

DC60838 | A3T2C7 (CP-LC-1495)

Instructions for Use

A3T2C7 (CP-LC-1495) is a biodegradable ionizable lipid featuring three β -propionate linkers and an azetidine polar head, formulated in four-component LNPs. It demonstrates exceptional lung-targeted mRNA delivery with 97.1% selectivity and high protein expression (1.21×10^8 p/s) in mice. Its slightly positive zeta potential (~ 3.5 mV) correlates with lung tropism, likely mediated by protein corona enrichment of vitronectin and prothrombin. The β -propionate structure enables pH-sensitive biodegradability for enhanced endosomal escape while maintaining low cytotoxicity ($>90\%$ cell viability). This lipid enables organ-specific mRNA delivery without permanently charged additives, outperforming conventional SORT strategies in selectivity and expression efficiency.

Product information

CAS No.	Not available
Chemical Name	A3T2C7 (CP-LC-1495)
Formula	C50H93O8N3S3
M.Wt	960.49
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: 960.49 g/mol. Volumes are final solution volumes.

Mass	1 mM	5 mM	10 mM
10 mg	10.411 mL	2.082 mL	1.041 mL
25 mg	26.028 mL	5.206 mL	2.603 mL
50 mg	52.057 mL	10.411 mL	5.206 mL
100 mg	104.114 mL	20.823 mL	10.411 mL
250 mg	260.284 mL	52.057 mL	26.028 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