

DC67618 | GVS-18-B35

Instructions for Use

GVS-18-B35 is a leading silicon ether-based ionizable lipid that demonstrates exceptional performance in mRNA delivery. It features a biodegradable silyl ether linkage, which undergoes rapid, non-enzymatic hydrolysis, enabling near-complete clearance from the liver within 24 hours in both mice and non-human primates (NHPs). This degradation mechanism is independent of variable enzymatic activity, ensuring consistent pharmacokinetics across species. In vivo, GVS-18-B35 lipid nanoparticles (LNPs) achieve superior liver-specific protein expression with minimal off-target accumulation in the spleen, resulting in a high liver-to-spleen signal ratio and reduced immune stimulation. The LNPs exhibit excellent stability under frozen storage (-80°C) and maintain critical quality attributes, including particle size, polydispersity, and encapsulation efficiency, through multiple freeze-thaw cycles. With an optimal pKa (~6.3) and enhanced endosomal escape capability, GVS-18-B35 represents a robust and versatile platform for mRNA therapeutics, particularly suited for applications requiring frequent dosing due to its unique combination of high potency and rapid clearance profile.

Product information

CAS No.	Not available
Chemical Name	GVS-18-B35
Formula	C38H75O3NSi
M.Wt	622.11
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: 622.11 g/mol. Volumes are final solution volumes.

Mass	1 mM	5 mM	10 mM
10 mg	16.074 mL	3.215 mL	1.607 mL
25 mg	40.186 mL	8.037 mL	4.019 mL
50 mg	80.372 mL	16.074 mL	8.037 mL
100 mg	160.743 mL	32.149 mL	16.074 mL
250 mg	401.858 mL	80.372 mL	40.186 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