

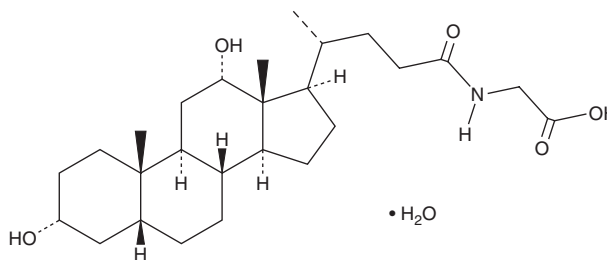
PRODUCT INFORMATION



Glycodeoxycholic Acid (hydrate)

Item No. 20274

CAS Registry No.: 1079043-81-4
Formal Name: N-[(3 α ,5 β ,12 α)-3,12-dihydroxy-24-oxocholan-24-yl]-glycine, monohydrate
Synonym: GDCA
MF: C₂₆H₄₃NO₅ • H₂O
FW: 467.6
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

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

GDCA (hydrate) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, GDCA (hydrate) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. GDCA (hydrate) has a solubility of approximately 0.2 mg/ml in a 1:4 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

GDCA is a glycine-conjugated form of the secondary bile acid deoxycholic acid (Item Nos. 18231 | 20756).¹ It induces a reversible, concentration-dependent reduction in myogenic tone in rats and decreases expression of the gene encoding the cytochrome P450 (CYP) isoform 7A1 (CYP7A1) in rabbits.^{2,3} Serum levels of GDCA are elevated in non-surviving patients with acetaminophen-induced acute liver failure (AALF) compared with survivors.⁴ GDCA levels are also increased in the plasma of patients with asthma.⁵

References

1. Lefebvre, P., Cariou, B., Lien, F., *et al.* Role of bile acids and bile acid receptors in metabolic regulation. *Physiol. Rev.* **89**(1), 147-191 (2009).
2. Khurana, S., Raina, H., Pappas, V., *et al.* Effects of deoxycholyglycine, a conjugated secondary bile acid, on myogenic tone and agonist-induced contraction in rat resistance arteries. *PLoS One* **7**(2), e32006 (2012).
3. Shang, Q., Guo, G.L., Honda, A., *et al.* Bile acid flux through portal but not peripheral veins inhibits CYP7A1 expression without involvement of ileal FGF19 in rabbits. *Am. J. Physiol. Gastrointest. Liver Physiol.* **307**(4), G479-G486 (2014).
4. Woolbright, B.L., McGill, M.R., Staggs, V.S., *et al.* Glycodeoxycholic acid levels as prognostic biomarker in acetaminophen-induced acute liver failure patients. *Toxicol. Sci.* **142**(2), 436-444 (2014).
5. Comhair, S.A.A., McDunn, J., Bennett, C., *et al.* Metabolomic endotype of asthma. *J. Immunol.* **195**(2), 643-650 (2015).

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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