



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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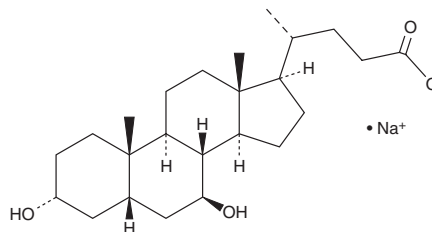
# PRODUCT INFORMATION



## Ursodeoxycholic Acid (sodium salt)

Item No. 15121

**CAS Registry No.:** 2898-95-5  
**Formal Name:** (3 $\alpha$ ,5 $\beta$ ,7 $\beta$ )-3,7-dihydroxy-cholan-24-oic acid, monosodium salt  
**Synonyms:** UDCA, Ursodiol  
**MF:** C<sub>24</sub>H<sub>39</sub>O<sub>4</sub> • Na  
**FW:** 414.6  
**Purity:** ≥98%  
**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

Ursodeoxycholic acid (UDCA) (sodium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the UDCA (sodium salt) in the solvent of choice. UDCA (sodium salt) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of UDCA (sodium salt) in these solvents is approximately 15, 10, and 5 mg/ml, respectively.

### Description

Ursodeoxycholic acid (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. Intestinal transport and metabolism of bile acids. *J. Lipid Res.* **56(6)**, 1085-1099 (2015).
2. Chiang, J.Y.L. Bile acid metabolism and signaling in liver disease and therapy. *Liver Res.* **1(1)**, 3-9 (2017).
3. Deo, A.K. and Bandiera, S.M. 3-Ketocholanoic acid is the major *in vitro* human hepatic microsomal metabolite of lithocholic acid. *Drug Metab. Dispos.* **37(9)**, 1938-1947 (2009).
4. Kim, R.B., Leake, B., Cvetkovic, M., *et al.* Modulation by drugs of human hepatic sodium-dependent bile acid transporter (sodium taurocholate cotransporting polypeptide) activity. *J. Pharmacol. Exp. Ther.* **291(3)**, 1204-1209 (1999).
5. Rodrigues, C.M.P., Fan, G., Ma, X., *et al.* A novel role for ursodeoxycholic acid in inhibiting apoptosis by modulating mitochondrial membrane perturbation. *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.

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