

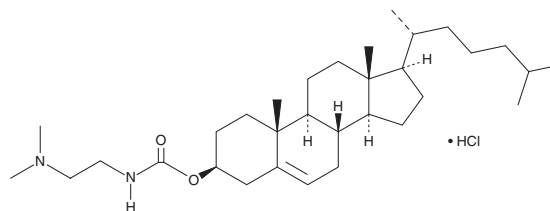
PRODUCT INFORMATION



DC-Chol (hydrochloride)

Item No. 16943

CAS Registry No.: 166023-21-8
Formal Name: (3β)-cholest-5-en-3-ol 3-[N-[2-(dimethylamino)ethyl]carbamate], monohydrochloride
Synonym: Cholesteryl 3β-N-(dimethylaminoethyl)carbamate
MF: C₃₂H₅₆N₂O₂ • HCl
FW: 537.3
Purity: ≥95%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

DC-Chol (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the DC-chol (hydrochloride) in the solvent of choice. DC-Chol (hydrochloride) is soluble in organic solvents such as methanol and DMSO, which should be purged with an inert gas. The solubility of DC-chol (hydrochloride) in these solvents is approximately 10 and 5 mg/ml, respectively.

Description

DC-Chol is a cationic cholesterol derivative.¹ DC-Chol, as a component of lipoplexes with 1,2-Dioleoyl-sn-glycero-3-PE (1,2-DOPE; Item No. 15091), has been used for transfection of mRNA into A549 cells without affecting cell viability. Incubation of DC-chol/1,2-DOPE liposomes or lipoplexes with human whole blood has no effect on neutrophil elastase or β-thromboglobulin levels or the number of platelets and red and white blood cells, indicating hemocompatibility. DC-Chol has also been widely used in the synthesis of liposomes for the delivery of siRNA, DNA, and chemotherapeutic agents into cells and mice.²⁻⁵

References

1. Michel, T., Luft, D., Abraham, M.K., *et al.* Cationic nanoliposomes meet mRNA: Efficient delivery of modified mRNA using hemocompatible and stable vectors for therapeutic applications. *Mol. Ther. Nucleic Acids* **8**, 459-468 (2017).
2. Gao, J., Sun, J., Li, H., *et al.* Lyophilized HER2-specific PEGylated immunoliposomes for active siRNA gene silencing. *Biomaterials* **31(9)**, 2655-2664 (2010).
3. Zhang, R., Wang, S.B., Chen, A.Z., *et al.* Codelivery of paclitaxel and small interfering RNA by octadecyl quaternized carboxymethyl chitosan-modified cationic liposome for combined cancer therapy. *J. Biomater. Appl.* **30(3)**, 351-360 (2015).
4. Men, Y., Wang, X.X., Li, R.J., *et al.* The efficacy of mitochondrial targeting antiresistant epirubicin liposomes in treating resistant leukemia in animals. *Int. J. Nanomedicine* **6**, 3125-3137 (2011).
5. Xing, X., Liu, V., Xia, W., *et al.* Safety studies of the intraperitoneal injection of E1A-liposome complex in mice. *Gene Ther.* **4(3)**, 238-243 (1997).

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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