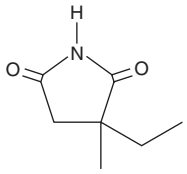
PRODUCT INFORMATION

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:	$C_7H_{11}NO_2$
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.[1-5] It increases glucose, fructose-1,6-bisphosphate, and pyruvate levels in rat brain when administered at a dose of 200 mg/kg.[1] Ethosuximide (400 mg/kg) reduces the severity of audiogenic seizures in a rat model of barbiturate withdrawal-induced convulsions.[2] It also inhibits tonic hindlimb extension induced by pentylenetetrazole (PTZ; Item No. 18682) or brainstem stimulation (ED_{50}s = 35 and 70 mg/kg, respectively), as well as leptazol-induced clonic seizures (ED_{50} = 230 mg/kg), in rats.[3,4] 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.[5] Formulations containing ethosuximide have been used in the treatment of petit mal seizures.

References

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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).

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