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DATASHEET

Lamotrigine

Product overview

Name	Lamotrigine
Cat No	HB0368
Biological action	Inhibitor
Purity	>99%
Description	Na^{2+} / K^{+} / Ca^{2+} channel inhibitor. Anticonvulsant.

Images

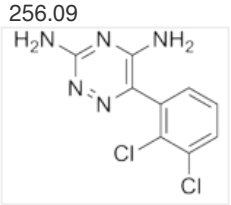
Biological Data

Biological description	Anticonvulsant. Inhibits voltage-dependent Na^{2+} channels, K^{+} and Ca^{2+} channels. Inhibits α4β2-nACh receptor mediated currents and reduces $GABA_A$ receptor transmission. Inhibits 5-HT, noradrenaline and dopamine uptake into synaptosomes (IC_{50} values are 474, 239 and 322 µM respectively). Shows anticonvulsant and anti-bipolar actions. Blood-brain barrier permeable.

Solubility & Handling

Storage instructions	Room temperature
Solubility overview	Soluble in ethanol (10mM) or DMSO (100mM)
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

Chemical Data

Chemical name	6-(2,3-Dichlorophenyl)-1,2,4-triazine-3,5-diamine
Molecular Weight	256.09
Chemical structure	
Molecular Formula	$C_9H_7Cl_2N_5$

CAS Number	84057-84-1
PubChem identifier	3878
SMILES	NC1=NC(N)=C(N=N1)C1=CC=CC(Cl)=C1Cl
InChiKey	PYZRQGJRPPTADH-UHFFFAOYSA-N

References

Modulation of calcium and potassium currents by lamotrigine.

Grunze H *et al* (1998) Neuropsychobiology 38(3)
PubMedID 9778600

Lamotrigine reduces spontaneous and evoked GABAA receptor-mediated synaptic transmission in the basolateral amygdala: implications for its effects in seizure and affective disorders.

Braga MF *et al* (2002) Neuropharmacology 42(4)
PubMedID 11955522

Lamotrigine inhibits monoamine uptake in vitro and modulates 5-hydroxytryptamine uptake in rats.

Southam E *et al* (1998) Eur J Pharmacol 358(1)
PubMedID 9809864

The anticonvulsive drug lamotrigine blocks neuronal {alpha}4{beta}2 nicotinic acetylcholine receptors.

Zheng C *et al* (2010) J Pharmacol Exp Ther 335(2)
PubMedID 20688974