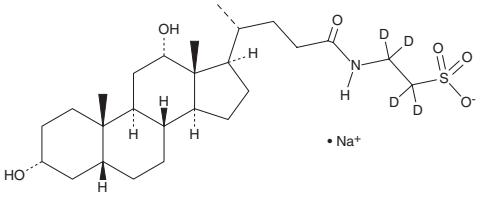
PRODUCT INFORMATION

Tauro-d_4-deoxycholic Acid (sodium salt)

Item No. 45772

Formal Name: 2-[[(3α,5β,12α)-3,12-dihydroxy-24-oxocholan-24-yl]amino]-ethanesulfonic acid-1,1,2,2-d_4, monosodium salt
Synonyms: Sodium Tauro-d_4-deoxycholic, TDCA-d_4
MF: $C_{26}H_{40}D_4NO_6S \bullet Na$
FW: 525.7
Chemical Purity: ≥98% (taurodeoxycholic acid)
Deuterium Incorporation: ≥99% deuterated forms (d_1-d_4); ≤1% d_0
Supplied as: A 1 mg/ml solution in methanol
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Tauro-d_4-deoxycholic acid (sodium salt) is intended for use as an internal standard for the quantification of taurodeoxycholic acid (Item Nos. 44869 | 15935) 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).

Description

Taurodeoxycholic acid is a taurine-conjugated form of the secondary bile acid deoxycholic acid (Item Nos. 20756 | 18231).[1] Taurodeoxycholic acid stimulates chloride ion secretion through calcium-activated chloride ion channels and cystic fibrosis transmembrane conductance regulator (CFTR) in Calu-3 airway epithelial cell monolayers when applied basolaterally.[2] Serum levels of taurodeoxycholic acid increase approximately 5-fold within two hours during an oral lipid tolerance test in humans.[1]

References

1. 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).
2. Hendrick, S.M., Mroz, M.S., Greene, C.M., *et al.* Bile acids stimulate chloride secretion through CFTR and calcium-activated Cl- channels in Calu-3 airway epithelial cells. *Am. J. Physiol. Lung. Cell. Mol. Physiol.* **307(5)**, L407-L418 (2014).

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