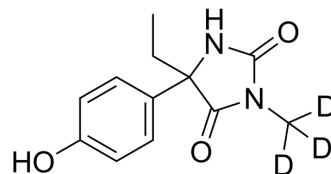


4-Hydroxymephenytoin-d₃

Cat. No.:	HY-W008772S		
CAS No.:	1173022-56-4		
Molecular Formula:	C ₁₂ H ₁₁ D ₃ N ₂ O ₃		
Molecular Weight:	237.27		
Target:	Drug Metabolite		
Pathway:	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

DMSO : 100 mg/mL (421.46 mM; Need ultrasonic)

Solvent	Mass	Concentration		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	4.2146 mL	21.0730 mL	42.1461 mL
	5 mM	0.8429 mL	4.2146 mL	8.4292 mL
	10 mM	0.4215 mL	2.1073 mL	4.2146 mL

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

BIOLOGICAL ACTIVITY

Description

4-Hydroxymephenytoin-d₃ is the deuterium labeled 4-Hydroxymephenytoin. 4-Hydroxymephenytoin is a metabolism of an antiepileptic agent mephenytoin, which is used as a CYP2C19 substrate^{[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]. Tanaka M, et al. Simple and selective assay of 4-hydroxymephenytoin in human urine using solid-phase extraction and high-performance liquid chromatography with electrochemical detection and its preliminary application to phenotyping test. *J Chromatogr B Biomed Appl*. 1996 Feb 9;676(1):87-94.

[3]. Stewart NA, et al. A UPLC-MS/MS assay of the "Pittsburgh cocktail": six CYP probe-drug/metabolites from human plasma and urine using stable isotope dilution. *Analyst*. 2011 Feb 7;136(3):605-12.

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

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