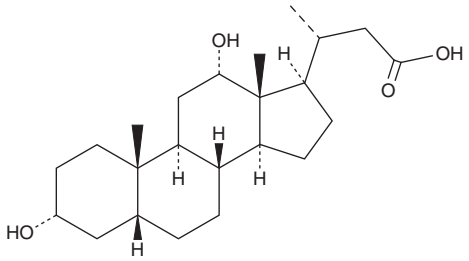
PRODUCT INFORMATION

Nordeoxycholic Acid

Item No. 30837

CAS Registry No.:	53608-86-9
Formal Name:	(3α,5β,12α)-3,12-dihydroxy-24-norcholan-23-oic acid
Synonyms:	23-NDCA, 23-Nordeoxycholic Acid
MF:	$C_{23}H_{38}O_4$
FW:	378.6
Purity:	≥95%
Supplied as:	A 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

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

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

Description

Nordeoxycholic acid is a metabolite of the bile acid norcholic acid and a 23-carbon derivative of deoxycholic acid (Item Nos. 20756 | 18231).[1] Levels of nordeoxycholic acid are decreased in the liver of rats in a high-fat diet model of non-alcoholic fatty liver disease (NAFLD) and serum levels are lower in men compared with women.[2,3] Nordeoxycholic acid has commonly been used as an internal standard for the quantification of bile acids in various sample types by GC- and LC-MS.[4,5]

References

1. Nakatomi, F., Kihira, K., Kuramoto, T., *et al.* Intestinal absorption and metabolism of norcholic acid in rats. *J. Pharmacobiodyn* **8(7)**, 557-563 (1985).
2. Tang, Y., Zhang, J., Li, J., *et al.* Turnover of bile acids in liver, serum and caecal content by high-fat diet feeding affects hepatic steatosis in rats. *Biochim. Biophys. Acta Mol. Cell Biol. Lipids* **1864(10)**, 1293-1304 (2019).
3. Xie, G., Wang, Y., Wang, X., *et al.* Profiling of serum bile acids in a healthy Chinese population using UPLC-MS/MS. *J. Proteome Res.* **14(2)**, 850-859 (2015).
4. Bergeron, A., Furtado, M., and Garofolo, F. Importance of using highly pure internal standards for successful liquid chromatography/tandem mass spectrometric bioanalytical assays. *Rapid Commun. Mass Spectrom.* **23(9)**, 1287-197 (2009).
5. Evrard, E. and Janssen, G. Gas-liquid chromatographic determination of human fecal bile acids. *J. Lipid Res.* **9(2)**, 226-236 (1968).

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