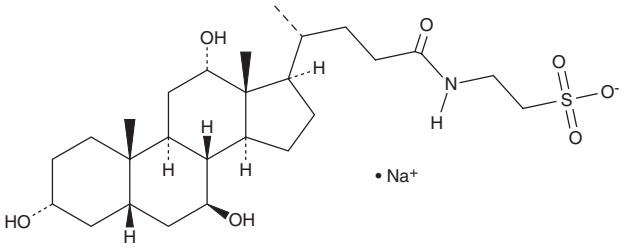
PRODUCT INFORMATION

Tauroursocholic acid (sodium salt)

Item No. 43806

CAS Registry No.:	17515-36-5
Formal Name:	2-[[(3α,5β,7β,12α)-3,7,12-trihydroxy-24-oxocholan-24-yl]amino]-ethanesulfonic acid, monosodium salt
Synonym:	TUCA
MF:	$C_{26}H_{44}NO_7S$ • Na
FW:	537.7
Purity:	≥98%
Supplied as:	A 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

Tauroursocholic acid (TUCA) (sodium salt) is supplied as a solid. A stock solution may be made by dissolving the TUCA (sodium salt) in the solvent of choice, which should be purged with an inert gas. TUCA (sodium salt) is sparingly soluble (1-10 mg/ml) in DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of TUCA (sodium salt) can be prepared by directly dissolving the solid in aqueous buffers. TUCA (sodium salt) is soluble (≥10 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

TUCA is a taurine-conjugated form of the bile acid ursocholic acid (Item No. 29883) and the 7β-hydroxy epimer of taurocholic acid (TCA; Item No. 16215).[1,2] Unlike TCA, TUCA does not inhibit HMG-CoA reductase nor the cytochrome P450 (CYP) isoform CYP7A1, also known as cholesterol 7α-hydroxylase. Bile levels of TUCA are increased in patients with biliary tract cancer compared with patients with benign biliary diseases.[3]

References

1. Nguyen, L.B., Shefer, S., Salen, G., *et al*. Regulation of 3-hydroxy-3-methylglutaryl-coenzyme A reductase activity in the rat ileum: Effects of bile acids and lovastatin. *Metabolism* **43(11)**, 1446-1450 (1994).
2. Shefer, S., Nguyen, L., Salen, G., *et al*. Feedback regulation of bile-acid synthesis in the rat. Differing effects of taurocholate and tauroursocholate. *J. Clin. Invest*. **85(4)**, 1191-1198 (1990).
3. Xu, X., Cheng, S., Ding, C., *et al*. Identification of bile biomarkers of biliary tract cancer through a liquid chromatography/mass spectrometry-based metabolomic method. *Mol. Med. Rep*. **11(3)**, 2191-2198 (2015).

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