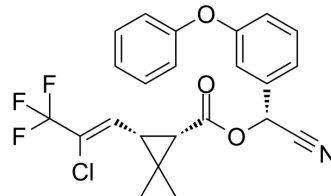


λ-Cyhalothrin

Cat. No.:	HY-B0836
CAS No.:	91465-08-6
Molecular Formula:	C ₂₃ H ₁₉ ClF ₃ NO ₃
Molecular Weight:	449.85
Target:	Parasite; Sodium Channel
Pathway:	Anti-infection; Membrane Transporter/Ion Channel
Storage:	4°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 33.33 mg/mL (74.09 mM; Need ultrasonic)					
	Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg	10 mg
		Concentration				
		1 mM		2.2230 mL	11.1148 mL	22.2296 mL
		5 mM		0.4446 mL	2.2230 mL	4.4459 mL
10 mM		0.2223 mL	1.1115 mL	2.2230 mL		
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	1. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (5.56 mM); Clear solution					

BIOLOGICAL ACTIVITY

Description	λ-Cyhalothrin is a high efficiency, broad-spectrum type II synthetic pyrethroid insecticide containing α-cyano group. λ-Cyhalothrin is used to control a wide range of pests in a variety of applications. λ-Cyhalothrin is a neurotoxin that targets sodium channels in the membranes of neurons in the central nervous system ^[1] .
In Vitro	<p>The mechanism of λ-Cyhalothrin toxicity produces delay in sodium channel inactivation, which leads to persistent depolarization of the nerve membrane. λ-Cyhalothrin produces membrane depolarization, calcium ion influx, and neurotransmitter release from rat brain synaptosomes^[1].</p> <p>λ-Cyhalothrin possesses estrogenic properties and has an ability to function as a xenoestrogen promoting human breast carcinoma cell proliferation in vitro^[1].</p> <p>λ-Cyhalothrin has found multiple uses in pest (fleas, cockroaches, flies, and ants) control^[1].</p> <p>λ-Cyhalothrin is highly effective against the malaria transmitting species of Anopheles^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

In Vivo

The effect of λ -Cyhalothrin (i.p.) on memory, movement activity, and co-ordination in mice exposed to bilateral clamping of the carotid arteries (BCCA) is investigated. Neither memory nor movement co-ordination are impaired by BCCA or λ -Cyhalothrin. Exploratory locomotor activity is significantly reduced in the BCCA/LCH group. Spontaneous movement activity is significantly reduced in the BCCA/ λ -Cyhalothrin group. Exposure to λ -Cyhalothrin coexisting with BCCA decreases motor activity in the mice in 2 subsequent 30-min^[1].

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

CUSTOMER VALIDATION

- Environ Pollut. 2022 Sep 7;120123.
- J Plant Ecol. 24 August 2022.

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REFERENCES

[1]. Barbara Nieradko-Iwanicka, et al. Effect of Lambda-Cyhalothrin on Memory and Movement in Mice After Transient Incomplete Cerebral Ischemia. Ann Agric Environ Med. 2011;18(1):41-5.

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

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