

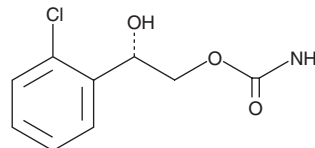
# PRODUCT INFORMATION



## Carisbamate

Item No. 23514

**CAS Registry No.:** 194085-75-1  
**Formal Name:** (1S)-1-(2-chlorophenyl)-1,2-ethanediol, 2-carbamate  
**Synonyms:** JNJ-10234094, RWJ 333369  
**MF:** C<sub>9</sub>H<sub>10</sub>ClNO<sub>3</sub>  
**FW:** 215.6  
**Purity:** ≥98%  
**Supplied as:** A solid  
**Storage:** 4°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Carisbamate is supplied as a solid. A stock solution may be made by dissolving the carisbamate in the solvent of choice, which should be purged with an inert gas. Carisbamate is soluble in the organic solvent DMSO.

### Description

Carisbamate is an antiepileptic agent.<sup>1,2</sup> *In vivo*, administration of carisbamate (10-60 mg/kg) dose-dependently reduces spike and wave discharges in the frontoparietal cortex in a rat model of absence seizures.<sup>1</sup> Carisbamate (10 mg/kg) increases latency to the first running episode in the Wistar audiogenic sensitive rat model of convulsive seizures. It also reduces motor seizure frequency in a rat model of spontaneous seizures in a dose-dependent manner.<sup>2</sup> Carisbamate blocks Na<sub>v</sub>1.2 channels (IC<sub>50</sub> = 68 μM for rat channels) and inhibits repetitive firing of action potentials in rat hippocampal neurons in a dose-dependent manner.<sup>3</sup> It also reduces T-type Ca<sup>2+</sup> currents in HEK cells transfected with human recombinant Ca<sub>v</sub>3.1 channels at a concentration of 300 μM.<sup>4</sup>

### References

1. François, J., Boehrer, A., and Nehlig, A. Effects of carisbamate (RWJ-333369) in two models of genetically determined generalized epilepsy, the GAERS and the audiogenic Wistar AS. *Epilepsia* **49**(3), 393-399 (2008).
2. Grabenstatter, H.L. and Dudek, F.E. A new potential AED, carisbamate, substantially reduces spontaneous motor seizures in rats with kainate-induced epilepsy. *Epilepsia* **49**(10), 1787-1794 (2008).
3. Liu, Y., Yohrling, G.J., Wang, Y., et al. Carisbamate, a novel neuromodulator, inhibits voltage-gated sodium channels and action potential firing of rat hippocampal neurons. *Epilepsy Res.* **83**(1), 66-72 (2009).
4. Kim, D.Y., Zhang, F.X., Nakanishi, S.T., et al. Carisbamate blockade of T-type voltage-gated calcium channels. *Epilepsia* **58**(4), 617-626 (2017).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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