



# 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) 

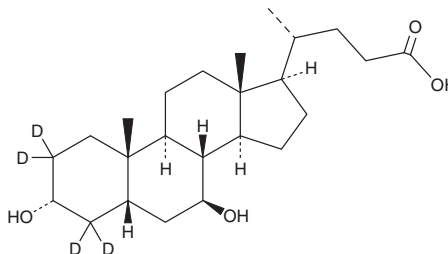
# PRODUCT INFORMATION



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

Item No. 21892

**CAS Registry No.:** 347841-46-7  
**Formal Name:** (3 $\alpha$ ,5 $\beta$ ,7 $\beta$ )-3,7-dihydroxy-cholan-24-oic-2,2,4,4-d<sub>4</sub> acid  
**Synonym:** UDCA-d<sub>4</sub>  
**MF:** C<sub>24</sub>H<sub>36</sub>D<sub>4</sub>O<sub>4</sub>  
**FW:** 396.6  
**Chemical Purity:**  $\geq$ 95% (Ursodeoxycholic Acid)  
**Deuterium Incorporation:**  $\geq$ 99% deuterated forms (d<sub>1</sub>-d<sub>4</sub>);  $\leq$ 1% d<sub>0</sub>  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:**  $\geq$ 2 years



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

### Laboratory Procedures

Ursodeoxycholic acid-d<sub>4</sub> (UDCA-d<sub>4</sub>) is intended for use as an internal standard for the quantification of UDCA (Item No. 15121) 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).

UDCA-d<sub>4</sub> is supplied as a crystalline solid. A stock solution may be made by dissolving the UDCA-d<sub>4</sub> in the solvent of choice. UDCA-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 UDCA-d<sub>4</sub> in ethanol is approximately 1 mg/ml and approximately 10 mg/ml in DMSO and DMF.

### Description

UDCA is a secondary bile acid formed via epimerization of chenodeoxycholic acid (CDCA; Item No. 10011286).<sup>1,2</sup> UDCA is also a metabolite of lithocholic acid (LCA; Item No. 20253) in human liver microsomes.<sup>3</sup> It inhibits taurocholic acid (Item No. 16215) uptake in HeLa cells expressing recombinant sodium/taurocholate cotransporting polypeptide (NTCP) with an IC<sub>50</sub> value of 3.6  $\mu$ M.<sup>4</sup> UDCA (50  $\mu$ M) inhibits apoptosis induced by deoxycholic acid (DCA; Item Nos. 20756 | 18231) or ethanol in primary rat hepatocytes.<sup>5</sup> Dietary administration of UDCA blocks DCA-induced increases in the number of TUNEL-positive hepatocytes in rats. Formulations containing UDCA have been used in the treatment of primary biliary cirrhosis.

### References

1. Dawson, P.A. and Karpen, S.J. *J. Lipid Res.* **56(6)**, 1085-1099 (2015).
2. Chiang, J.Y.L. *Liver Res.* **1(1)**, 3-9 (2017).
3. Deo, A.K. and Bandiera, S.M. *Drug Metab. Dispos.* **37(9)**, 1938-1947 (2009).
4. Kim, R.B., Leake, B., Cvetkovic, M., et al. *J. Pharmacol. Exp. Ther.* **291(3)**, 1204-1209 (1999).
5. Rodrigues, C.M.P., Fan, G., Ma, X., et al. *J. Clin. Invest.* **101(12)**, 2790-2799 (1998).

#### 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, 08/17/2020

#### 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