

Product Data Sheet

Product Name: Lipid 331

Cat. No.: GC91831

Chemical Properties

Cas. No. N/A

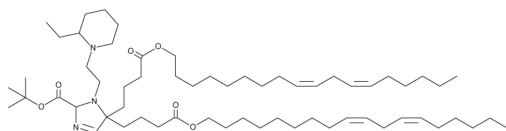
Formula $C_{61}H_{107}N_3O_6$ M.Wt 978.5

Solubility Chloroform: Soluble, Methanol: Soluble Storage $-20^{\circ}C$

General For obtaining a higher solubility, please warm the tube at $37^{\circ}C$ and shake it in the tips ultrasonic bath for a while. Stock solution can be stored below $-20^{\circ}C$ for several months.

Shipping Evaluation sample solution: ship with blue ice All other available size: ship with RT, or Condition blue ice upon request.

Structure



Background

Lipid 331 is a biodegradable cyclic ionizable cationic lipid ($pK_a = 7.53$) that has been used in the formation of lipid nanoparticles (LNPs) for the delivery of mRNA *in vitro* and *in vivo*.^[1] LNPs containing lipid 331 and encapsulating 5-methoxyuridine-modified mRNA encoding ovalbumin induce IFN regulatory factor (IRF) activation in a reporter assay using THP-1 monocytes. Intranasal administration of LNPs containing lipid 331 and DOTAP and encapsulating mRNA encoding a fusion of the receptor-binding domain (RBD) of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) spike glycoprotein, also known as surface glycoprotein, with mouse complement C3d as an adjuvant increase serum anti-SARS-CoV-2 spike glycoprotein RBD IgG titers in mice.

References:

[1]. Li, B., Jiang, A.Y., Raji, I., et al. Enhancing the immunogenicity of lipid-nanoparticle mRNA vaccines by adjuvanting the ionizable lipid and the mRNA. *Nat. Biomed. Eng.* (2023).

Caution: Product has not been fully validated for medical applications. For research use only.

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