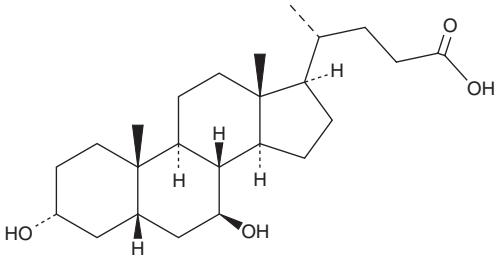
PRODUCT INFORMATION

Ursodeoxycholic Acid

Item No. 31016

CAS Registry No.:	128-13-2
Formal Name:	(3α,5β,7β)-3,7-dihydroxy-cholan-24-oic acid
Synonyms:	NSC 683769, UDCA, Ursodiol
MF:	$C_{24}H_{40}O_4$
FW:	392.6
Purity:	≥95%
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) is supplied as a crystalline solid. A stock solution may be made by dissolving the UDCA in the solvent of choice, which should be purged with an inert gas. UDCA is soluble in organic solvents such as methanol, DMSO, and chloroform. The solubility of UDCA in these solvents is approximately 30 mg/ml.

Description

UDCA is a secondary bile acid formed *via* epimerization of chenodeoxycholic acid (CDCA; Item Nos. 10011286 | 35346).[1,2] UDCA is also a metabolite of lithocholic acid (LCA; Item No. 20253) in human liver microsomes.[3] It inhibits taurocholic acid (Item No. 16215) uptake in HeLa cells expressing recombinant human sodium/taurocholate cotransporting polypeptide (NTCP) with an IC_{50} value of 3.6 µM.[4] UDCA (50 µM) inhibits apoptosis induced by deoxycholic acid (DCA; Item Nos. 20756 | 18231) or ethanol in primary rat hepatocytes.[5] 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).

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