

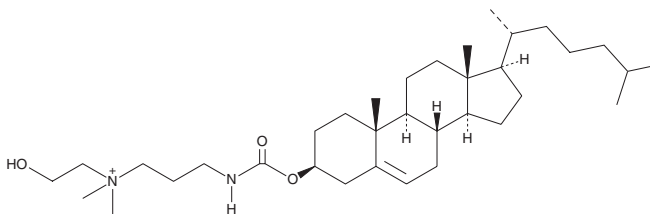
# PRODUCT INFORMATION



## DMHAPC-Chol

Item No. 26582

**CAS Registry No.:** 794494-38-5  
**Formal Name:** (3 $\beta$ )-cholest-5-en-3-ol 3-[N-[3-[(2-hydroxyethyl)dimethylammonio]propyl]carbamate]  
**Synonym:** Dimethyl Hydroxyethyl Aminopropane Carbamoyl Cholesterol Iodide  
**MF:** C<sub>35</sub>H<sub>63</sub>N<sub>2</sub>O<sub>3</sub>  
**FW:** 559.9  
**Purity:**  $\geq$ 95%  
**UV/Vis.:**  $\lambda_{\text{max}}$ : 219 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:**  $\geq$ 2 years



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

### Laboratory Procedures

DMHAPC-Chol is supplied as a crystalline solid. A stock solution may be made by dissolving the DMHAPC-chol in the solvent of choice. DMHAPC-Chol is soluble in organic solvents such as ethanol and dimethyl formamide, which should be purged with an inert gas. The solubility of DMHAPC-chol in these solvents is approximately 10 mg/ml.

DMHAPC-Chol is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, DMHAPC-chol should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. DMHAPC-Chol has a solubility of approximately 0.14 mg/ml in a 1:6 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

DMHAPC-Chol is a cationic cholesterol.<sup>1</sup> Liposomes containing DMHAPC-chol have been used for DNA plasmid delivery *in vitro* and *in vivo* in a B16-F10 mouse xenograft model. Liposomes containing DMHAPC-chol are cytotoxic to B16-F10 cells when used at lipid concentrations greater than 20  $\mu$ M. DMHAPC-Chol, as part of a lipoplex with DOPE (Item No. 15091), has also been used to deliver DNA into mouse lung *via* intratracheal injection, resulting in a heterogeneous distribution in the bronchi and bronchioles, and to deliver VEGF siRNA into A431 and MDA-MB-231 cells, which secrete VEGF.<sup>2,3</sup>

### References

1. Percot, A., Briane, D., Coudert, R., *et al.* A hydroxyethylated cholesterol-based cationic lipid for DNA delivery: Effect of conditioning. *Int. J. Pharm.* **278**(1), 143-163 (2004).
2. Ding, W., Hattori, Y., Higashiyama, K., *et al.* Hydroxyethylated cationic cholesterol derivatives in liposome vectors promote gene expression in the lung. *Int. J. Pharm.* **354**(1-2), 196-203 (2008).
3. Briane, D., Slimani, H., Tagounits, A., *et al.* Inhibition of VEGF expression in A431 and MDA-MB-231 tumour cells by cationic lipid-mediated siRNA delivery. *J. Drug Target.* **20**(4), 347-354 (2012).

#### 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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