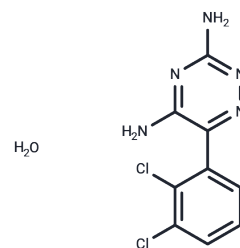


Lamotrigine hydrate

Chemical Properties

CAS No. :	375347-20-9
Formula:	C ₉ H ₉ Cl ₂ N ₅ O
Molecular Weight:	274.11
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



Biological Description

Description	Lamotrigine hydrate is an effective oral active anticonvulsant or antiepileptic agent that selectively blocks voltage-gated Na ⁺ channels, stabilizes presynaptic neuronal membranes and inhibits glutamate release. Lamotrigine hydrate can be used in epilepsy, focal seizure, et al [1] [2].
Targets(IC50)	Others, Autophagy, Sodium Channel
In vitro	Lamotrigine hydrate effectively inhibits the Veratrine-induced release of glutamate and aspartate, displaying equal potency with ED ₅₀ values of 21 μM for both amino acids. However, its efficacy in reducing GABA release is notably weaker, with an ED ₅₀ of 44 μM. Furthermore, Lamotrigine hydrate demonstrates no impact on potassium-evoked amino acid release at concentrations up to 300 μM. Additionally, it is significantly less potent—approximately fivefold—in inhibiting the release of [3H]acetylcholine evoked by Veratrine, with an ED ₅₀ of 100 μM, compared to its effect on glutamate or aspartate release.
In vivo	Lamotrigine hydrate, administered intraperitoneally (IP) 30 minutes prior to pentylenetetrazol at doses of 10 mg/kg, 15 mg/kg, or 20 mg/kg, reduces seizure intensity at higher concentrations and prolongs the latency period before the onset of the first pentylenetetrazol-induced seizure across all doses, in comparison to control groups [2].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.6482 mL	18.2409 mL	36.4817 mL
5 mM	0.7296 mL	3.6482 mL	7.2963 mL
10 mM	0.3648 mL	1.8241 mL	3.6482 mL
50 mM	0.073 mL	0.3648 mL	0.7296 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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