determines the lipid nanoparticle's (LNP) properties, resulting in larger particles with a high surface density of the phospholipid DSPC. This elevated DSPC density reduces interactions with serum proteins like ApoE, minimizing rapid liver clearance and shifting mRNA delivery preference towards the spleen. Consequently, CL15F 6-4 LNPs achieve efficient, endogenous spleen-targeted delivery, making them a highly promising candidate for enhancing vaccine efficacy by preferentially transfecting antigen-presenting cells without complex functionalization.

Product information

CAS No.	Not available
Chemical Name	CL15F 6-4
Formula	C44H83O7N
M.Wt	738.15
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: 738.15 g/mol. Volumes are final solution volumes.

Mass	1 mM	5 mM	10 mM
10 mg	13.547 mL	2.709 mL	1.355 mL
25 mg	33.868 mL	6.774 mL	3.387 mL
50 mg	67.737 mL	13.547 mL	6.774 mL
100 mg	135.474 mL	27.095 mL	13.547 mL
250 mg	338.685 mL	67.737 mL	33.868 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