DC67458 | DMT7

Instructions for Use

DMT7 (pKa 6.5) is an ionizable cationic lipid engineered for co-delivery of mRNA and immunomodulators via LNPs. In 4T1 breast cancer metastasis models, DMT7 LNPs carrying IL-12 mRNA and STING agonist MSA-2 significantly reduce tumor burden and pulmonary metastases while modulating T cell populations. The formulation demonstrates broad immunotherapeutic effects in melanoma models, shifting tumor macrophages toward the M1 phenotype, reducing Tregs, and elevating pro-inflammatory cytokines (IL-12, IL-2, TNF-α, IFN-γ).

Product information

CAS No.	Not available
Chemical Name	DMT7
Formula	C42H79N3S
M.Wt	658.2
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: 658.2 g/mol. Volumes are final solution volumes.

Mass	1 mM	5 mM	10 mM
10 mg	15.193 mL	3.039 mL	1.519 mL

Mass	1 mM	5 mM	10 mM
25 mg	37.982 mL	7.596 mL	3.798 mL
50 mg	75.965 mL	15.193 mL	7.596 mL
100 mg	151.930 mL	30.386 mL	15.193 mL
250 mg	379.824 mL	75.965 mL	37.982 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