

DC60839 | A2T2C9 (CP-LC-1465)

Instructions for Use

A2T2C9 (CP-LC-1465) is an imidazole-based ionizable lipid with branched hydrophobic chains and β -propionate linkers, formulated in four-component LNPs for spleen-targeted mRNA delivery. It achieves >80% spleen selectivity with protein expression exceeding 1×10^7 p/s in mice, driven by its negative zeta potential (-9.7 to -19 mV). Structural features including imidazole polar head and branched acrylate (C9) enhance splenic tropism, potentially through distinct protein corona interactions. Demonstrated low cytotoxicity (>75% viability in splenic cells) and biodegradability via pH-sensitive linkers enable efficient mRNA delivery without permanent charged additives, outperforming conventional anionic SORT systems in selectivity and therapeutic potential.

Product information

CAS No.	Not available
Chemical Name	A2T2C9 (CP-LC-1465)
Formula	C58H106O8N4S3
M.Wt	1,083.69
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: 1083.69 g/mol. Volumes are final solution volumes.

Mass	1 mM	5 mM	10 mM
10 mg	9.228 mL	1.846 mL	0.923 mL
25 mg	23.069 mL	4.614 mL	2.307 mL
50 mg	46.139 mL	9.228 mL	4.614 mL
100 mg	92.277 mL	18.455 mL	9.228 mL
250 mg	230.693 mL	46.139 mL	23.069 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