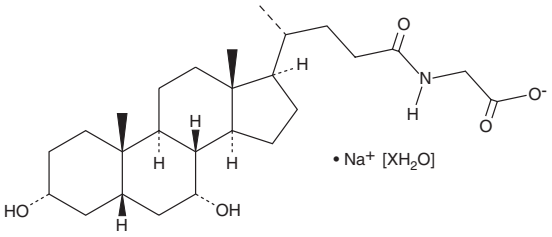
PRODUCT INFORMATION

Glycochenodeoxycholic Acid (sodium salt hydrate)

Item No. 16942

Formal Name:	N-[(3α,5β,7α)-3,7-dihydroxy-24-oxocholan-24-yl]-glycine, monosodium salt, hydrate
Synonym:	GCDCA
MF:	$C_{26}H_{42}NO_5 \bullet Na\ [XH_2O]$
FW:	471.6
Purity:	≥95%
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



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

Laboratory Procedures

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

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of GCDCA (sodium salt hydrate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of GCDCA (sodium salt hydrate) in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Glycochenodeoxycholic acid (GCDCA) is a glycine-conjugated form of the primary bile acid chenodeoxycholic acid (Item No. 10011286).[1] It reduces formation of cholic acid (Item No. 20250) in primary human hepatocytes when used at a concentration of 100 µM.[2] GCDCA (50, 75, and 100 µM) reduces the number of LC3 puncta, a marker of autophagy, and is cytotoxic to L-02 hepatocytes.[1] GCDCA (50 µM) induces apoptosis in isolated rat hepatocytes, an effect that can be blocked by the protein kinase C (PKC) inhibitor chelerythrine (Item No. 11314).[3] Fecal levels of GCDCA are decreased in a rat model of high-fat diet-induced obesity compared with rats fed a normal diet.[4]

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 (GCDC) 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, 03/25/2026

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