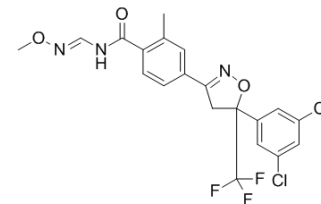


## Fluxametamide

<b>Cat. No.:</b>	HY-108690		
<b>CAS No.:</b>	928783-29-3		
<b>Molecular Formula:</b>	C <sub>20</sub> H <sub>16</sub> Cl <sub>2</sub> F <sub>3</sub> N <sub>3</sub> O <sub>3</sub>		
<b>Molecular Weight:</b>	474.26		
<b>Target:</b>	GABA Receptor		
<b>Pathway:</b>	Membrane Transporter/Ion Channel; Neuronal Signaling		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 125 mg/mL (263.57 mM; Need ultrasonic)					
		Solvent Concentration	Mass	1 mg	5 mg	10 mg
	<b>Preparing Stock Solutions</b>	1 mM		2.1085 mL	10.5427 mL	21.0855 mL
		5 mM		0.4217 mL	2.1085 mL	4.2171 mL
10 mM			0.2109 mL	1.0543 mL	2.1085 mL	
Please refer to the solubility information to select the appropriate solvent.						
<b>In Vivo</b>	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.08 mg/mL (4.39 mM); Clear solution  2. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.08 mg/mL (4.39 mM); Clear solution					

### BIOLOGICAL ACTIVITY

<b>Description</b>	Fluxametamide is an insecticide with wide spectrum, acts as an antagonist of GABA- and glutamate-gated chloride channels, with IC <sub>50</sub> of 1.95 nM and 225 nM for <i>M. domestica</i> GABACls and GluClS.
<b>IC<sub>50</sub> &amp; Target</b>	IC <sub>50</sub> : 1.95 nM ( <i>M. domestica</i> GABACls), 225 nM ( <i>M. domestica</i> GluClS) <sup>[1]</sup>
<b>In Vitro</b>	Fluxametamide is an antagonist of GABA- and glutamate-gated chloride channels, dose-dependently inhibits currents induced by GABA and glutamate in <i>M. domestica</i> GABACls and GluClS, with IC <sub>50</sub> values of 1.95 (1.18-3.21) nM and 225 (137-372) nM, respectively, and displays potent antagonistic activity against <i>T. urticae</i> GABACls with an IC <sub>50</sub> of 0.219 (0.127-0.381) nM. Fluxametamide inhibits GABA responses in the wild-type <i>L. striatellus</i> GABACls with IC <sub>50</sub> values of 1.40 (0.57-3.29) nM; in the A2'N mutant GABACls, the IC <sub>50</sub> value is 3.51 (2.17-5.69) nM. Moreover, Fluxametamide scarcely inhibits GABA (EC <sub>50</sub> )-

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induced currents in rat GABA<sub>A</sub>Rs at 10  $\mu$ M and with no inhibition on glycine (EC<sub>50</sub>)-induced current in human  $\alpha$ 1 GlyCIs at tested concentrations<sup>[1]</sup>.

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

**In Vivo**

Fluxametamide shows significant insecticidal activity with an LD<sub>50</sub> (LD<sub>95</sub>) value of 12.9  $\pm$  4.9 ng/fly (38.7  $\pm$  6.3 ng/fly)<sup>[1]</sup>.

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

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**REFERENCES**

[1]. MihoAsahi, et al. Fluxametamide: A novel isoxazoline insecticide that acts via distinctive antagonism of insect ligand-gated chloride channels. Pesticide Biochemistry and Physiology.

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

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