Mephenytoin-d8

Cat. No.: HY-B1184S2

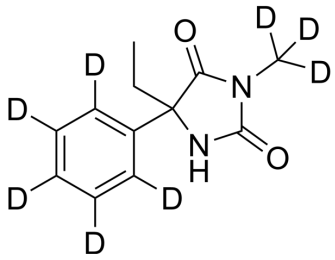
Molecular Formula: $C_{12}H_6D_8N_2O_2$

Molecular Weight: 226.3

Target: Cytochrome P450

Pathway: Metabolic Enzyme/Protease

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Mephenytoin-d_8 is the deuterium labeled Mephenytoin[1]. Mephenytoin, an anticonvulsant, is the CYP2C19 and CYP2B6 substrate[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 Feb;53(2):211-216.

[2]. Klaassen T, et al. Assessment of urinary mephenytoin metrics to phenotype for CYP2C19 and CYP2B6 activity. Eur J Clin Pharmacol. 2008;64(4):387-398.

[3]. D R Minck, et al. Comparison of the behavioral teratogenic potential of phenytoin, mephenytoin, ethotoin, and hydantoin in rats. Teratology. 1991 Apr43(4):279-93.

[4]. J H Maguire, et al. Hypolipidemic activity of antiepileptic 5-phenylhydantoins in mice. Eur J Pharmacol. 1985 Oct 29117(1):135-8.

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