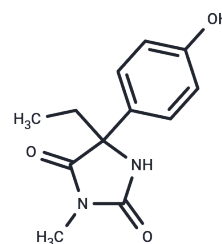


4-Hydroxymephenytoin

Chemical Properties

CAS No. :	61837-65-8
Formula:	C ₁₂ H ₁₄ N ₂ O ₃
Molecular Weight:	234.25
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>



Biological Description

Description	4-Hydroxymephenytoin ((+/-)-4'-Hydroxymephenytoin) is the metabolism of an antiepileptic drug mephenytoin. Mephenytoin is used as a CYP2C19 substrate.
Targets(IC50)	Drug Metabolite
In vitro	4-Hydroxymephenytoin, a metabolite of the antiepileptic drug mephenytoin, serves as a CYP2C19 substrate[1]. It is utilized in the development of UltraPerformance LC (UPLC) tandem mass spectrometry assays to assess CYP probe drugs and their pertinent metabolites in human urine or plasma samples[2].

Solubility Information

Solubility	DMSO: 150 mg/mL (640.34 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 3.3 mg/mL (14.09 mM), Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.2689 mL	21.3447 mL	42.6894 mL
5 mM	0.8538 mL	4.2689 mL	8.5379 mL
10 mM	0.4269 mL	2.1345 mL	4.2689 mL
50 mM	0.0854 mL	0.4269 mL	0.8538 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

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.

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.

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