



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!  
See the following pages for more information!



### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

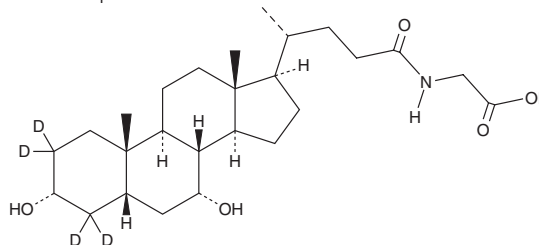
# PRODUCT INFORMATION



## Glycochenodeoxycholic Acid-d<sub>4</sub>

Item No. 21890

**CAS Registry No.:** 1201918-16-2  
**Formal Name:** N-[(3 $\alpha$ ,5 $\beta$ ,7 $\alpha$ )-3,7-dihydroxy-24-oxocholan-24-yl-2,2,4,4-d<sub>4</sub>]-glycine  
**Synonym:** GCDCA-d<sub>4</sub>  
**MF:** C<sub>26</sub>H<sub>39</sub>D<sub>4</sub>NO<sub>5</sub>  
**FW:** 453.7  
**Chemical Purity:** ≥98% (Glycochenodeoxycholic acid)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>4</sub>); ≤1% d<sub>0</sub>  
**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

Glycochenodeoxycholic acid-d<sub>4</sub> (GCDCA-d<sub>4</sub>) is intended for use as an internal standard for the quantification of GCDCA (Item No. 16942) 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).

GCDCA-d<sub>4</sub> is supplied as a crystalline solid. A stock solution may be made by dissolving the GCDCA-d<sub>4</sub> in the solvent of choice. GCDCA-d<sub>4</sub> is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of GCDCA-d<sub>4</sub> in ethanol is approximately 1 mg/ml and approximately 10 mg/ml in DMSO and DMF.

### Description

An internal standard for the quantification of glycochenodeoxycholic acid (GCDCA; Item No. 16942) by GC- or LC-MS. GCDCA is a glycine-conjugated form of the primary bile acid chenodeoxycholic acid (Item No. 10011286).<sup>1</sup> It reduces formation of cholic acid (Item No. 20250) in primary human hepatocytes when used at a concentration of 100  $\mu$ M.<sup>2</sup> GCDCA (50, 75, and 100  $\mu$ M) reduces the number of LC3 puncta, a marker of autophagy, and is cytotoxic to L-02 hepatocytes.<sup>1</sup> GCDCA (50  $\mu$ M) induces apoptosis in isolated rat hepatocytes, an effect that can be blocked by the protein kinase C (PKC) inhibitor chelerythrine (Item No. 11314).<sup>3</sup> Fecal levels of GCDCA are decreased in a rat model of high-fat diet-induced obesity compared with rats fed a normal diet.<sup>4</sup>

### References

1. Lan, W., Chen, Z., Chen, Y., *et al.* Glycochenodeoxycholic acid impairs transcription factor E3-dependent autophagy-lysosome machinery by disrupting reactive oxygen species homeostasis in L02 cells. *Toxicol. Lett.* **331**, 11-21 (2020).
2. Ellis, E., Axelson, M., Abrahamsson, A., *et al.* Feedback regulation of bile acid synthesis in primary human hepatocytes: Evidence that CDCA is the strongest inhibitor. *Hepatology* **38(4)**, 930-938 (2003).
3. Gonzalez, B., Fisher, C., and Rosser, B.G. Glycochenodeoxycholic acid (GCDCA) induced hepatocyte apoptosis is associated with early modulation of intracellular PKC activity. *Mol. Cell. Biochem.* **207(1-2)**, 19-27 (2000).
4. Lin, H., An, Y., Tang, H., *et al.* Alterations of bile acids and gut microbiota in obesity induced by high fat diet in rat model. *J. Agric. Food Chem.* **67(13)**, 3624-3632 (2019).

#### 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

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 01/04/2021

#### 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