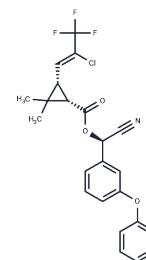


λ -Cyhalothrin

Chemical Properties

CAS No. :	91465-08-6
Formula:	C ₂₃ H ₁₉ ClF ₃ NO ₃
Molecular Weight:	449.85
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



Biological Description

Description	λ -Cyhalothrin (Icon) is a type II synthetic pyrethroid insecticide featuring a high-efficiency, broad-spectrum formula with an α -cyano group. It is employed across various applications for controlling a wide array of pests. As a neurotoxin, λ -Cyhalothrin acts on sodium channels in neuron membranes within the central nervous system.
Targets(IC50)	Parasite,Sodium Channel
In vitro	λ -Cyhalothrin's toxicity mechanism involves delaying sodium channel inactivation, leading to prolonged depolarization of the nerve membrane. This compound causes membrane depolarization, influx of calcium ions, and neurotransmitter release in rat brain synaptosomes[1]. Additionally, λ -Cyhalothrin exhibits estrogenic qualities, acting as a xenoestrogen that promotes proliferation of human breast carcinoma cells in vitro [1]. It is extensively utilized for controlling pests (fleas, cockroaches, flies, and ants)[1] and is highly effective against Anopheles species, known for transmitting malaria[1].
In vivo	The investigation assesses the impact of λ -Cyhalothrin (i.p.) on memory, movement activity, and coordination in mice subjected to bilateral clamping of the carotid arteries (BCCA). It was found that neither memory nor coordination was negatively affected by BCCA or λ -Cyhalothrin. However, a notable decline in exploratory locomotor activity was observed in the BCCA/ λ -Cyhalothrin group, and spontaneous movement activity significantly decreased in the BCCA/ λ -Cyhalothrin group. Furthermore, when exposed to λ -Cyhalothrin in the presence of BCCA, a decrease in motor activity was evident in mice during two subsequent 30-minute sessions[1].

Solubility Information

Solubility	DMSO: 250 mg/mL (555.74 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Corn Oil: 2.5 mg/mL (5.56 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.223 mL	11.1148 mL	22.2296 mL
5 mM	0.4446 mL	2.223 mL	4.4459 mL
10 mM	0.2223 mL	1.1115 mL	2.223 mL
50 mM	0.0445 mL	0.2223 mL	0.4446 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

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