DC67565 | IAJD249

Instructions for Use

IAJD 294 is a single-component ionizable amphiphilic Janus dendrimer that autonomously coassembles with mRNA via simple injection into uniform monodisperse dendrimersome nanoparticles (DNPs, 85 nm diameter, PDI<0.2), eliminating complex multi-component formulations. Its optimized 3,5-benzoyl ester linkage and symmetric hydrophobic tails enable dual-organ targeting:
Spleen: 2.97 × 10^7 RLU (50% of total activity)
Lymph nodes: 10^6 RLU (10× higher than IAJD 87)
through partial hydrophobic interdigitation (stabilizing DNPs for enhanced lymphatic uptake) and pKa ~6.5 (facilitating endosomal escape), validating constitutional isomerism for precision delivery.

Product information

CAS No.	Not available
Chemical Name	IAJD249
Formula	C39H78N2O6
M.Wt	671.05
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: 671.05 g/mol. Volumes are final solution volumes.

Mass	1 mM	5 mM	10 mM
10 mg	14.902 mL	2.980 mL	1.490 mL
25 mg	37.255 mL	7.451 mL	3.726 mL
50 mg	74.510 mL	14.902 mL	7.451 mL
100 mg	149.020 mL	29.804 mL	14.902 mL
250 mg	372.550 mL	74.510 mL	37.255 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