

DC67568 | ORNA Lipid AX-6

Instructions for Use

AX6 is an ionizable lipid in the F32 LNP formulation, engineered by ReNAgade/Orna Therapeutics for targeted mRNA delivery to T cells. AX-6's unique bridged bicyclic/polycyclic core with a tertiary amine group enables pH-dependent protonation and endosomal escape, while C14-C18 hydrophobic tails (optionally branched/fluorinated) enhance bilayer stability and mRNA encapsulation. Demonstrating exceptional T-cell tropism, AX6 achieves high transfection efficiency in CD4+/CD8+ T cells (validated in NHP/humanized models) with minimal toxicity. Compared to clinical benchmarks (SM-102, ALC-0315), its rigid core offers superior serum stability and immune-cell specificity, positioning it as an ideal candidate for CAR-T/NK therapies and next-gen vaccines. The F32 LNP system's proven efficacy (e.g., in vivo B-cell depletion) underscores AX 6's transformative potential for cell engineering and immunotherapies.

Product information

CAS No.	Not available
Chemical Name	ORNA Lipid AX-6
Formula	C61H113O10N
M.Wt	1,020.57
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: 1020.57 g/mol. Volumes are final solution volumes.

Mass	1 mM	5 mM	10 mM
10 mg	9.798 mL	1.960 mL	0.980 mL
25 mg	24.496 mL	4.899 mL	2.450 mL
50 mg	48.992 mL	9.798 mL	4.899 mL
100 mg	97.984 mL	19.597 mL	9.798 mL
250 mg	244.961 mL	48.992 mL	24.496 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