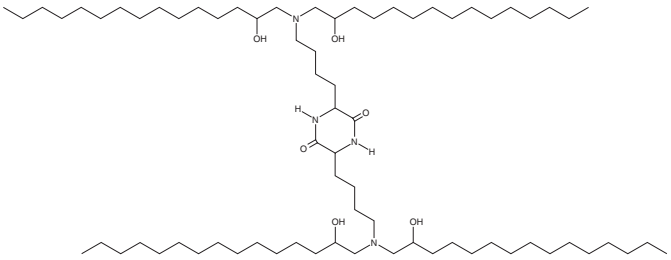
PRODUCT INFORMATION

cKK-E15

Item No. 38211



CAS Registry No.:	1432494-71-7
Formal Name:	3,6-*bis*[4-[*bis*(2-hydroxypentadecyl)amino]butyl]-2,5-piperazinedione
MF:	$C_{72}H_{144}N_4O_6$
FW:	1,161.9
Purity:	≥95%
Supplied as:	A solution in ethanol
Storage:	-20°C
Stability:	≥1 year

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Description

cKK-E15 is an ionizable cationic lipid and a derivative of cKK-E12 (Item No. 36700) that has been used in the generation of lipid nanoparticles (LNPs).[1] LNPs containing cKK-E15 and encapsulating Cre mRNA induce the expression of Cre in Kupffer cells, endothelial cells, and hepatocytes in Ai14 mice engineered to express the fluorescent protein tdTomato upon translation of Cre. Translation of mRNA delivered to the liver by LNPs containing cKK-E15 is inhibited by the toll-like receptor 4 (TLR4) agonist LPS in Ai14 mice but not by low-grade chronic inflammation in a B16/F10 murine model of cancer-induced inflammation. Unlike cKK-E12, the delivery of LNPs containing cKK-E15 is not dependent upon *ApoE* or *Ldlr* expression in mice.[2]

References

1. Lokugamage, M.P., Gan, Z., Zurla, C., *et al.* Mild innate immune activation overrides efficient nanoparticle-mediated RNA delivery. *Adv. Mater.* **32(1),** e1904905 (2020).
2. Paunovska, K., Da Silva Sanchez, A.J., Lokugamage, M.P., *et al.* The extent to which lipid nanoparticles require apolipoprotein E and low-density lipoprotein receptor for delivery changes with ionizable lipid structure. *Nano. Lett.* **22(24),** 10025-10033 (2022).

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