

DC67480 | Sanofi Lipid VII

Instructions for Use

Lipid VII is a novel ionizable cationic lipid developed by Sanofi. Lipid VII demonstrates exceptional performance as a lipid nanoparticle delivery system, combining high efficiency with outstanding safety. Cellular assays reveal VII achieves 180,000 RLU transfection efficiency under serum conditions, surpassing traditional SS-OP systems by 2.25-fold while maintaining perfect 100% cellular viability and eliminating cytotoxicity risks that plague alternatives. In vivo systemic delivery shows rapid whole-body biodistribution, reaching photon emission levels exceeding $1.00\text{E}+10$ photons/sec within 48 hours. VII exhibits superior organ targeting with a liver-specific accumulation ratio of 9.0, outperforming SS-OP systems by 50%, while reducing off-target spleen accumulation by 20%. Its versatility is further validated in therapeutic protein expression, where structural analogs achieve erythropoietin concentrations of 14 ng/mL, exceeding industry standards by 180%. For vaccine applications, VII generates a median HAI titer of 7,611 against H1N1 influenza—540 times higher than baseline buffers and more than double the next-best formulation. This evidence establishes VII as a breakthrough technology, offering unmatched efficiency, precision targeting, and clinical-grade safety across diverse applications.

Product information

CAS No.	Not available
Chemical Name	Sanofi Lipid VII
Formula	C ₆₈ H ₁₃₁ O ₁₂ N
M.Wt	1,154.79
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: 1154.79 g/mol. Volumes are final solution volumes.

Mass	1 mM	5 mM	10 mM
10 mg	8.660 mL	1.732 mL	0.866 mL
25 mg	21.649 mL	4.330 mL	2.165 mL
50 mg	43.298 mL	8.660 mL	4.330 mL
100 mg	86.596 mL	17.319 mL	8.660 mL
250 mg	216.490 mL	43.298 mL	21.649 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

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