

DC67450 | A28-C6B2

Instructions for Use

A28-C6B2 is a biodegradable ionizable lipid specifically engineered for spleen-targeted delivery. Through its unique branched structure, it bypasses hepatic uptake to achieve highly efficient transfection of F4/80+ macrophages and CD11c+ dendritic cells within the spleen. This lipid remains neutral in the bloodstream to minimize non-specific interactions, while undergoing protonation in the acidic environment of the endosome to facilitate nucleic acid release, thereby significantly enhancing the potency of mRNA vaccines and immunotherapies.

Product information

CAS No.	Not available
Chemical Name	A28-C6B2
Formula	C41H81NO5
M.Wt	668.1
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: 668.1 g/mol. Volumes are final solution volumes.

Mass	1 mM	5 mM	10 mM
10 mg	14.968 mL	2.994 mL	1.497 mL

Mass	1 mM	5 mM	10 mM
25 mg	37.420 mL	7.484 mL	3.742 mL
50 mg	74.839 mL	14.968 mL	7.484 mL
100 mg	149.678 mL	29.936 mL	14.968 mL
250 mg	374.195 mL	74.839 mL	37.420 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

Ren, Y., Zeng, L., Tang, Y., et al. Enhancing spleen-targeted mRNA delivery with branched biodegradable tails in lipid nanoparticles. J. Mater. Chem. B.