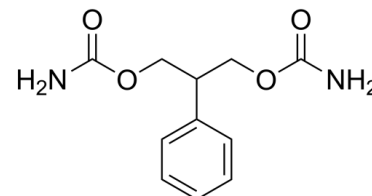


## Data Sheet

<b>Product Name:</b>	Felbamate
<b>Cat. No.:</b>	CS-2068
<b>CAS No.:</b>	25451-15-4
<b>Molecular Formula:</b>	C <sub>11</sub> H <sub>14</sub> N <sub>2</sub> O <sub>4</sub>
<b>Molecular Weight:</b>	238.24
<b>Target:</b>	iGluR
<b>Pathway:</b>	Membrane Transporter/Ion Channel; Neuronal Signaling
<b>Solubility:</b>	DMSO : ≥ 100 mg/mL



### BIOLOGICAL ACTIVITY:

Felbamate (W-554) is a potent nonsedative anticonvulsant whose clinical effect may be related to the inhibition of N-methyl-D-aspartate (NMDA). IC<sub>50</sub> & Target: NMDA Receptor<sup>[1]</sup>. *In Vitro*: Felbamate (W-554) 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<sup>[1]</sup>. 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<sup>[2]</sup>.

### 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.

### CAIndexNames:

1,3-Propanediol, 2-phenyl-, 1,3-dicarbamate

### SMILES:

NC(OCC(C1=CC=CC=C1)COC(N)=O)=O

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

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