

# Product data sheet



MedKoo Cat#: 556006 Name: ALC-0315 CAS#: 2036272-55-4 Chemical Formula: C <sub>48</sub> H <sub>95</sub> NO <sub>5</sub> Exact Mass: 765.721 Molecular Weight: 766.29	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years. In solvent: -80°C 3 months; -20°C 2 weeks.

## 1. Product description:

ALC-0315 is a synthetic cationic lipid (or ionizable lipid). It is a colorless oily material, It has attracted attention as a component of the SARS-CoV-2 vaccine, BNT162b2, from BioNTech and Pfizer. Specifically, it is one of four components that form lipid nanoparticles (LNPs), which encapsulate and protect the otherwise fragile mRNA that is the active ingredient in these drugs. These nanoparticles promote the uptake of therapeutically effective nucleic acids such as oligonucleotides or mRNA both in vitro and in vivo. At physiological pH, ALC-0315 becomes protonated at the nitrogen atom, yielding an ammonium cation that is attracted to the messenger RNA (mRNA), which is anionic.

## 2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

## 3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMSO	50.0	65.25
Chloroform	50.0	65.25
Ethanol	100.0	130.50

## 4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.30 mL	6.52 mL	13.05 mL
5 mM	0.26 mL	1.30 mL	2.61 mL
10 mM	0.13 mL	0.65 mL	1.30 mL
50 mM	0.03 mL	0.13 mL	0.26 mL

## 5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of “Calculator”

## 6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

TBD

In vivo study

TBD

## 7. Bioactivity

Biological target:

ALC-0315 is a synthetic cationic lipid (or ionizable lipid).

# Product data sheet



In vitro activity

---

TBD

In vivo activity

---

TBD

*Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.*