

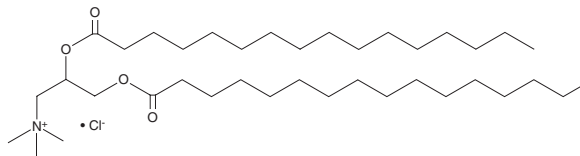
PRODUCT INFORMATION



1,2-Dipalmitoyl-3-trimethylammoniumpropane (chloride)

Item No. 38907

CAS Registry No.: 139984-36-4
Formal Name: N,N,N-trimethyl-2,3-bis[(1-oxohexadecyl)oxy]-1-propanaminium, monochloride
Synonyms: DPTAP, 16:0 TAP
MF: C₃₈H₇₆NO₄ • Cl
FW: 646.5
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

1,2-Dipalmitoyl-3-trimethylammoniumpropane (DPTAP) (chloride) is supplied as a solid. Aqueous solutions of DPTAP (chloride) can be prepared by directly dissolving the solid in aqueous buffers. DPTAP (chloride) is slightly soluble in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

DPTAP is a cationic lipid that has been used as a transfection reagent *in vitro* and *in vivo* and in the formation of liposomes and microbubbles.¹⁻³ Microbubbles containing DPTAP and encapsulating the microRNA (miRNA) miR-145 reduce atherosclerotic plaque area by 48.04% using ultrasound-targeted microbubble destruction (UTMD) in *ApoE*^{-/-} mice in a model of atherosclerosis induced by a high-fat diet.³

References

1. Lemmon, J.C.M., McFarland, R.J., Rybicka, J.M., *et al.* *In vitro* and *in vivo* transfection of primary phagocytes via microbubble-mediated intraphagosomal sonoporation. *J. Immunol. Methods* **371(1-2)**, 152-158 (2011).
2. Barrier Quer, C., Elsharkawy, A., Romeijn, S., *et al.* Cationic liposomes as adjuvants for influenza hemagglutinin: More than charge alone. *Eur. J. Pharm. Biopharm.* **81(2)**, 294-302 (2012).
3. Wu, Y., Deng, C., Xu, J., *et al.* Enhanced local delivery of microRNA-145a-5P into mouse aorta via ultrasound-targeted microbubble destruction inhibits atherosclerotic plaque formation. *Mol. Pharm.* **20(2)**, 1086-1095 (2023).

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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