

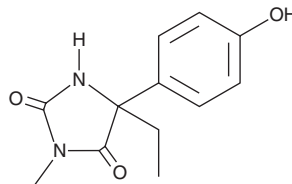
# PRODUCT INFORMATION



## (±)4-Hydroxymephenytoin

Item No. 16124

**CAS Registry No.:** 61837-65-8  
**Formal Name:** 5-ethyl-5-(4-hydroxyphenyl)-3-methyl-2,4-imidazolidinedione  
**MF:** C<sub>12</sub>H<sub>14</sub>N<sub>2</sub>O<sub>3</sub>  
**FW:** 234.3  
**Purity:** ≥98%  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

(±)4-Hydroxymephenytoin is supplied as a crystalline solid. A stock solution may be made by dissolving the (±)4-hydroxymephenytoin in the solvent of choice, which should be purged with an inert gas. (±)4-Hydroxymephenytoin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of (±)4-hydroxymephenytoin in ethanol is approximately 15 mg/ml and approximately 25 mg/ml in DMSO and DMF.

(±)4-Hydroxymephenytoin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, (±)4-hydroxymephenytoin should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. (±)4-Hydroxymephenytoin has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

(±)4-Hydroxymephenytoin is a metabolite of (R)-mephenytoin (Item No. 25891) and (S)-mephenytoin (Item No. 11913).<sup>1,2</sup> It is formed from (R)- and (S)-mephenytoin by the cytochrome P450 (CYP) isoform CYP2C19 in the liver.

### References

1. Stewart, N.A., Buch, S.C., Conrads, T.P., *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* **136**(3), 605-612 (2011).
2. Jansson, B., Simonsson, U.S.H., and Ashton, M. Simultaneous enantiospecific separation and quantitation of mephenytoin and its metabolites nirvanol and 4'-hydroxymephenytoin in human plasma by liquid chromatography. *J. Chromatogr. B Analyt. Technol. Biomed. Life Sci.* **791**(1-2), 179-191 (2003).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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