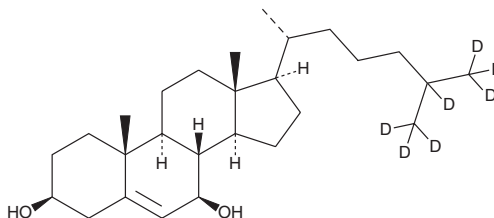


# PRODUCT INFORMATION



## 7 $\beta$ -hydroxy Cholesterol-d<sub>7</sub> Item No. 25548

**CAS Registry No.:** 349553-97-5  
**Formal Name:** (3 $\beta$ ,7 $\beta$ )-cholest-5-ene-  
25,26,26,26,27,27,27-d<sub>7</sub>-3,7-diol  
**MF:** C<sub>27</sub>H<sub>39</sub>D<sub>7</sub>O<sub>2</sub>  
**FW:** 409.7  
**Chemical Purity:**  $\geq$ 98% (7 $\beta$ -hydroxy Cholesterol)  
**Deuterium Incorporation:**  $\geq$ 99% deuterated forms (d<sub>1</sub>-d<sub>7</sub>);  $\leq$ 1% d<sub>0</sub>  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:**  $\geq$ 4 years



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

### Laboratory Procedures

7 $\beta$ -hydroxy Cholesterol-d<sub>7</sub> is intended for use as an internal standard for the quantification of 7 $\beta$ -hydroxy cholesterol by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

7 $\beta$ -hydroxy Cholesterol-d<sub>7</sub> is supplied as a solid. A stock solution may be made by dissolving the 7 $\beta$ -hydroxy cholesterol-d<sub>7</sub> in the solvent of choice, which should be purged with an inert gas. 7 $\beta$ -hydroxy Cholesterol-d<sub>7</sub> is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 7 $\beta$ -hydroxy cholesterol-d<sub>7</sub> in these solvents is approximately 20, 0.1, and 2 mg/ml, respectively.

### Description

7 $\beta$ -hydroxy Cholesterol is an oxysterol formed by enzymatic and non-enzymatic oxidation of cholesterol.<sup>1</sup> It is the primary oxysterol found in LDL and induces apoptosis and cell death of human umbilical vein endothelial cells (HUVECs) *in vitro* in a concentration-dependent manner. Increased plasma levels of 7 $\beta$ -hydroxy cholesterol positively correlate with mortality in coronary heart disease in human males.<sup>2</sup>

### References

1. Lizard, G., Monier, S., Cordelet, C., *et al.* Characterization and comparison of the mode of cell death, apoptosis versus necrosis, induced by 7 $\beta$ -hydroxycholesterol and 7-ketocholesterol in the cells of the vascular wall. *Arterioscler. Thromb. Vasc. Biol.* **19(5)**, 1190-1200 (1999).
2. Ziedén, B., Kaminskis, A., Kristenson, M., *et al.* Increased plasma 7  $\beta$ -hydroxycholesterol concentrations in a population with a high risk for cardiovascular disease. *Artioscler. Thromb. Vasc. Biol.* **19(4)**, 967-971 (1999).

#### 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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