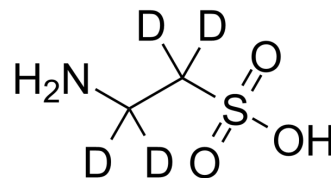


Taurine-d₄

Cat. No.:	HY-B0351S		
CAS No.:	342611-14-7		
Molecular Formula:	C ₂ H ₃ D ₄ NO ₃ S		
Molecular Weight:	129.17		
Target:	Autophagy; Endogenous Metabolite		
Pathway:	Autophagy; Metabolic Enzyme/Protease		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

PBS (pH 7.2) : ≥ 10 mg/mL (77.42 mM)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent	1 mg	5 mg	10 mg
	Concentration			
1 mM		7.7417 mL	38.7087 mL	77.4174 mL
5 mM		1.5483 mL	7.7417 mL	15.4835 mL
10 mM		0.7742 mL	3.8709 mL	7.7417 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Taurine-d₄ is the deuterium labeled Taurine. Taurine, a sulphur-containing amino acid and an organic osmolyte involved in cell volume regulation, provides a substrate for the formation of bile salts, and plays a role in the modulation of intracellular free calcium concentration. Taurine has the ability to activate autophagy in adipocytes[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]. Ripps H, Shen W. Review: taurine: a "very essential" amino acid. Mol Vis. 2012;18:2673-2686.

[3]. Xu YJ, et al. The potential health benefits of taurine in cardiovascular disease. Exp Clin Cardiol. 2008;13(2):57-65.

[4]. Kaneko H, et al. Taurine is an amino acid with the ability to activate autophagy in adipocytes. Amino Acids. 2018;50(5):527-535.

Caution: Product has not been fully validated for medical applications. For research use only.

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