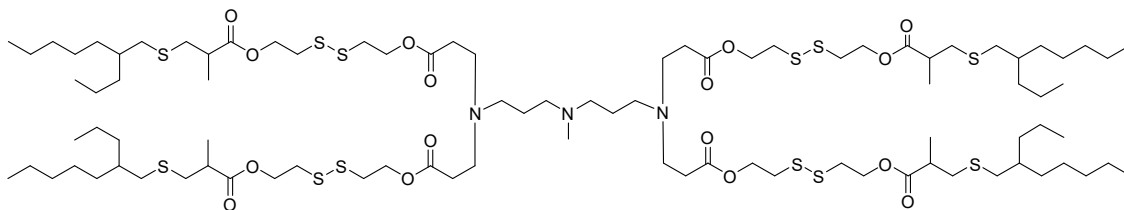


## 4A3-SCC-PH

Catalog number: N-1432



**Molecular Formula:**  $C_{91}H_{171}N_3O_{16}S_{12}$

**MW:** 1948.09

**CAS#:** N/A

**Alternate Name:** ((methylazanediylium)bis(propane-3,1-diyl))bis(8,14-dioxo-7,15-dioxa-3,4,18,19-tetrathia-11-azahenicosane-11,1,21-triyl) tetrakis(2-methyl-3-((2-propylheptyl)thio)propanoate)

**Solubility:** Methanol, ethanol, DMF, DMSO.

**Storage and Handling:** 4A3-SCC-PH is stable for at least 2 years when stored as an oil, protected from moisture, and light at -20°C. Solutions of 4A3-SCC-PH should be stored at -20°C between uses.

**Background:** The linker-degradable ionizable lipids (LDIL) 4A3-SCC-PH and 4A3-SCC-10 (Echelon Catalog # N-1430) possess superior endosomal escape and rapid mRNA release abilities thanks to their unique GSH-responsive cone-shaped architecture. Lipid nanoparticles (LNPs) of 4A3-SCC-PH showed improved mCherry mRNA delivery in livers by 176-fold compared to DLin-MC3-DMA *in vivo*. 4A3-SCC-PH and 4A3-SCC-10 also demonstrated improved mRNA delivery *in vivo*, compared to their parent counterpart without a disulfide bond or control counterpart with a disulfide bond in the tail.

**References:** 1) Chen Z. et al. "Modular Design of Biodegradable Ionizable Lipids for Improved mRNA Delivery and Precise Cancer Metastasis Delineation In Vivo." *J. Am. Chem. Soc.* 2023, 145(44) 24302-24314. doi: 10.1021/jacs.3c09143.

**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 1, 5/23/2024 – **For research use only.** Not intended for diagnostic or therapeutic use.

