

PRODUCT INFORMATION



Tauro- α -muricholic Acid- d_4 (sodium salt)

Item No. 27039

Formal Name: 2-[[[(3 α ,5 β ,6 β ,7 α)-3,6,7-trihydroxy-24-oxocholan-24-yl]-2,2,4,4- d_4]]amino]ethanesulfonic acid, monosodium salt

Synonyms: Tauro- α -muricholate- d_4 , TaMCA- d_4

MF: $C_{26}H_{40}D_4NO_7S \cdot Na$

FW: 541.7

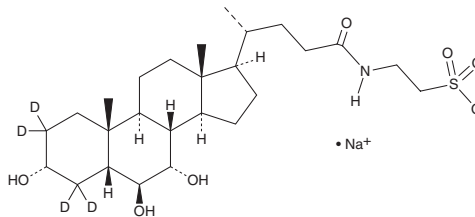
Chemical Purity: $\geq 98\%$ (Tauro- α -muricholic Acid)

Deuterium Incorporation: $\geq 99\%$ deuterated forms (d_1 - d_4); $\leq 1\%$ d_0

Supplied as: A crystalline solid

Storage: $-20^\circ C$

Stability: ≥ 2 years



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

Laboratory Procedures

Tauro- α -muricholic acid- d_4 (TaMCA- d_4) (sodium salt) is intended for use as an internal standard for the quantification of TaMCA (Item No. 20288) 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).

TaMCA- d_4 (sodium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the TaMCA- d_4 (sodium salt) in the solvent of choice, which should be purged with an inert gas. TaMCA- d_4 (sodium salt) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of TaMCA- d_4 (sodium salt) in ethanol is approximately 1 mg/ml and approximately 10 mg/ml in DMSO and DMF.

TaMCA- d_4 (sodium salt) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, TaMCA- d_4 (sodium salt) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. TaMCA- d_4 (sodium salt) has a solubility of approximately 0.2 mg/ml in a 1:4 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

TaMCA is an antagonist of the farnesoid X receptor (FXR; $IC_{50} = 28 \mu M$) and a taurine-conjugated form of the murine-specific primary bile acid α -muricholic acid (Item No. 20291).¹ TaMCA is common in rodents but has also been found in small amounts in human serum.²

References

1. Sayin, S.I., Wahlström, A., Felin, J., *et al.* Gut microbiota regulates bile acid metabolism by reducing the levels of tauro-beta-muricholic acid, a naturally occurring FXR antagonist. *Cell Metab.* **17**(2), 225-235 (2013).
2. García-Cañaveras, J.C., Donato, M.T., Castell, J.V., *et al.* Targeted profiling of circulating and hepatic bile acids in human, mouse, and rat using a UPLC-MRM-MS-validated method. *J. Lipid Res.* **53**(10), 2231-2241 (2012).

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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