

DC60215 | Moderna Lipid 29

Instructions for Use

Lipid 29 is an ionizable amino lipid ($pK_a = 6.91$) from Moderna platform that has been used in combination with other lipids in the formation of lipid nanoparticles (LNPs). Administration of human erythropoietin (EPO) mRNA in lipid 29-containing LNPs increases serum EPO levels in mice.

Product information

CAS No.	Not available
Chemical Name	Moderna Lipid 29
Formula	C ₅₂ H ₉₇ N ₃ O ₆
M.Wt	860.4
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: 860.4 g/mol. Volumes are final solution volumes.

Mass	1 mM	5 mM	10 mM
10 mg	11.623 mL	2.325 mL	1.162 mL
25 mg	29.056 mL	5.811 mL	2.906 mL
50 mg	58.113 mL	11.623 mL	5.811 mL

Mass	1 mM	5 mM	10 mM
100 mg	116.225 mL	23.245 mL	11.623 mL
250 mg	290.563 mL	58.113 mL	29.056 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

Mark Cornebise, et al. Discovery of a Novel Amino Lipid That Improves Lipid Nanoparticle Performance through Specific Interactions with mRNA. Advanced functional materials. 2022.