(-)-Carvone

Cat. No.: HY-W017423

CAS No.: 6485-40-1

Molecular Formula: $C_{10}H_{14}O$

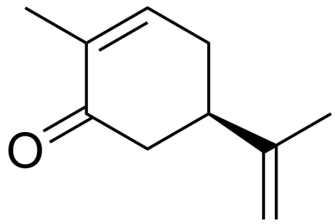
Molecular Weight: 150.22

Target: Cholinesterase (ChE)

Pathway: Neuronal Signaling

Storage:

Pure form	-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 (665.69 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	6.6569 mL	33.2845 mL	66.5690 mL
	5 mM	1.3314 mL	6.6569 mL	13.3138 mL
	10 mM	0.6657 mL	3.3285 mL	6.6569 mL

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

BIOLOGICAL ACTIVITY

Description

(-)-Carvone is an insect neurotoxin and a irreversible acetylcholinesterase (AChE) inhibitor. (-)-Carvone can be used as a bird repellent, inhibits larval growth, decreases pupatation rate, and increases mortality of larvae[1][2].

IC_{50} & Target

eel AChE
2.19 mM (Ki)

In Vitro

(-)-Carvone (3.04 mM; 30 min) inactivates eel AChE with K_i value of 2.19 mM[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

(-)-Carvone (5% in absolute ethanol v/v, 20 μL; application to the thoraces ventral surfaces) inhibits AChE such as horse serum cholinesterase, house fly head cholinesterases, and head and thorax cholinesterases from the Madagascar roach in vitro[1].
(-)-Carvone (0.05%-0.1% w/v; p.o.; 7 d) inhibits E. insulana larvae growth, decreases weight of larvae[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Female roaches (Gromphadorhina portentosa) (6.4 g-6.8 g)[1]
Dosage:	5% in absolute ethanol v/v, 20 μL
Administration:	Application to the ventral surfaces of their thoraces; decapitated and crude at various time intervals (0, 2, 4, 5, 20, 24, and 26 hr)
Result:	Inhibited the activity of AChE in the extracts of both the head and thorax.

REFERENCES

[1]. Grundy D L, et al. Inhibition of acetylcholinesterases by pulegone-1, 2-epoxide[J]. Pesticide biochemistry and physiology, 1985, 23(3): 383-388.

[2]. Meisner J, et al. The response of Earias insulana Boisd. larvae to phagodeterrent (–)-carvone incorporated in an artificial diet 1[J]. Zeitschrift für Angewandte Entomologie, 1980, 90(1-5): 80-82.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

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