

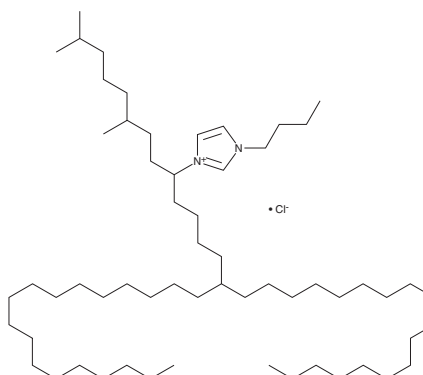
# PRODUCT INFORMATION



## IM21.7c

Item No. 39637

**CAS Registry No.:** 2416939-42-7  
**Formal Name:** 1-butyl-3-[1-(3,7-dimethyloctyl)-6-octadecyltetraacosyl]-1H-imidazolium, monochloride  
**MF:** C<sub>59</sub>H<sub>117</sub>N<sub>2</sub> • Cl  
**FW:** 890.0  
**Purity:** ≥95%  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥4 years



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

### Laboratory Procedures

IM21.7c is supplied as a solid. A stock solution may be made by dissolving the IM21.7c in the solvent of choice, which should be purged with an inert gas. IM21.7c is sparingly soluble (1-10 mg/ml) in ethanol and slightly soluble (0.1-1 mg/ml) in DMSO

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of IM21.7c can be prepared by directly dissolving the solid in aqueous buffers. IM21.7c is slightly soluble (0.1-1 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

### Description

IM21.7c is a cationic lipid that has been used in the generation of lipid nanoparticles for the delivery of mRNA *in vitro* and *in vivo*.<sup>2</sup> LNPs containing IM21.7c and encapsulating an mRNA reporter selectively accumulate in the lungs and spleen over the liver in mice after intravenous administration.

### Reference

- Guéguen, C., Ben Chimol, T., Briand, M., *et al.* Evaluating how cationic lipid affects mRNA-LNP physical properties and biodistribution. *Eur. J. Pharm. Biopharm.* **195**, 114077 (2024).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

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