

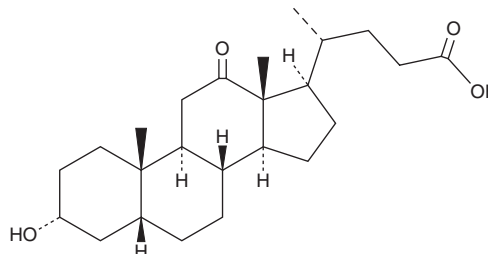
PRODUCT INFORMATION



12-keto Lithocholic Acid

Item No. 29547

CAS Registry No.: 5130-29-0
Formal Name: (3 α ,5 β)-3-hydroxy-12-oxo-cholan-24-oic acid
Synonyms: 12-keto LCA, 12-keto Lithocholate, 12-KLCA, 12-oxo LCA, 12-oxo Lithocholate, 12-oxo Lithocholic Acid
MF: C₂₄H₃₈O₄
FW: 390.6
Purity: $\geq$ 98%
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

12-keto Lithocholic acid is supplied as a solid. A stock solution may be made by dissolving the 12-keto lithocholic acid in the solvent of choice, which should be purged with an inert gas. 12-keto Lithocholic acid is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 12-keto lithocholic acid in these solvents is approximately 30 mg/ml.

12-keto Lithocholic acid is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 12-keto lithocholic acid should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. 12-keto Lithocholic acid has a solubility of approximately 0.25 mg/ml in a 1:3 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

12-keto Lithocholic acid is a metabolite of the secondary bile acid deoxycholic acid (DCA; Item Nos. 20756 | 18231).^{1,2} Fecal levels of 12-keto lithocholic acid are elevated in rats fed a diet supplemented with cholic acid (Item No. 20250) or DCA compared with rats fed a control diet or a diet supplemented with cholesterol (Item No. 9003100), hyodeoxycholic acid (HDCA; Item No. 20294), or lithocholic acid (LCA; Item No. 20253).² 12-keto Lithocholic acid activates the human pregnane X receptor (PXR; EC₅₀ = 31.3 μ M in a cell-based transactivation assay).³ 12-keto Lithocholic acid levels are increased in duodenal bile from patients with type 2 diabetes.⁴

References

1. Franco, P., Porru, E., Fiori, J., *et al.* Identification and quantification of oxo-bile acids in human faeces with liquid chromatography-mass spectrometry: A potent tool for human gut acidic sterolbiome studies. *J. Chromatogr. A*. **1585**, 70-81 (2019).
2. Sakai, K., Makino, T., Kawai, Y., *et al.* Intestinal microflora and bile acids. Effect of bile acids on the distribution of microflora and bile acid in the digestive tract of the rat. *Microbiol. Immunol.* **24**(3), 187-196 (1980).
3. Krasowski, M.D., Yasuda, K., Hagey, L.R., *et al.* Evolution of the pregnane X receptor: Adaptation to cross-species differences in biliary bile salts. *Mol. Endocrinol.* **19**(7), 1720-1739 (2005).
4. Andersén, E., Karlaganis, G., and Sjövall, J. Altered bile acid profiles in duodenal bile and urine in diabetic subjects. *Eur. J. Clin. Invest.* **18**(2), 166-172 (1988).

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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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM