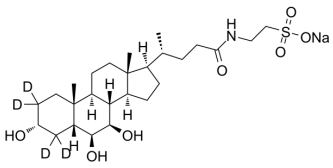
Tauro-β-muricholic acid-d4 sodium

Cat. No.:	HY-135103S
Molecular Formula:	$C_{26}H_{40}D_4NNaO_7S$
Molecular Weight:	541.71
Target:	FXR
Pathway:	Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Tauro-β-muricholic acid-d4 sodium is the deuterium labeled Tauro-β-muricholic acid sodium. Tauro-β-muricholic Acid sodium (T-βMCA sodium), a endogenous metabolite, is a competitive and reversible farnesoid X receptor (FXR) antagonist, with an IC_{50} of 40 μM[1][2][3].
In Vitro	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-216.

[2]. Sayin SI, et al. Gut microbiota regulates bile acid metabolism by reducing the levels of tauro-beta-muricholic acid, a naturally occurring FXR antagonist. Cell Metab. 2013 Feb 5;17(2):225-35.

[3]. Wahlström A, et al. Induction of farnesoid X receptor signaling in germ-free mice colonized with a human microbiota. J Lipid Res. 2017 Feb;58(2):412-419.

[4]. Fu T, et al. FXR Regulates Intestinal Cancer Stem Cell Proliferation. Cell. 2019 Feb 21;176(5):1098-1112.e18.

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