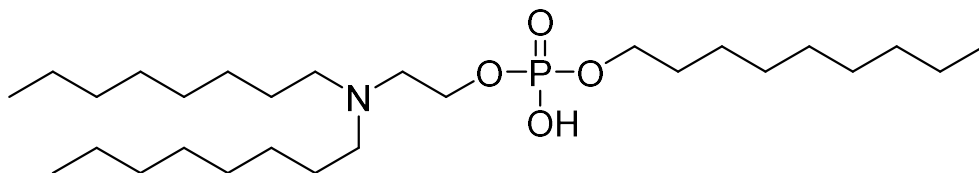


## 9A1P9

**Catalog number:** N-1919



**Molecular Formula:** C<sub>27</sub>H<sub>58</sub>NO<sub>4</sub>P

**MW:** 491.73

**CAS#:** 2760467-57-8

**Alternate Name:** 2-(dioctylamino)ethyl nonyl hydrogen phosphate

**Solubility:** Methanol, ethanol, DMSO, and dimethyl formamide

**Storage and Handling:** 9A1P9 is stable for at least one year when stored as a solid, protected from moisture, and light at -20°C. After reconstitution, solutions of 9A1P9 should be stored at -20°C between uses.

**Background:** 9A1P9 is a multi-tail ionizable phospholipid which promotes membrane destabilization and cargo release, enhancing mRNA delivery and gene editing. 9A1P9 exhibited 40- to 965-fold higher in vivo mRNA delivery efficacy compared to DOPE and DSPE.

**References:** 1) Liu S. et al. (2021) "Membrane destabilizing ionizable phospholipids for organ selective mRNA delivery and CRISPR/Cas gene editing" *Nat. Mater.* 20(5): 701–710, doi: 10.1038/s41563-020-00886-0.

**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.

Technical Data Sheet, Rev 2, 5/23/2024 – **For research use only.** Not intended for diagnostic or therapeutic use.

