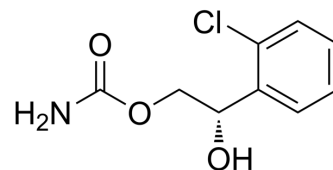


## Carisbamate

Cat. No.:	HY-14948
CAS No.:	194085-75-1
Molecular Formula:	C <sub>9</sub> H <sub>10</sub> ClNO <sub>3</sub>
Molecular Weight:	215.63
Target:	Others
Pathway:	Others
Storage:	Powder    -20°C    3 years 4°C    2 years In solvent   -80°C    6 months -20°C    1 month



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : ≥ 100 mg/mL (463.76 mM)  
 \* "≥" means soluble, but saturation unknown.

	Solvent Concentration	Mass	1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM		4.6376 mL	23.1879 mL	46.3757 mL
	5 mM		0.9275 mL	4.6376 mL	9.2751 mL
	10 mM		0.4638 mL	2.3188 mL	4.6376 mL

Please refer to the solubility information to select the appropriate solvent.

#### In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
Solubility: ≥ 2.5 mg/mL (11.59 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: ≥ 2.5 mg/mL (11.59 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 2.5 mg/mL (11.59 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

Carisbamate (RWJ-333369) is an orally active neuromodulator. Carisbamate prevents the development and production of epilep-like discharges and has a neuroprotective effect after in vitro epilepticus-like injury. Carisbamate has good antiepileptic activity in genetic models of generalized and nonconvulsive epilepsy<sup>[1][2][3]</sup>.

#### In Vitro

Carisbamate (200 μM; 12 h) exhibits antiepileptic effects on SREDs model of hippocampal cells<sup>[1]</sup>.  
 Carisbamate (200 μM; 24 h) shows long lasting effects on the hippocampal neurons that are independent from antiepileptic

effects in vitro<sup>[1]</sup>.

Carisbamate not only inhibits the development and expression of SREDs in the majority of neurons, but also decreases seizure frequency and duration in the few neurons that still has an occasional epileptiform event<sup>[1]</sup>.

Carisbamate (200  $\mu$ M) shows neuroprotective effects on hippocampal cells with SE (status epilepticus)-like injury<sup>[1]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

#### Cell Viability Assay<sup>[1]</sup>

Cell Line:	Hippocampal cells (from 2-day postnatal Sprague-Dawley rat; spontaneous recurrent epileptiform discharges (SREDs) model)
Concentration:	200 $\mu$ M
Incubation Time:	12 h
Result:	Acutely inhibited SREDs with greater than 95% of the neurons exhibited an in vitro antiepileptic effect.

#### Cell Viability Assay<sup>[1]</sup>

Cell Line:	Hippocampal cells (SREDs model)
Concentration:	200 $\mu$ M
Incubation Time:	24 h
Result:	Exhibited cells evaluated the day after treatment were still free of in vitro seizure activity and did not develop SREDs.

### In Vivo

Carisbamate (10, 30, 60 mg/kg; i.p.; single) dose dependently reduces the expression of spike-and-wave discharges (SWD) in absence seizures rat model<sup>[2]</sup>.

Carisbamate (20, 30 mg/kg; i.p.; single) shows no wild running episode or tonic seizure occurs in any of the rats tested<sup>[2]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male genetic absence epilepsy rat (absence seizures model) <sup>[2]</sup> .
Dosage:	10, 30, 60 mg/kg
Administration:	Intraperitoneal injection; single.
Result:	Completely inhibited SWD when at 60 mg/kg after 120 min, and restored the duration of SWD to the control level when at 30 mg/kg after 100 min.

Animal Model:	Male Wistar audiogenic sensitive rat (convulsive seizures model) <sup>[2]</sup> .
Dosage:	10, 20, 30 mg/kg
Administration:	Intraperitoneal injection; single.
Result:	Shown no wild running episode or tonic seizure occurred in any of the rats tested when at 20 and 30 mg/kg. Increased by 327% the latency to the tonic seizure that still occurred in the six of eight rats studied when at 10 mg/kg.

## REFERENCES

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[1]. Deshpande LS, et al. Carisbamate prevents the development and expression of spontaneous recurrent epileptiform discharges and is neuroprotective in cultured hippocampal neurons. *Epilepsia*. 2008 Oct;49(10):1795-802.

[2]. François J, et al. Effects of carisbamate (RWJ-333369) in two models of genetically determined generalized epilepsy, the GAERS and the audiogenic Wistar AS. *Epilepsia*. 2008 Mar;49(3):393-9.

[3]. Novak GP, et al. Carisbamate (RWJ-333369). *Neurotherapeutics*. 2007 Jan;4(1):106-9.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA