PRODUCT INFORMATION



Hyodeoxycholic Acid

Item No. 20294

CAS Registry No.:	83-49-8	Υ.
Formal Name:	(5β)-3α,6α-dihydroxy-cholan-24-oic acid	\sim η
Synonyms:	HDCA, a-Hyodeoxycholic Acid, NSC 60672	ОН
MF:	$C_{24}H_{40}O_4$	
FW:	392.6	
Purity:	≥90%	
Supplied as:	A crystalline solid	HO
Storage:	-20°C	H : OH
Stability:	≥4 years	
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Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

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

HDCA is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, HDCA should first be dissolved in DMF and then diluted with the aqueous buffer of choice. HDCA 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

Hyodeoxycholic acid (HDCA) is a secondary bile acid.¹ It is produced from lithocholic acid (Item No. 20253) by gut bacteria.¹⁻³ Dietary administration of HDCA (1.25% w/w) decreases plasma VLDL and LDL cholesterol levels and reduces fasting glucose levels and atherosclerotic lesion size in LDL receptor knockout mice fed a Western diet.⁴ Serum levels of HDCA are increased in patients with Crohn's disease or ulcerative colitis.⁵

References

- 1. Einarsson, K. On the formation of hyodeoxycholic acid in the rat. Bile acids and steroids 154. J. Biol. Chem. 241(3), 534-539 (1966).
- 2. Madsen, D., Beaver, M., Chang, L., et al. Analysis of bile acids in conventional and germfree rats. J. Lipid. Res. 17(2), 107-111 (1976).
- 3. Sacquet, E. Parquet, M., Riottot, M., et al. Intestinal absorption, excretion, and biotransformation of hyodeoxycholic acid in man. J. Lipid. Res. 24(5), 604-613 (1983).
- 4. Shih, D.M., Shaposhnik, Z., Meng, Y., et al. Hyodeoxycholic acid improves HDL function and inhibits atherosclerotic lesion formation in LDLR-knockout mice. FASEB J. 27(9), 3805-3817 (2013).
- 5. Gnewuch, C., Liebisch, G., Langmann, T., et al. Serum bile acid profiling reflects enterohepatic detoxification state and intestinal barrier function in inflammatory bowel disease. World J. Gastroenterol. 15(25), 3134-3141 (2009).

WARNING THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFFTY 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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