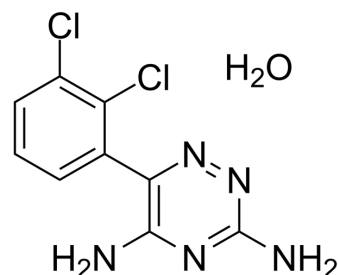


Lamotrigine hydrate

Cat. No.:	HY-B0495A
CAS No.:	375347-20-9
Molecular Formula:	C ₉ H ₉ Cl ₂ N ₃ O
Molecular Weight:	274.11
Target:	Sodium Channel; Autophagy
Pathway:	Membrane Transporter/Ion Channel; Autophagy
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Lamotrigine hydrate is a potent and orally active anticonvulsant or antiepileptic agent. Lamotrigine hydrate selectively blocks voltage-gated Na ⁺ channels, stabilizing presynaptic neuronal membranes and inhibiting glutamate release. Lamotrigine hydrate can be used for the research of epilepsy, focal seizure, et al ^{[1][2]} .
In Vitro	Lamotrigine hydrate inhibits Veratrine evoked release of glutamate and aspartate with ED ₅₀ values of 21 μM for both amino acids, but Lamotrigine hydrate is less potent in the inhibition of GABA release (ED ₅₀ =44 μM. At concentrations up to 300 μM, LTG has no effect on potassium-evoked amino acid ^[1] . Lamotrigine hydrate is some five times less potent in the inhibition of Veratrine-evoked [³ H]acetylcholine release (ED ₅₀ =100 μM) than in glutamate or aspartate release ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Lamotrigine hydrate (IP, 30 min before pentylenetetrazol; 10 mg/kg, 15 mg/kg or 20 mg/kg) decreases the seizure intensity at the higher doses, it increases the latency to the first pentylenetetrazol-induced seizure in all studied doses compared with the controls ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Cell Calcium. March 2022, 102527.
- Pharmacol Biochem Behav. 2018 May;168:43-50.
- Pharmacol Res Perspect. 2021 Oct;9(5):e00879.
- Pharmacol Res Perspect. 2020 Apr;8(2):e00575.

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REFERENCES

[1]. M J Leach, et al. Pharmacological studies on lamotrigine, a novel potential antiepileptic drug: II. Neurochemical studies on the mechanism of action. Epilepsia. Sep-Oct 1986;27(5):490-7.

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

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