

DC82105 | 93-O170

Instructions for Use

93-O170 is a chalcogen-containing ionizable cationic lipidoid. It has been used in the generation of lipid nanoparticles (LNPs). LNPs containing 93-O170 localize to the spleen after intravenous injection into mice. LNPs containing 93-O170 have been used for the delivery of Cre recombinase and ribonucleoproteins for genome editing in mice and for the intratumoral delivery of cGAMP to enhance cross-presentation of tumor antigens.

Product information

CAS No.	Not available
Chemical Name	93-O170
Formula	C44H83N3O6
M.Wt	750.2
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: 750.2 g/mol. Volumes are final solution volumes.

Mass	1 mM	5 mM	10 mM
10 mg	13.330 mL	2.666 mL	1.333 mL

Mass	1 mM	5 mM	10 mM
25 mg	33.324 mL	6.665 mL	3.332 mL
50 mg	66.649 mL	13.330 mL	6.665 mL
100 mg	133.298 mL	26.660 mL	13.330 mL
250 mg	333.244 mL	66.649 mL	33.324 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

1. Zhao, X., Chen, J., Qiu, M., et al. Imidazole-based synthetic lipidoids for in vivo mrna delivery into primary T lymphocytes. *Angew. Chem. Int. Ed. Engl.* 59(45), 20083-20089 (2020).
2. Chen, J., Qiu, M., Ye, Z., et al. In situ cancer vaccination using lipidoid nanoparticles. *Sci. Adv.* 7(19), eabf1244 (2021).
3. Li, Y., Yang, T., Yu, Y., et al. Combinatorial library of chalcogen-containing lipidoids for intracellular delivery of genome-editing proteins. *Biomaterials* 178, 652-662 (2018).