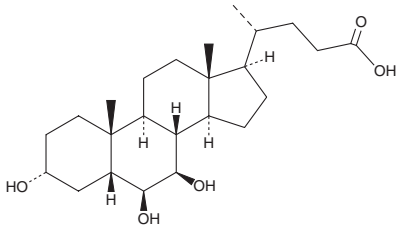
PRODUCT INFORMATION

β-Muricholic Acid

Item No. 20287

CAS Registry No.:	2393-59-1
Formal Name:	(5β)-3α,6β,7β-trihydroxy-cholan-24-oic acid
Synonyms:	5β-Cholanic Acid-3α,6β,7β-triol, β-MCA
MF:	$C_{24}H_{40}O_5$
FW:	408.6
Purity:	≥95%
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



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

Laboratory Procedures

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

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

β-Muricholic acid (β-MCA) is a murine-specific primary bile acid.[1,2] Dietary administration of β-MCA reduces HMG-CoA reductase activity in liver microsomes from mice fed a high cholesterol and cholic acid diet.[3] Dietary administration of β-MCA also dissolves 100% of gallstones in a gallstone-susceptible mouse model of diet-induced cholesterol gallstones.[4]

References

1. Eyssen, H.J., Parmentier, G.G., and Mertens, J.A. Sulfate bile acids in germ-free and conventional mice. *Eur. J. Biochem.* **66(3)**, 507-514 (1976).
2. Wahlström, A., Sayin, S.I., Marschall, H.-I., et al. Intestinal crosstalk between bile acids and microbiota and its impact on host metabolism. Cell Metab. 24(1), 41-50 (2016).
3. Fujino, Y., Nakayama, K., Yoshimura, K., *et al.* Suppression of hepatic HMG-CoA reductase activity by β-muricholic acid in mice fed a diet containing cholesterol and cholic acid. *Jpn. J. Pharmacol.* **46(4)**, 421-423 (1988).
4. Wang, D.Q.-H. and Tazuma, S. Effect of β-muricholic acid on the prevention and dissolution of cholesterol gallstones in C57L/J mice. *J. Lipid. Res.* **43(11)**, 1960-1968 (2002).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM