

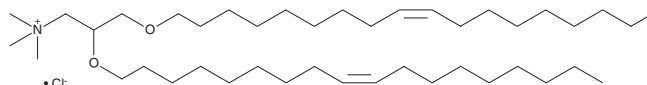
# PRODUCT INFORMATION



## N-[1-(2,3-Dioleoyloxy)propyl]-N,N,N-trimethylammonium (chloride)

Item No. 25926

**CAS Registry No.:** 104162-48-3  
**Formal Name:** N,N,N-trimethyl-2,3-bis[(9Z)-9-octadecen-1-yloxy]-1-propanaminium, monochloride  
**Synonym:** DOTMA  
**MF:** C<sub>42</sub>H<sub>84</sub>NO<sub>2</sub> • Cl  
**FW:** 670.6  
**Purity:** ≥95%  
**UV/Vis.:** λ<sub>max</sub>: 225 nm  
**Supplied as:** A solution in ethanol  
**Storage:** -20°C  
**Stability:** ≥2 years



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

### Laboratory Procedures

N-[1-(2,3-Dioleoyloxy)propyl]-N,N,N-trimethylammonium (DOTMA) (chloride) is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as DMSO and dimethyl formamide purged with an inert gas can be used. The solubility of DOTMA (chloride) in these solvents is approximately 0.5 and 5 mg/ml, respectively.

DOTMA (chloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanolic solution of DOTMA (chloride) should be diluted with the aqueous buffer of choice. DOTMA (chloride) has a solubility of approximately 0.5 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method.

### Description

DOTMA is a cationic lipid.<sup>1</sup> It has been used as a component in liposomes that can be used to encapsulate siRNA, microRNAs, and oligonucleotides and for gene transfection *in vitro*.<sup>1,2</sup>

### References

1. Wang, X., Yu, B., Ren, W., *et al.* Enhanced hepatic delivery of siRNA and microRNA using oleic acid based lipid nanoparticle formulations. *J. Control Release* **172**(3), 690-698 (2013).
2. Huang, Q.-D., Zhong, G.-X., Zhang, Y., *et al.* Cyclen-based cationic lipids for highly efficient gene delivery towards tumor cells. *PLoS One* **6**(8), e23134 (2011).

#### 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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