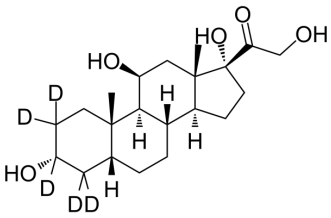
Tetrahydrocortisol-d5

Cat. No.:	HY-129630S
Molecular Formula:	$C_{21}H_{29}D_5O_5$
Molecular Weight:	371.52
Target:	Endogenous Metabolite
Pathway:	Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Tetrahydrocortisol-d5 is the deuterium labeled Tetrahydrocortisol. Tetrahydrocortisol is cortisol metabolite. The urinary Tetrahydrocortisol/Tetrahydrocortisone ratio decreases with increasing 11β-hydroxysteroid dehydrogenase (11β-HSD) activity[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]. Webster SP, et al. Selection and early clinical evaluation of the brain-penetrant 11β-hydroxysteroid dehydrogenase type 1 (11β-HSD1) inhibitor UE2343 (Xanamem™). Br J Pharmacol. 2017 Mar;174(5):396-408.

[3]. Turpeinen U, et al. Determination of free tetrahydrocortisol and tetrahydrocortisone ratio in urine by liquid chromatography-tandem mass spectrometry. Scand J Clin Lab Invest. 2006;66(2):147-59.

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