

DC60879 | Lipid te AA3-Dlin

Instructions for Use

TE AA3-Dlin is an optimized lipid nanoparticle (LNP) carrier designed for mRNA-based cancer immunotherapy, enabling precise in vivo dendritic cell (DC) reprogramming to enhance antitumor immunity. TE AA3-Dlin LNP exhibits superior serum stability, maintaining consistent particle size and low turbidity under physiological conditions, while protecting mRNA from degradation, which is crucial for effective delivery. Functionally, TE AA3-Dlin preferentially targets splenic DCs by leveraging ApoE-enriched protein coronas, facilitating efficient cellular uptake and mRNA expression, as demonstrated by enhanced EGFP signals in DCs. This targeting promotes DC maturation, antigen presentation, and membrane-bound IL-15 expression, activating cytotoxic T lymphocytes (CTLs) for tumor rejection. In models like melanoma and colon carcinoma, it synergizes with checkpoint inhibitors, showing minimal toxicity and robust immunological memory.

Product information

CAS No.	Not available
Chemical Name	Lipid te AA3-Dlin
Formula	C48H82N2O4
M.Wt	727.17
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: 727.17 g/mol. Volumes are final solution volumes.

Mass	1 mM	5 mM	10 mM
10 mg	13.752 mL	2.750 mL	1.375 mL
25 mg	34.380 mL	6.876 mL	3.438 mL
50 mg	68.760 mL	13.752 mL	6.876 mL
100 mg	137.519 mL	27.504 mL	13.752 mL
250 mg	343.799 mL	68.760 mL	34.380 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

mRNA-Based Vaccination Drives In Vivo Dendritic Cell Reprogramming and Selective Cytotoxic T Lymphocyte Modulation for Enhanced Antitumor Immunity-ACS Nano Vol 19-Chenshuang Zhang, William Stewart², Yilong Teng, Bin Hu, Xiaoyang Xu, Xue-Qing Zhang