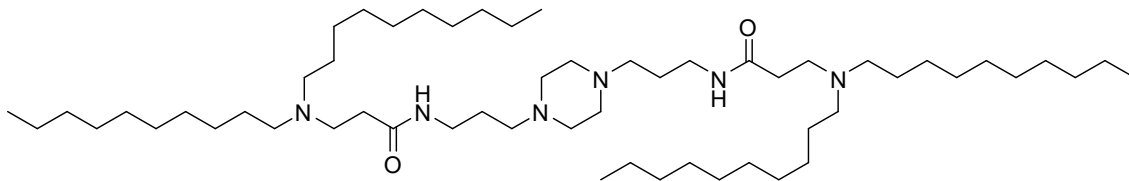


PPZ-A10

Catalog number: N-1410



Molecular Formula: C₅₆H₁₁₄N₆O₂

MW: 903.57

CAS#: 2941268-67-1

Alternative Names: N,N'-(piperazine-1,4-diylbis(propane-3,1-diyl))bis(3-(didecylamino)propanamide)

Solubility: Methanol, ethanol >5 mg/mL

Storage and Handling: Store dry at -20 °C or below. Stock solutions should be stored at -20 °C.

Background: PPZ-A10 is an ionizable lipid used for formulating lipid nanoparticles to deliver RNA *in vitro* and *in vivo*. PPZ-A10 LNPs preferentially delivered Cre mRNA to liver and spleen immune cells when injected intravenously into mice at concentrations as low as 0.3 mg/kg. PPZ A10 LNPs containing RNA to generate chimeric antigen receptor macrophages were injected into a hepatocellular carcinoma mouse model resulting in decreased tumor burden and increased survival.

References: 1) H. Ni, Hatit, M.Z.C, *et al.* (2022) "Piperazine-derived lipid nanoparticles deliver mRNA to immune cells *in vivo*" *Nat. Commun.* 13:4766, 1-9, DOI: 10.1038/s41467-022-32281-5.
2) Z. Yang, Y. Liu, *et al.* (2023) "Dual mRNA co-delivery for *in situ* generation of phagocytosis-enhanced CAR macrophages augments hepatocellular carcinoma immunotherapy" *J. Controlled Release*, 360, 718-733, DOI: 10.1016/j.jconrel.2023.07.021.

Hazardous Properties and Cautions: The toxicological and pharmacological properties of this compound are not fully known. For further information see the MSDS on request. This product is manufactured and shipped only in small quantities, intended for research and development in a laboratory utilizing prudent procedures for handling chemicals of unknown toxicity, under the supervision of persons technically qualified to evaluate potential risks and authorized to enforce appropriate health and safety measures. As with all research chemicals, precautions should be taken to avoid unnecessary exposures or risks.

Warranty and Disclaimer: Echelon warrants the product conforms to the specifications stated herein. In the event of nonconformity, Echelon will replace products or refund purchase price, at its sole option, and Echelon shall not be responsible for any other loss or damage, whether known or foreseeable to Echelon. No other warranties apply, express or implied, including but not limited to warranty of fitness for any purpose or implied warranty of merchantability. Purchaser is solely responsible for all consequences of its use of the product and Echelon assumes no responsibility therefore, including success of purchaser's research and development, or health or safety of any uses of the product.

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