

Lotilaner

Chemical Properties

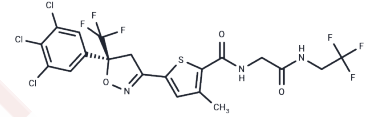
CAS No. : 1369852-71-0

Formula: C₂₀H₁₄Cl₃F₆N₃O₃S

Molecular Weight: 596.76

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	Lotilaner is a parasiticide. It is used as a potent non-competitive antagonist of insects GABA _A receptors (IC ₅₀ of 23.84 nM for <i>Drosophila melanogaster</i> GABA receptor). It also has no effect on a dog GABA _A receptor.
Targets(IC ₅₀)	GABA Receptor,Parasite
In vitro	Lotilaner displays IC ₅₀ s of 38.25 ± 3.75, 52.40 ± 4.54, 36.79 ± 4.39 nM for <i>Drosophila melanogaster</i> dieldrin/fipronil-resistant forms (DmR2), <i>Lepeophtheirus salmonis</i> (Ls) and <i>Rhipicephalus microplus</i> (Rm) GABA _A receptors, respectively.

Solubility Information

Solubility	DMSO: 166.67 mg/mL (279.29 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (3.35 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	1.6757 mL	8.3786 mL	16.7572 mL
5 mM	0.3351 mL	1.6757 mL	3.3514 mL
10 mM	0.1676 mL	0.8379 mL	1.6757 mL
50 mM	0.0335 mL	0.1676 mL	0.3351 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

Lotilaner, et al. The novel isoxazoline ectoparasiticide lotilaner (Credelio™): a non-competitive antagonist specific to invertebrates γ -aminobutyric acid-gated chloride channels (GABA_ACl_s). Parasit Vectors. 2017 Nov 1;10(1):530.

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