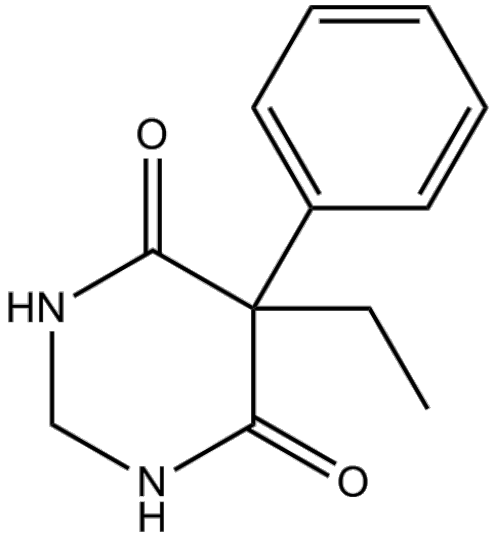
Product Data Sheet

Product Name: Primidone
Cat. No.: GC15960

Chemical Properties

Cas. No.	125-33-7		
Chemical Name	5-ethyl-5-phenyl-1,3-diazinane-4,6-dione		
SMILES	CCC1(C(=O)NCNC1=O)C2=CC=CC=C2		
Formula	$C_{12}H_{14}N_2O_2$	M.Wt	218.25
Solubility	≥ 10.9mg/mL in DMSO	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		

Structure



Background

Primidone is an anticonvulsant of the pyrimidinedione class.Target: GABA ReceptorPrimidone is an anticonvulsant of the pyrimidinedione class, the active metabolites of which, phenobarbital (minor) and phenylethylmalonamide (PEMA) (major), are also anticonvulsants. It is believed to work via

Product Data Sheet

interactions with voltage-gated sodium channels which inhibit high-frequency repetitive firing of action potentials [1]. The effect of primidone in essential tremor is not mediated by PEMA.[76] The major metabolite, phenobarbital, is also a potent anticonvulsant in its own right and likely contributes to primidone's effects in many forms of epilepsy [2]. Primidone and the other enzyme-inducing anticonvulsants can cut the half-life of antipyrine roughly in half (6.2 ± 1.9 h vs. 11.2 ± 4.2 h), and increases the clearance rate by almost 70%. Phenobarbital reduces the half-life to 4.8 ± 1.3 and increases the clearance by almost 109% [3].

References:

[1]. Macdonald, R.L. and K.M. Kelly, Antiepileptic drug mechanisms of action. Epilepsia, 1995. 36 Suppl 2: p. S2-12.
[2]. Calzetti, S., et al., Phenylethylmalonamide in essential tremor. A double-blind controlled study. J Neurol Neurosurg Psychiatry, 1981. 44(10): p. 932-4.
[3]. Perucca, E., et al., A comparative study of the relative enzyme inducing properties of anticonvulsant drugs in epileptic patients. Br J Clin Pharmacol, 1984. 18(3): p. 401-10.

Caution: Product has not been fully validated for medical applications. For research use only.
Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
Address: 10292 Central Ave. #205, Montclair, CA, USA