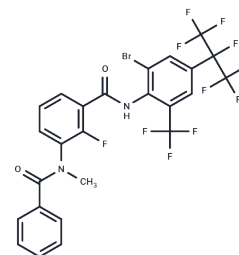


## Broflanilide

## Chemical Properties

CAS No. :	1207727-04-5
Formula:	C <sub>25</sub> H <sub>14</sub> BrF <sub>11</sub> N <sub>2</sub> O <sub>2</sub>
Molecular Weight:	663.29
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	Broflanilide is an insecticide-resistant GABA receptor antagonist for dieldrin. Its metabolite, Desmethyl-Broflanilide, can inhibit the RDL GABAR of the striped night moth, with an IC <sub>50</sub> value of 1.3 nM.
Targets(IC <sub>50</sub> )	GABA Receptor
In vitro	Broflanilide, an insecticide metabolized to desmethyl-broflanilide, exhibits weak activity against human GABAA $\alpha$ 1 $\beta$ 2 $\gamma$ 2, mammalian GABAA $\alpha$ 1 $\beta$ 3 $\gamma$ 2, and human glycine receptor (GlyR) $\alpha$ 1 $\beta$ with IC <sub>50</sub> s >3 $\mu$ M, and less potent inhibition of GlyR $\alpha$ 1-A288G $\beta$ and GlyR $\alpha$ 1-A288G with IC <sub>50</sub> s of 0.706 $\mu$ M and 0.149 $\mu$ M, respectively.

## Solubility Information

Solubility	DMSO: 262.5 mg/mL (395.75 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Corn Oil: 3.3 mg/mL (4.98 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

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	1mg	5mg	10mg
1 mM	1.5076 mL	7.5382 mL	15.0764 mL
5 mM	0.3015 mL	1.5076 mL	3.0153 mL
10 mM	0.1508 mL	0.7538 mL	1.5076 mL
50 mM	0.0302 mL	0.1508 mL	0.3015 mL

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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

Nakao T, et al. Broflanilide: A meta-diamide insecticide with a novel mode of action. *Bioorg Med Chem.* 2016 Feb 1;24(3):372-7.

Zhang S W, Zeng Q H, Yang H, et al. Sublethal and transgenerational effects of broflanilide on *Myzus persicae* (Sulzer)(Hemiptera: Aphididae). *Crop Protection.* 2023: 106421.

Yang H Z, Zhang S W, Yang H, et al. Safety evaluation and sublethal effect of broflanilide on *Aphidius gifuensis*. *Environmental Entomology.* 2024: nvae053.

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