

DC66527 | AI-28

Instructions for Use

AI-28 is a multi-ionizable aminolipid featuring a central amine and three identical disulfide-linked saturated side chains. The hydrophobic side chains are linked to the central structure by ester as well as disulfide bonds. Disulfide bonds are readily cleaved in the reducing environment of the cell cytoplasm. Ionizable lipids are typically used in the design of nucleic acid lipid nanoparticles, as their pH-dependent positive charge stabilizes the anionic nucleic acids they encapsulate.

Product information

CAS No.	Not available
Chemical Name	AI-28
Formula	C ₅₈ H ₁₁₅ N ₃ O ₆ S ₆
M.Wt	1,143
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: 1143.0 g/mol. Volumes are final solution volumes.

Mass	1 mM	5 mM	10 mM
10 mg	8.749 mL	1.750 mL	0.875 mL

Mass	1 mM	5 mM	10 mM
25 mg	21.872 mL	4.374 mL	2.187 mL
50 mg	43.745 mL	8.749 mL	4.374 mL
100 mg	87.489 mL	17.498 mL	8.749 mL
250 mg	218.723 mL	43.745 mL	21.872 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