

# PRODUCT INFORMATION



## 2H-Cho-Arg (trifluoroacetate salt)

Item No. 25944

CAS Registry No.: 1609010-59-4

Formal Name: (3β-[6-[[[(2S)-2-amino-(5α)-[(aminoiminomethyl)amino]-1-oxopentyl]amino]hexanoate], cholestan-3-ol, bis(2,2,2-trifluoroacetate)

MF: C<sub>39</sub>H<sub>73</sub>N<sub>5</sub>O<sub>3</sub> • 2CF<sub>3</sub>COO

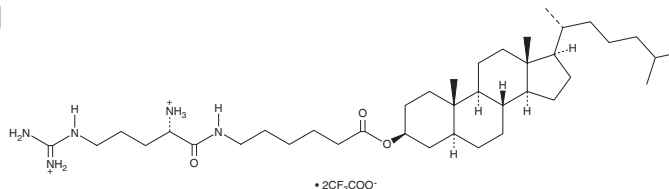
FW: 886.1

Purity: ≥95%

Supplied as: A 10 mg/ml solution in ethanol

Storage: -20°C

Stability: ≥1 year



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

### Laboratory Procedures

2H-Cho-Arg (trifluoroacetate salt) 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 2H-Cho-Arg (trifluoroacetate salt) in these solvents is approximately 50 mg/ml.

2H-Cho-Arg (trifluoroacetate salt) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanolic solution of 2H-Cho-Arg (trifluoroacetate salt) should be diluted with the aqueous buffer of choice. 2H-Cho-Arg (trifluoroacetate salt) has a solubility of approximately 0.25 mg/ml in a 1:3 solution of ethanol:PBS (pH 7.2) using this method.

### Description

2H-Cho-Arg is a steroid-based cationic lipid that contains a 2H-cholesterol skeleton coupled to an L-arginine head group and can be used to facilitate gene transfection.<sup>1</sup> It forms a complex with plasmid DNA (pDNA) and decreases pDNA migration in an electrophoretic mobility shift assay at +/- charge ratios of 4 or higher. 2H-Cho-Arg facilitates transfection of a luciferase gene into H1299 cells, an effect that is reversed by the lipid raft-mediated endocytosis inhibitor methyl-β-cyclodextrin (Item No. 21633) and the caveolae-mediated endocytosis inhibitor genistein (Item No. 10005167), but not by inhibitors of clathrin- or micropinocytosis-mediated endocytosis. It induces cytotoxicity in H1299 cells (IC<sub>50</sub> = 92.7 μg/ml).

### Reference

1. Sheng, R., Wang, Z., Luo, T., *et al.* Skeleton-controlled pDNA delivery of renewable steroid-based cationic lipids, the endocytosis pathway analysis and intracellular localization. *Int. J. Mol. Sci.* **19**(2), E369 (2018).

#### 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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