

DC67476 | CAP 2 (hydrochloride)

Instructions for Use

CAP 2 is a unique ionizable lipid featuring a bicholesterol structure connected by a phosphate linker with an amino terminus. This design enables efficient in vivo delivery of both mRNA and saRNA via LNPs. In a Dmc1-deficient mouse model of male infertility, saRNA-encoded Dmc1 delivered by CAP 2 LNPs demonstrated prolonged protein expression in testicular tissue compared to mRNA formulations. The treatment restored spermatogenesis, improving germ cell maturation, seminiferous tubule morphology, and ultimately yielding functional sperm capable of fertilization.

Product information

CAS No.	Not available
Chemical Name	CAP 2 (hydrochloride)
Formula	C59H102NO4P • HCl
M.Wt	956.9
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: 956.9 g/mol. Volumes are final solution volumes.

Mass	1 mM	5 mM	10 mM
10 mg	10.450 mL	2.090 mL	1.045 mL

Mass	1 mM	5 mM	10 mM
25 mg	26.126 mL	5.225 mL	2.613 mL
50 mg	52.252 mL	10.450 mL	5.225 mL
100 mg	104.504 mL	20.901 mL	10.450 mL
250 mg	261.260 mL	52.252 mL	26.126 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