

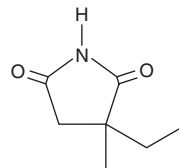
# PRODUCT INFORMATION



## Ethosuximide

Item No. 23947

**CAS Registry No.:** 77-67-8  
**Formal Name:** 3-ethyl-3-methyl-2,5-pyrrolidinedione  
**Synonyms:** CI-366, NSC 64013  
**MF:** C<sub>7</sub>H<sub>11</sub>NO<sub>2</sub>  
**FW:** 141.2  
**Purity:** ≥95%  
**Supplied as:** A 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

Ethosuximide is supplied as a solid. A stock solution may be made by dissolving the ethosuximide in the solvent of choice, which should be purged with an inert gas. Ethosuximide is soluble in the organic solvent methanol.

### Description

Ethosuximide is an anticonvulsant.<sup>1-5</sup> It increases glucose, fructose-1,6-bisphosphate, and pyruvate levels in rat brain when administered at a dose of 200 mg/kg.<sup>1</sup> Ethosuximide (400 mg/kg) reduces the severity of audiogenic seizures in a rat model of barbiturate withdrawal-induced convulsions.<sup>2</sup> It also inhibits tonic hindlimb extension induced by pentylentetrazole (PTZ; Item No. 18682) or brainstem stimulation (ED<sub>50</sub> = 35 and 70 mg/kg, respectively), as well as leptazol-induced clonic seizures (ED<sub>50</sub> = 230 mg/kg), in rats.<sup>3,4</sup> Ethosuximide reduces resting tremor by 60% in a macaque model of Parkinson's disease induced by MPTP when administered at a dose of 150 mg/animal for 5 days.<sup>5</sup> Formulations containing ethosuximide have been used in the treatment of petit mal seizures.

### References

1. Nahorski, S.R. Biochemical effects of the anticonvulsants trimethadione, ethosuximide and chlordiazepoxide in rat brain. *J. Neurochem.* **19(8)**, 1937-1946 (1972).
2. Norton, P.R. The effects of drugs on barbiturate withdrawal convulsions in the rat. *J. Pharm. Pharmacol.* **22(10)**, 763-766 (1970).
3. Consroe, P.F. and Wolkin, A.L. Anticonvulsant interaction of cannabidiol and ethosuximide in rats. *J. Pharm. Pharmacol.* **29(8)**, 500-501 (1977).
4. Chiu, P. and Burnham, W.M. The effect of anticonvulsant drugs on convulsions triggered by direct stimulation of the brainstem. *Neuropharmacology* **21(4)**, 355-359 (1982).
5. Gomez-Mancilla, B., Latulippe, J.F., Boucher, R., et al. Effect of ethosuximide on rest tremor in the MPTP monkey model. *Mov. Disord.* **7(2)**, 137-141 (1992).

#### 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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#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM