

DC67543 | ATX L2

Instructions for Use

L2 is a redox-responsive lipid engineered for ultra-potent siRNA delivery. With shorter hexyl (C6) tails and a carbamate linker, it demonstrates the fastest biodegradation (liver half-life: 2.6 days) among tested lipids. L2 achieves >80% FVII gene knockdown at just 0.01 mg/kg—surpassing both L1 and MC3 in siRNA potency. Its higher apparent pKa (6.90) enhances endosomal disruption, correlating with strong in vitro hEPO expression. While slightly less effective for mRNA than L1, L2's unmatched siRNA silencing efficiency, rapid cytosolic self-immolation, and low cytotoxicity position it as a leading candidate for RNAi therapeutics targeting hepatic diseases.

Product information

CAS No.	Not available
Chemical Name	ATX L2
Formula	C42H82O6N2S2
M.Wt	775.25
Purity	>98%
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: 775.25 g/mol. Volumes are final solution volumes.

Mass	1 mM	5 mM	10 mM
10 mg	12.899 mL	2.580 mL	1.290 mL
25 mg	32.248 mL	6.450 mL	3.225 mL
50 mg	64.495 mL	12.899 mL	6.450 mL
100 mg	128.991 mL	25.798 mL	12.899 mL
250 mg	322.477 mL	64.495 mL	32.248 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

Design and Evaluation of Biodegradable Self-Immolative Lipids for RNA Delivery-R Mukthavaram, A Sagi, H Hong, R Recatto... - Advanced healthcare materials