

# DC70010 | 98N12-5

## Instructions for Use

98N12-5 is an ionizable cationic lipid. It has been used in combination with other lipids in the generation of lipid nanoparticles (LNPs). LNPs containing 98N12-5 and encapsulating proprotein convertase subtilisin kexin type 9 (PCSK9) siRNA selectively accumulate in the liver and reduce total serum cholesterol levels in mice and rats and serum LDL levels in cynomolgus monkeys.

## Product information

|                    |                                                                                                                                                                     |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CAS No.            | Not available                                                                                                                                                       |
| Chemical Name      | 98N12-5                                                                                                                                                             |
| Formula            | C81H163N9O5                                                                                                                                                         |
| M.Wt               | 1,343.22                                                                                                                                                            |
| 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: 1343.22 g/mol. Volumes are final solution volumes.

| Mass  | 1 mM      | 5 mM     | 10 mM    |
|-------|-----------|----------|----------|
| 10 mg | 7.445 mL  | 1.489 mL | 0.744 mL |
| 25 mg | 18.612 mL | 3.722 mL | 1.861 mL |

| Mass   | 1 mM       | 5 mM      | 10 mM     |
|--------|------------|-----------|-----------|
| 50 mg  | 37.224 mL  | 7.445 mL  | 3.722 mL  |
| 100 mg | 74.448 mL  | 14.890 mL | 7.445 mL  |
| 250 mg | 186.120 mL | 37.224 mL | 18.612 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. Akinc, A., Goldberg, M., Qin, J., et al. Development of lipidoid-siRNA formulations for systemic delivery to the liver. *Mol. Ther.* 17(5), 872-879 (2009).
2. Frank-Kamenetsky, M., Grefhorst, A., Anderson, N.N., et al. Therapeutic RNAi targeting PCSK9 acutely lowers plasma cholesterol in rodents and LDL cholesterol in nonhuman primates. *Proc. Natl. Acad. Sci. USA* 105(33), 11915-11920 (2008).