

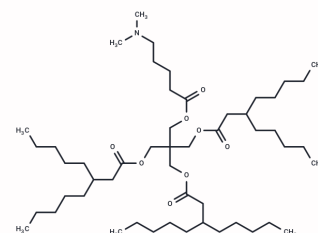
TCL065

Cat. No.: SN-M-LM1227

Chemical Properties

Product Name	TCL065
Full Name	[2-[5-(dimethylamino)pentanoyloxymethyl]-3-(3-pentyl octanoyloxy)-2-(3-pentyl octanoyloxymethyl)propyl] 3-pentyl octanoate
Cat. No.	SN-M-LM1227
CAS No.	1872269-57-2
Molecular Formula	C51H97NO8
Molecular Weight	852.32
Storage	Powder: -20°C for 3 years In solvent: -80°C for 1 year
Shipping	Shipping with blue ice/Shipping at ambient temperature.
Purity	98+%

Structure



Biological Description

TCL065, an ionizable cationic lipid ($pK_a = 6.3$), is utilized in the creation of lipid nanoparticles (LNPs) for the delivery of mRNA and single-guide RNA (sgRNA) both in vitro and in vivo. When LNPs with TCL065 encapsulate sgRNA targeting the donor site of dystrophin exon 45, along with those targeting the splicing acceptor site of dystrophin exon 45, dystrophin expression is restored in myoblasts derived from induced-pluripotent stem (iPS) cells from Duchenne muscular dystrophy (DMD) patients. Additionally, TCL065-containing LNPs encapsulating mRNA encoding Cas9 nuclease, combined with those containing sgRNA targeting the Rosa26 locus, have been applied for CRISPR-mediated gene editing in mouse gastrocnemius muscle.

Related Products / Keywords

- TCL065

This product is a research reagent and must not be used for clinical validation or human therapeutic use.