

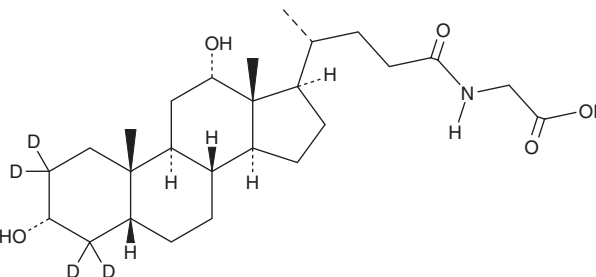
PRODUCT INFORMATION



Glycodeoxycholic Acid-d₄

Item No. 31310

CAS Registry No.: 1069132-37-1
Formal Name: N-[(3 α ,5 β ,12 α)-3,12-dihydroxy-24-oxocholan-24-yl]-2,2,4,4-d₄]-glycine
Synonym: GDCA-d₄
MF: C₂₆H₃₉D₄NO₅
FW: 453.7
Chemical Purity: \geq 98% (Glycodeoxycholic Acid)
Deuterium Incorporation: \geq 99% deuterated forms (d₁-d₄); \leq 1% d₀
Supplied as: A 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

Glycodeoxycholic acid-d₄ is intended for use as an internal standard for the quantification of glycodeoxycholic acid (Item No. 20274) 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).

Glycodeoxycholic acid-d₄ is supplied as a solid. A stock solution may be made by dissolving the glycodeoxycholic acid-d₄ in the solvent of choice, which should be purged with an inert gas. Glycodeoxycholic acid-d₄ is slightly soluble in ethanol and methanol.

Description

Glycodeoxycholic acid (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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