

DC82025 | 306-O12B-3

Instructions for Use

306-O12B-3 is an ionizable lipidoid with cationic properties, commonly used in lipid nanoparticle (LNP) formulations for antisense oligonucleotide (ASO) delivery. When administered intravenously in mice, LNPs incorporating 306-O12B-3 exhibit liver-specific accumulation. Studies show that ASO-loaded LNPs containing 306-O12B-3 effectively silence hepatic PCSK9 expression by targeting the proprotein convertase subtilisin/kexin type 9 gene. Additionally, when combined with the cationic lipidoid NT1-O14B (Item No. 37095), these LNPs can deliver tau-targeting ASOs to the brain, reducing tau protein levels in mice.

Product information

CAS No.	Not available
Chemical Name	306-O12B-3
Formula	C46H91N3O6S6
M.Wt	974.6
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: 974.6 g/mol. Volumes are final solution volumes.

Mass	1 mM	5 mM	10 mM
10 mg	10.261 mL	2.052 mL	1.026 mL
25 mg	25.652 mL	5.130 mL	2.565 mL
50 mg	51.303 mL	10.261 mL	5.130 mL
100 mg	102.606 mL	20.521 mL	10.261 mL
250 mg	256.515 mL	51.303 mL	25.652 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. Yang, L., Ma, F., Liu, F., et al. Efficient delivery of antisense oligonucleotides using bioreducible lipid nanoparticles in vitro and in vivo. *Mol. Ther. Nucleic Acids* 19, 1357-1367 (2020).
2. Ma, F., Yang, L., Sun, Z., et al. Neurotransmitter-derived lipidoids (NT-lipidoids) for enhanced brain delivery through intravenous injection. *Sci. Adv.* 6(30), eabb4429 (2020).