



# Lipids for Cell and Gene Therapy

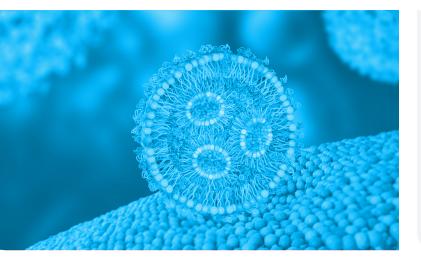


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## LIPIDS FOR CELL AND GENE THERAPY

## Bring your therapies from bench to clinic with our chemistry expertise and application knowledge.

A dependable and high-quality supply of lipids is crucial for the successful development and commercialization of new vaccines and therapies. We provide a diverse range of lipid excipients that are well-suited for LNP, NLC, and SLN formulation, as well as contract services for custom lipid synthesis.



#### **KEY FEATURES**

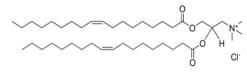
- Critical lipid components for mRNA vaccines(COVID-19) and drug delivery applications.
- GMP grade lipids for clinical trials and commercial manufacturing.
- High purity cationic, pegylated, ionizable, and phospholipids.

## **CATIONIC LIPIDS**

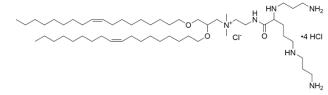
Cationic lipids are used in LNPs to encapsulate oligonucleotides and facilitate cellular uptake and endosomal escape. Our cationic lipids such as DOTAP-Cl are used for high efficiency transfection, mRNA vaccine, and drug delivery applications.

#### **FEATURED PRODUCTS**

14475 DOTAP Chloride



#### 14477 DOSPA Chloride



| CAT #    | DESCRIPTION          |
|----------|----------------------|
| 14475-MS | DOTAP Methyl Sulfate |
| 14487    | DPTAP                |
| 14488    | DMTAP                |
| 14476    | DOTMA Chloride       |
| 14475    | DOTAP Chloride       |
| 14477    | DOSPA Chloride       |
| 14486    | DSTAP Chloride       |
| 26445    | DOTAP Chloride GMP   |

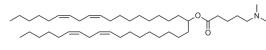
Our advanced chemistry expertise enables us to synthesize complex compounds including high purity DOSPA Chloride.

## **IONIZABLE LIPIDS**

Ionizable lipids are neutral at physiological pH but protonated at acidic pH. When protonated, ionizable lipids condense nucleic acids through electrostatic interactions and promote fusion with endosomal membranes.

#### FEATURED PRODUCT

14496 DLin-MC3-DMA



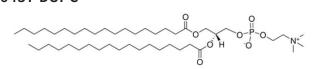
| CAT # | DESCRIPTION                 |
|-------|-----------------------------|
| 14478 | DODMA                       |
| 14489 | DODAP                       |
| 14496 | DLin-MC3-DMA                |
| 14477 | DOSPA Chloride <sup>*</sup> |

\*DOSPA is cationic at physiological pH, and further protonated at acidic pH

### **PHOSPHOLIPIDS**

Phospholipids affect the size and surface chemistry of LNPs, improving intracellular uptake. They also provide stability to the LNP and protect therapeutic payloads from degradation. They are used in vaccine and drug nanodelivery platforms.

#### FEATURED PRODUCT 26437 DSPC



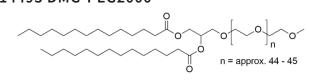
| CAT # | DESCRIPTION       |
|-------|-------------------|
| 26437 | DSPC              |
| 26447 | DMPC              |
| 26450 | DOPC              |
| 26453 | DSPG, Sodium Salt |
| 26449 | DPPC              |
| 26451 | DOPE              |
| 26452 | DSPE              |

### **PEGYLATED LIPIDS**

PEGylated lipids prevent opsonization and improve LNP stability and drug bioavailability. Demonstrated as a safe and efficient component for therapeutic delivery, they help ensure that vaccines remain in the bloodstream long enough to reach their target cells, meaning enhanced immunogenicity and increased protection against disease.

## CAT # DESCRIPTION 14492 ALC-0159 14493 DMG-PEG2000

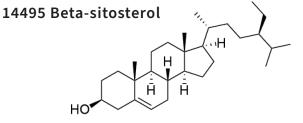
#### FEATURED PRODUCT 14493 DMG-PEG2000



## **CHOLESTEROL & DERIVATIVES**

Cholesterol and its derivatives stabilize LNPs during storage and circulation by increasing the membrane rigidity. They also improve cellular uptake efficiency of therapeutic payloads by facilitating stable encapsulation and preventing leakage from the liposomal core. These lipids are also believed to minimize antigenic stimuli to the immune system, resulting in more tolerable vaccines.

#### **FEATURED PRODUCT**



| CAT # | DESCRIPTION     |
|-------|-----------------|
| 26436 | Cholesterol     |
| 14495 | Beta-sitosterol |
| 14497 | Stigmasterol    |
| 14401 | CHEMS           |

#### **CUSTOM SYNTHESIS**

With our extensive expertise in chemistry, quality control, and regulatory compliance, we are equipped to provide you with customized lipid synthesis and formulation services that are tailored to your unique needs. At Kyfora Bio, we offer support for phase-appropriate and cost-effective GMP manufacturing, enabling us to provide you with high-quality products at any scale.