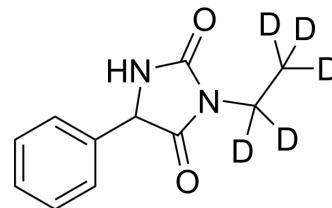


Ethotoin-d5

Cat. No.:	HY-B1642S
CAS No.:	2714409-09-1
Molecular Formula:	C ₁₁ H ₇ D ₅ N ₂ O ₂
Molecular Weight:	209.26
Target:	Isotope-Labeled Compounds
Pathway:	Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Ethotoin-d ₅ is the deuterium labeled Ethotoin[1]. Ethotoin (Peganone) is an orally active anticonvulsant agent used in epilepsy research, Ethotoin is a hydantoin, similar to phenytoin[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.
In Vivo	After dosing Ethotoin on gestational day 18, offspring exhibits mild mortality and weight loss ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
Animal Model:	Pregnant Sprague-Dawley CD rats ^[2]
Dosage:	600 mg/kg
Administration:	Oral gavage, 600 mg/kg, once
Result:	Prewaning mortality for Ethotoin was 2.0%, Ethotoin -exposed animals weighed approximately 6.6% less than controls.

REFERENCES

- [1]. A S Troupin, et al. Clinical pharmacology of mephenytoin and ethotoin. *Ann Neurol.* 1979 Nov;6(5):410-4.
- [2]. D R Minck, et al. Comparison of the behavioral teratogenic potential of phenytoin, mephenytoin, ethotoin, and hydantoin in rats. *Teratology.* 1991 Apr;43(4):279-93.
- [3]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother.* 2019 Feb;53(2):211-216.
- [4]. D R Minck, et al. Comparison of the behavioral teratogenic potential of phenytoin, mephenytoin, ethotoin, and hydantoin in rats. *Teratology.* 1991 Apr;43(4):279-93.

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

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