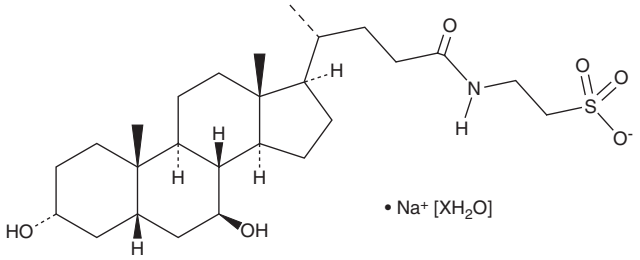
PRODUCT INFORMATION

Tauroursodeoxycholic Acid (sodium salt hydrate)

Item No. 9003379

Formal Name: 2-[[(3α,5β,7β)-3,7-dihydroxy-24-oxocholan-24-yl]amino]-ethanesulfonic acid, monosodium salt, hydrate
Synonyms: 3α,7β-dihydroxy-5β-cholanoyl Taurine, Sodium Tauroursodeoxycholate, TUDCA, UR-906
MF: $C_{26}H_{44}NO_6S \bullet Na\ [XH_2O]$
FW: 521.7
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

Tauroursodeoxycholic acid (TUDCA) (sodium salt hydrate) is supplied as a crystalline solid. A stock solution may be made by dissolving the TUDCA (sodium salt hydrate) in the solvent of choice, which should be purged with an inert gas. TUDCA (sodium salt hydrate) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of TUDCA (sodium salt hydrate) in these solvents is approximately 1, 20, and 25 mg/ml, respectively.

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 TUDCA (sodium salt hydrate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of TUDCA (sodium salt hydrate) in PBS, pH 7.2, is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

TUDCA is a taurine-conjugated form of the secondary bile acid ursodeoxycholic acid (Item No. 15121).[1,2] TUDCA is found in small quantities in human bile but at a higher concentration in the bile of black bears.[2] It demonstrates anti-apoptotic activity in rodent models of tauopathy, Huntington's disease, ischemic brain injury, and retinal disorders.[2,3]

References

1. Beuers, U. Effects of bile acids on hepatocellular signaling and secretion. *Yale J. Biol. Med.* **70(4)**, 341-346 (1997).
2. Boatright, J.H., Nickerson, J.M., Moring, A.G., *et al.* Bile acids in treatment of ocular disease. *J. Ocul. Biol. Dis. Infor.* **2(3)**, 149-159 (2009).
3. Vang, S., Longley, K., Steer, C.J., *et al.* The unexpected uses of urso- and tauroursodeoxycholic acid in the treatment of non-liver diseases. *Glob. Adv. Health Med.* **3(3)**, 58-69 (2014).

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