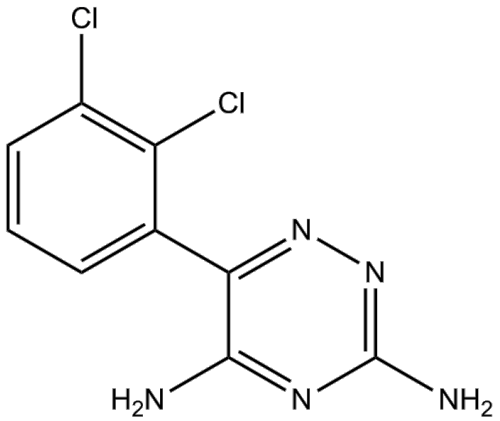
Product Data Sheet

Product Name: Lamotrigine
Cat. No.: GC14764

Chemical Properties

Cas. No.	84057-84-1		
Chemical Name	6-(2,3-dichlorophenyl)-1,2,4-triazine-3,5-diamine		
SMILES	C1=CC(=C(C(=C1)Cl)Cl)C2=C(N=C(N=N2)N)N		
Formula	$C_9H_7Cl_2N_5$	M.Wt	256.09
Solubility	≥ 12.3mg/mL in DMSO	Storage	Store at -20°C, protect from light
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

Lamotrigine(BW430C) is a novel anticonvulsant drug for inhibition of 5-HT and sodium channelTarget: Sodium ChannelLamotrigine stabilises presynaptic neuronal membranes by blockade of voltage-dependent sodium channels, thus preventing the release of excitatory neurotransmitters, particularly glutamate and aspartate [1]. In rat cerebral cortex tissue incubated with veratrine 10 mg/L, lamotrigine is twice as potent in inhibiting the release of glutamate and aspartate (ED 50 = 5.38 mg/L for each) than the release of GABA (ED50 = 11.2 mg/L), and is much less potent in inhibiting

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acetylcholine release (ED50 = 25.6 mg/L) when cortical slices is exposed to veratrine 75 mg/L. Basal glutamate release is unaffected [2]. Lamotrigine inhibits high-frequency sustained repetitive firing of sodium-dependent action potentials, indicating a direct effect on voltage-activated sodium channels [3]. Lamotrigine (Lamictal), a phenyltriazine derivative, is a well established anticonvulsant agent that has shown efficacy in the prevention of mood episodes in adult patients with bipolar I disorder. lamotrigine significantly delayed time to intervention for a depressive episode and showed limited efficacy in delaying time to intervention for a manic/hypomanic episode, compared with placebo. Lamotrigine is generally well tolerated [4].

References:

[1]. Goa, K.L., S.R. Ross, and P. Chrisp, Lamotrigine. A review of its pharmacological properties and clinical efficacy in epilepsy. Drugs, 1993. 46(1): p. 152-76.
[2]. Leach, M.J., C.M. Marden, and A.A. Miller, Pharmacological studies on lamotrigine, a novel potential antiepileptic drug: II. Neurochemical studies on the mechanism of action. Epilepsia, 1986. 27(5): p. 490-7.
[3]. Cheung, H., D. Kamp, and E. Harris, An in vitro investigation of the action of lamotrigine on neuronal voltage-activated sodium channels. Epilepsy Res, 1992. 13(2): p. 107-12.
[4]. Goldsmith, D.R., et al., Lamotrigine: a review of its use in bipolar disorder. Drugs, 2003. 63(19): p. 2029-50.

Caution: Product has not been fully validated for medical applications. For research use only.
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