

DC60566 | Lipid CAD9 (3-A2-7b)

Instructions for Use

Lipid CAD9 (3-A2-7b) is a cationic degradable (CAD) lipid. 3-A2-7b formulated LNP, LNP-CAD9, can deliver FLuc mRNA to the lungs in vivo. LNP-CAD9 co-delivering Cas9 mRNA/VEGFR2 single guide RNA (sgRNA) effectively induces VEGFR2 knock out in lung endothelial cells of female mice.

Product information

CAS No.	Not available
Chemical Name	Lipid CAD9 (3-A2-7b)
Formula	C ₅₄ H ₈₈ O ₈ N ₄
M.Wt	921.32
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: 921.32 g/mol. Volumes are final solution volumes.

Mass	1 mM	5 mM	10 mM
10 mg	10.854 mL	2.171 mL	1.085 mL
25 mg	27.135 mL	5.427 mL	2.713 mL
50 mg	54.270 mL	10.854 mL	5.427 mL

Mass	1 mM	5 mM	10 mM
100 mg	108.540 mL	21.708 mL	10.854 mL
250 mg	271.350 mL	54.270 mL	27.135 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

High-throughput barcoding of nanoparticles identifies cationic, degradable lipid-like materials for mRNA delivery to the lungs in female preclinical models-Nature Communication-22 January 2024-Lulu Xue,Drew Weissman^{3,5} & Michael J. Mitchell