4-Hydroxytolbutamide-d_9

Cat. No.: HY-100641S

CAS No.: 1185112-19-9

Molecular Formula: $C_{12}H_9D_9N_2O_4S$

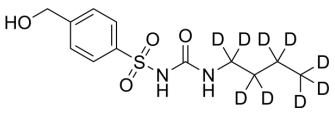
Molecular Weight: 295.4

Target: Autophagy; Potassium Channel

Pathway: Autophagy; Membrane Transporter/Ion Channel

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



BIOLOGICAL ACTIVITY

Description	4-Hydroxytolbutamide-d_9 is the deuterium labeled 4-Hydroxytolbutamide. 4-Hydroxytolbutamide (Hydroxytolbutamide) is a metabolite of Tolbutamide. 4-Hydroxytolbutamide is metabolized by CYP2C8 and CYP2C9. Tolbutamide is a first generation potassium channel blocker and a sulfonylurea oral antidiabetic[1][2].
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]. Hansen LL, et al. Quantitative determination of tolbutamide and its metabolites in human plasma and urine by high-performance liquid chromatography and UV detection. Ther Drug Monit. 1999 Dec;21(6):664-71.

[3]. Yuan R, et al. Evaluation of cytochrome P450 probe substrates commonly used by the pharmaceutical industry to study in vitro drug interactions. Drug Metab Dispos. 2002 Dec;30(12):1311-9.

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