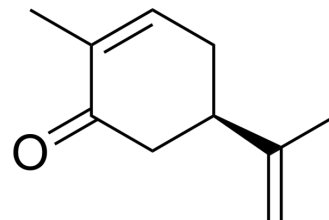


(-)-Carvone

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:	<div>Pure form</div> <div>-20°C 3 years</div> <div>4°C 2 years</div> <div>In solvent</div> <div>-80°C 6 months</div> <div>-20°C 1 month</div>



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (665.69 mM; Need ultrasonic)

	Solvent Concentration	Mass	1 mg	5 mg	10 mg
Preparing Stock Solutions	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 pupation rate, and increases mortality of larvae ^{[1][2]} .
IC ₅₀ & Target	eel AChE 2.19 mM (K _i)
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 (<i>Gromphadorhina portentosa</i>) (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.

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

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