

DC68039 | CHCha-10

Instructions for Use

CHCha-10 is an amino acid-derived ionizable lipid engineered for pulmonary gene therapy. Its optimal surface charge (-0.126 mV) enables efficient mucus penetration, while a pKa of ~7.0 facilitates endosomal escape. Its unique conical structure promotes membrane fusion and mRNA release. In animal models, CHCha-10-based LNPs achieved highly efficient and specific editing of lung epithelial cells, particularly stem-like basal cells (~44%), with effects persisting through tissue renewal. It also demonstrated excellent efficacy and safety in ferrets, a model closely mimicking human lung physiology.

Product information

CAS No.	Not available
Chemical Name	CHCha-10
Formula	C76H142N6O10
M.Wt	1,300.0040
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: 1300.004 g/mol. Volumes are final solution volumes.

Mass	1 mM	5 mM	10 mM
10 mg	7.692 mL	1.538 mL	0.769 mL

Mass	1 mM	5 mM	10 mM
25 mg	19.231 mL	3.846 mL	1.923 mL
50 mg	38.461 mL	7.692 mL	3.846 mL
100 mg	76.923 mL	15.385 mL	7.692 mL
250 mg	192.307 mL	38.461 mL	19.231 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