

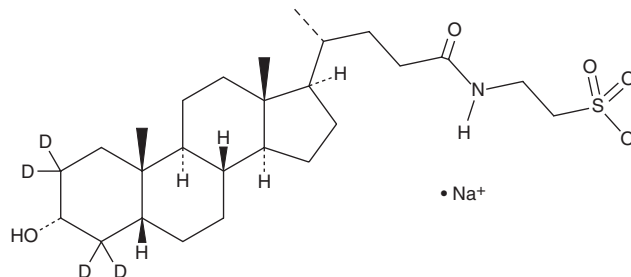
PRODUCT INFORMATION



Taurolithocholic Acid-d₄ (sodium salt)

Item No. 32984

CAS Registry No.: 2410279-97-7
Formal Name: 2-[[[(3 α ,5 β)-3-hydroxy-24-oxocholan-24-yl-2,2,4,4-d₄]amino]-ethanesulfonic acid, monosodium salt
Synonyms: Sodium Taurolithocholate-d₄, TLCA-d₄
MF: C₂₆H₄₀D₄NO₅S • Na
FW: 509.7
Chemical Purity: ≥98% (Taurolithocholic Acid)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₄); ≤1% d₀
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

Taurolithocholic acid-d₄ (TLCA-d₄) (sodium salt) is intended for use as an internal standard for the quantification of TLCA (Item No. 17275) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

TLCA-d₄ (sodium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the TLCA-d₄ (sodium salt) in the solvent of choice, which should be purged with an inert gas. TLCA-d₄ (sodium salt) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of TLCA-d₄ (sodium salt) in these solvents is approximately 1, 20, and 25 mg/ml, respectively.

Description

TLCA is a taurine-conjugated form of the secondary bile acid lithocholic acid (Item No. 20253).¹ TLCA (75 μ M) increases caspase-3 and -7 activity in Hep3B cells transfected with sodium taurocholate cotransporting peptide (NTCP), but not nontransfected Hep3B cells.² It has been used to induce cholestasis *in ex vivo* and *in vivo* animal models of hepatocellular cholestasis.³⁻⁴ Serum levels of TLCA increase approximately 5-fold within two hours during an oral lipid tolerance test in humans.¹

References

- Schmid, A., Neumann, H., Karrasch, T., *et al.* Bile acid metabolome after an oral lipid tolerance test by liquid chromatography-tandem mass spectrometry (LC-MS/MS). *PLoS One* **11**(2), e0148869 (2016).
- Rust, C., Wild, N., Bernt, C., *et al.* Bile acid-induced apoptosis in hepatocytes is caspase-6-dependent. *J. Biol. Chem.* **284**(5), 2908-2916 (2009).
- Denk, G.U., Maitz, S., Wimmer, R., *et al.* Conjugation is essential for the anticholestatic effect of NorUrsodeoxycholic acid in taurolithocholic acid-induced cholestasis in rat liver. *Hepatology* **52**(5), 1758-1768 (2010).
- Javitt, N.B. Cholestasis in rats induced by taurolithocholate. *Nature* **210**(5042), 1262-1263 (1966).

WARNING

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

SAFETY 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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