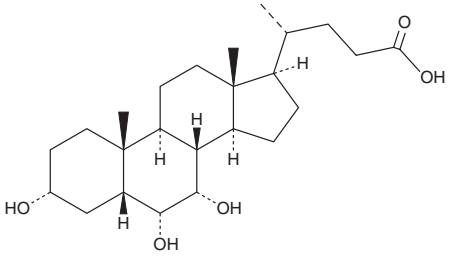
PRODUCT INFORMATION

Hyocholic Acid

Item No. 20293

CAS Registry No.: 547-75-1
Formal Name: (5β)-3α,6α,7α-trihydroxy-cholan-24-oic acid
Synonyms: HCA, γ-MCA, γ-Muricholic Acid
MF: $C_{24}H_{40}O_5$
FW: 408.6
Purity: ≥95%
UV/Vis.: λ_{max}: 210 nm
Supplied as: A crystalline 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

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

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

Hyocholic acid is a primary bile acid in pigs and other mammals.[1] It has also been found in urine samples from patients with cholestasis.[2] Hyocholic acid is converted by gut microflora primarily to taurohyocholate and, to a lesser extent, taurocholic acid (Item No. 16215) and tauro-β-muricholic acid (Item No. 20289) in mice.[3] Hyocholic acid has low toxicity against human hepatoma HepG2 cells.[3,4]

References

1. Lundell, K., and Wikvall, K. Species-specific and age-dependent bile acid composition: Aspects on CYP8B and CYP4A subfamilies in bile acid biosynthesis. *Curr. Drug Metab.* **9(4)**, 323-331 (2008).
2. van Berge Henegouwen, G.P., Brandt, K.H., Eyssen, H., *et al.* Sulphated and unsulphated bile acids in serum, bile, and urine of patients with cholestasis. *Gut* **17(11)**, 861-869 (1976).
3. Wang, D.Q.-H., Tazuma, S., Cohen, D.E., *et al.* Feeding natural hydrophilic bile acids inhibits intestinal cholesterol absorption: Studies in the gallstone-susceptible mouse. *Am. J. Physiol Gastrointest. Liver Physiol.* **285(3)**, G494-G502 (2003).
4. Perreault, M., Bialek, A., Trottier, J., *et al.* Role of glucuronidation for hepatic detoxification and urinary elimination of toxic bile acids during biliary obstruction. *PLoS One* **8(11)**, e80994 (2013).

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