

PRODUCT INFORMATION



E10i-494

Item No. 43084

CAS Registry No.: 3031773-77-7

Formal Name: 1,1'-(2-(2-(4-(2-((2-(2-(bis(2-hydroxy-13-methyltetradecyl)amino)ethoxy)ethyl)(2-hydroxy-13-methyltetradecyl)amino)ethyl)piperazin-1-yl)ethoxy)ethyl)azanediyl)bis(13-methyltetradecan-2-ol)

MF: C₈₉H₁₈₃N₅O₇

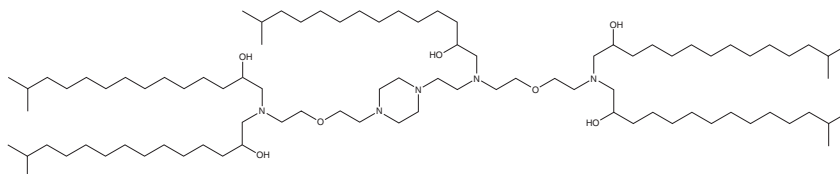
FW: 1,435.5

Purity: ≥95% (mixture of isomers)

Supplied as: A 10 mg/ml solution in ethanol

Storage: -20°C

Stability: ≥4 years



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

Description

E10i-494 is an ionizable cationic branched endosomal disruptor (BEND) lipid that has been used in the generation of lipid nanoparticles (LNPs) for the delivery of mRNA and small molecules *in vitro* and *in vivo*.^{1,2} LNPs containing E10i-494 and encapsulating mCherry or luciferase mRNA induce mCherry or luciferase expression in T cells.¹ LNPs containing E10i-494 and encapsulating p53 mRNA, cyclopirox (CPX; Item No. 16021), or both p53 mRNA and CPX alter the tumor immune microenvironment (TIME) by repolarizing tumor-associated macrophage (TAM)-like cells generated *in vitro* under conditions mimicking the oral squamous cell carcinoma microenvironment to an M1-like phenotype.² E10i-494-containing LNPs encapsulating p53 mRNA, CPX, or both p53 mRNA and CPX reduce tumor volume and mass in a CAL 27 tongue squamous cell carcinoma mouse xenograft model.

References

1. Padilla, M.S., Mrksich, K., Wang, Y., *et al.* Branched endosomal disruptor (BEND) lipids mediate delivery of mRNA and CRISPR-Cas9 ribonucleoprotein complex for hepatic gene editing and T cell engineering. *Nat. Commun.* **16**(1), 996 (2025).
2. Padilla, M.S., Li, J.J., Zhang, Q., *et al.* Lipid nanoparticle co-delivery of mRNA and a small molecule drug for oral cancer chemoimmunotherapy. *bioRxiv [Preprint]* (2025).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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