

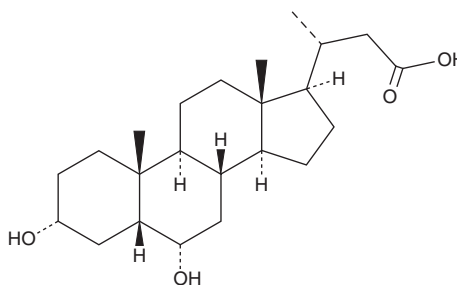
# PRODUCT INFORMATION



## Norhyodeoxycholic Acid

Item No. 9003440

**CAS Registry No.:** 77518-23-1  
**Formal Name:** (5 $\beta$ )-3 $\alpha$ ,6 $\alpha$ -dihydroxy-24-norcholan-23-oic acid  
**Synonyms:** 3 $\alpha$ ,6 $\alpha$ -Dihydroxy-24-nor-5 $\beta$ -cholan-23-oic Acid, NHDCA  
**MF:** C<sub>23</sub>H<sub>38</sub>O<sub>4</sub>  
**FW:** 378.6  
**Purity:**  $\geq$ 98%  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:**  $\geq$ 4 years



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

### Laboratory Procedures

Norhyodeoxycholic acid (NHDCA) is supplied as a crystalline solid. A stock solution may be made by dissolving the NHDCA in the solvent of choice, which should be purged with an inert gas. NHDCA is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of NHDCA in ethanol and DMSO is approximately 20 mg/ml and approximately 30 mg/ml in DMF.

NHDCA is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, NHDCA should first be dissolved in DMF and then diluted with the aqueous buffer of choice. NHDCA has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

NHDCA is a synthetic bile acid and a derivative of hyodeoxycholic acid (HDCA; Item No. 20294).<sup>1,2</sup> NHDCA is an intermediate in the synthesis of 3 $\beta$ -sulfooxy-7 $\beta$ -hydroxy-24-nor-5-cholen-23-oic acid, which has been used as an internal standard for the quantification of  $\Delta^5$ -bile acid conjugates that have been identified in patients with Niemann-Pick disease type C1.<sup>3</sup>

### References

1. Schteingart, C.D. and Hofmann, A.F. Synthesis of 24-nor-5 $\beta$ -cholan-23-oic acid derivatives: A convenient and efficient one-carbon degradation of the side chain of natural bile acids. *J. Lipid Res.* **29**(10), 1387-1395 (1988).
2. Une, M. and Hoshita, T. Natural occurrence and chemical synthesis of bile alcohols, higher bile acids, and short side chain bile acids. *Hiroshima J. Med. Sci.* **43**(2), 37-67 (1994).
3. Kakiyama, G., Muto, A., Shimada, M., et al. Chemical synthesis of 3 $\beta$ -sulfooxy-7 $\beta$ -hydroxy-24-nor-5-cholenoic acid: An internal standard for mass spectrometric analysis of the abnormal  $\Delta^5$ -bile acids occurring in Niemann-Pick disease. *Steroids* **74**(9), 766-772 (2009).

#### 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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