

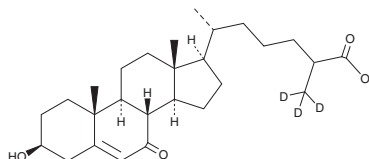
# PRODUCT INFORMATION



## 3 $\beta$ -hydroxy-7-oxo-5-Cholestenoic Acid-d<sub>3</sub>

Item No. 29539

**CAS Registry No.:** 2342573-92-4  
**Formal Name:** 3 $\beta$ -hydroxy-7-oxo-cholest-5-en-26-oic-27,27,27-d<sub>3</sub> acid  
**Synonyms:** 3 $\beta$ -hydroxy-7-oxo-5-CA-d<sub>3</sub>,  
3 $\beta$ -hydroxy-7-oxocholest-5-enoic Acid-d<sub>3</sub>  
**MF:** C<sub>27</sub>H<sub>39</sub>D<sub>3</sub>O<sub>4</sub>  
**FW:** 433.6  
**Chemical Purity:**  $\geq 98\%$  (3 $\beta$ -hydroxy-7-oxo-5-Cholestenoic Acid)  
**Deuterium Incorporation:**  $\geq 99\%$  deuterated forms (d<sub>1</sub>-d<sub>3</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

3 $\beta$ -hydroxy-7-oxo-5-Cholestenoic acid-d<sub>3</sub> is intended for use as an internal standard for the quantification of 3 $\beta$ -hydroxy-7-oxo-5-cholestenoic acid 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).

3 $\beta$ -hydroxy-7-oxo-5-Cholestenoic acid-d<sub>3</sub> is supplied as a solid. A stock solution may be made by dissolving the 3 $\beta$ -hydroxy-7-oxo-5-cholestenoic acid-d<sub>3</sub> in the solvent of choice, which should be purged with an inert gas. 3 $\beta$ -hydroxy-7-oxo-5-Cholestenoic acid-d<sub>3</sub> is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of 3 $\beta$ -hydroxy-7-oxo-5-cholestenoic acid-d<sub>3</sub> in DMSO and DMF is approximately 1 and 2 mg/ml, respectively. 3 $\beta$ -hydroxy-7-oxo-5-Cholestenoic acid-d<sub>3</sub> is slightly soluble in ethanol.

### Description

3 $\beta$ -hydroxy-7-oxo-5-Cholestenoic acid is a metabolite of the oxysterol 7-keto cholesterol (Item No. 16339).<sup>1</sup> It is formed from 7-keto cholesterol by the cytochrome P450 (CYP) isoform CYP27A1. Plasma levels of 3 $\beta$ -hydroxy-7-oxo-5-cholestenoic acid are increased in a rat model of liver injury induced by carbon tetrachloride.<sup>2</sup>

### References

1. Heo, G.-Y., Bederman, I., Mast, N., *et al.* Conversion of 7-ketocholesterol to oxysterol metabolites by recombinant CYP27A1 and retinal pigment epithelial cells. *J. Lipid Res.* **52**(6), 1117-1127 (2011).
2. Xu, S.-Y., Zhang, Y., Han, T., *et al.* Ultra-performance liquid chromatography quadrupole time-of-flight mass spectrometry-based plasma metabolomics study of hepatoprotective effect of cuscuteae semen on CCl<sub>4</sub>-induced liver injury model of rats. *Biomed. Chromatogr.* **36**(12), e5489 (2022).

#### 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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