

DC67988 | KT-001

Instructions for Use

KT-001 is a novel ionizable cationic lipid developed by Vivas, Inc., disclosed in US 2026/0007612 A1 (published Jan 8, 2026). KT-001 demonstrates exceptional skeletal muscle targeting and low liver toxicity. Unlike traditional lipids that primarily accumulate in the liver, KT-001 avoids serum ApoE binding, preventing hepatic uptake. Upon intramuscular injection, it achieves a 29-fold reduction in liver off-target expression compared to standard lipids, while maintaining robust, long-lasting protein expression at the injection site. Its optimized pKa enables precise, pH-responsive endosomal escape for high transfection efficiency. KT-001 is an ideal carrier for localized mRNA vaccines and targeted therapeutics for muscle-related disorders.

Product information

CAS No.	Not available
Chemical Name	KT-001
Formula	C48H95O5N
M.Wt	766.29
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: 766.29 g/mol. Volumes are final solution volumes.

Mass	1 mM	5 mM	10 mM
10 mg	13.050 mL	2.610 mL	1.305 mL
25 mg	32.625 mL	6.525 mL	3.262 mL
50 mg	65.249 mL	13.050 mL	6.525 mL
100 mg	130.499 mL	26.100 mL	13.050 mL
250 mg	326.247 mL	65.249 mL	32.625 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