Felbamate hydrate

Cat. No.: HY-B0184A

CAS No.: 1177501-39-1

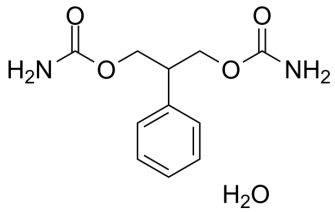
Molecular Formula: $C_{11}H_{16}N_2O_5$

Molecular Weight: 256.26

Target: iGluR

Pathway: Membrane Transporter/Ion Channel; Neuronal Signaling

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Felbamate hydrate (W-554 hydrate) is a potent nonsedative anticonvulsant whose clinical effect may be related to the inhibition of N-methyl-D-aspartate (NMDA) .
IC_{50} & Target	NMDA Receptor[1].
In Vitro	Felbamate hydrate (W-554 hydrate) is an anti-epileptic drug used in the treatment of epilepsy. It is used to treat partial seizures (with and without generalization) in adults and partial and generalized seizures associated with Lennox-Gastaut syndrome in children. However, an increased risk of potentially fatal aplastic anemia and/or liver failure limit the drugs usage to severe refractory epilepsy[1]. Felbamate (W-554) has been proposed to a unique dual mechanism of action as a positive modulator of GABAA receptors and as a blocker of NMDA receptors, particularly isoforms containing the NR2B subunit. Although it is clear that felbamate does cause pharmacological inhibition of NMDA receptor of relevance of NMDA receptor blockade as a strategy for the treatment of human epilepsy has been questioned. Therefore, the importance of the effects of felbamate on NMDA receptors to its therapeutic action in epilepsy is uncertain[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Kuo CC, et al. Use-dependent inhibition of the N-methyl-D-aspartate currents by felbamate: a gating modifier with selective binding to the desensitized channels. Mol Pharmacol. 2004 Feb;65(2):370-80.

[2]. Harty TP, et al. Felbamate block of recombinant N-methyl-D-aspartate receptors: selectivity for the NR2B subunit. Epilepsy Res. 2000 Mar;39(1):47-55.

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