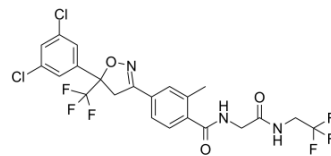


Fluralaner

Cat. No.:	HY-16973		
CAS No.:	864731-61-3		
Molecular Formula:	C ₂₂ H ₁₇ Cl ₂ F ₆ N ₃ O ₃		
Molecular Weight:	556.29		
Target:	Parasite		
Pathway:	Anti-infection		
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 : ≥ 221 mg/mL (397.27 mM)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	1.7976 mL	8.9881 mL	17.9762 mL
	5 mM	0.3595 mL	1.7976 mL	3.5952 mL
	10 mM	0.1798 mL	0.8988 mL	1.7976 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: ≥ 2.25 mg/mL (4.04 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
 Solubility: ≥ 2.25 mg/mL (4.04 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
 Solubility: ≥ 2.25 mg/mL (4.04 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Fluralaner (INN) is a systemic insecticide and acaricide Fluralaner through potent blockage of GABA and L-glutamate gated chloride channels.

In Vitro

Fluralaner potently inhibits flea reproduction capacity in vitro. Oviposition ceases completely at concentrations as low as 25.0 ng/mL. While no ovicidal effect is observed, fluralaner exerts a larvicidal effect at exceptionally low concentrations (6.25 ng/mL)^[1].

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

In Vivo

In the simulated flea-infested home environment, flea-control efficacy on fluralaner-treated dogs is >99% at every time point measured for 12 weeks. No adverse events are observed in fluralaner-treated dogs. Fluralaner completely controls egg laying, larval development and flea reproduction even at sub-insecticidal concentrations. Oral treatment of dogs with fluralaner is highly effective for eliminating fleas in a simulated flea-infested home environment^[1]. After single oral administration of Bravecto chewable tablets, mite numbers in skin scrapings are reduced by 99.8% on Day 28 and by 100% on Days 56 and 84. A marked decrease is observed in the occurrence of erythematous patches, crusts, casts and scales in the dogs treated with Bravecto^[2].

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PROTOCOL

Animal Administration ^[2]

Dogs: Thirty-two (16 male and 16 female) healthy 8-week old Beagle dogs weighing 2.0 - 3.6 kg at first administration are included in the study. Fluralaner is administered on three occasions at 8-week intervals at doses of up to 56, 168, and 280 mg fluralaner/kg body weight, equivalent to 1, 3, and 5 times the highest recommended treatment dose of fluralaner; sham dosed dogs served as controls^[2].

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

CUSTOMER VALIDATION

- Research Square Preprint. 2020 Dec.

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REFERENCES

[1]. Williams H, et al. Fluralaner, a novel isoxazoline, prevents flea (*Ctenocephalides felis*) reproduction in vitro and in a simulated home environment. *Parasit Vectors*. 2014 Jun 19;7:275.

[2]. Walther FM, et al. Safety of fluralaner, a novel systemic antiparasitic drug, in MDR1(-/-) Collies after oral administration. *Parasit Vectors*. 2014 Mar 6;7:86.

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

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