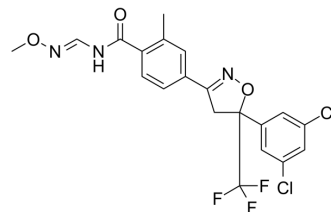


Fluxametamide

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



SOLVENT & SOLUBILITY

In Vitro	DMSO : 125 mg/mL (263.57 mM; Need ultrasonic)			
		Solvent	Mass	
		Concentration	1 mg	5 mg
	Preparing Stock Solutions	1 mM	2.1085 mL	10.5427 mL
		5 mM	0.4217 mL	2.1085 mL
		10 mM	0.2109 mL	1.0543 mL
	Please refer to the solubility information to select the appropriate solvent.			
In Vivo	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

Description	Fluxametamide is an insecticide with wide spectrum, acts as an antagonist of GABA- and glutamate-gated chloride channels, with IC ₅₀ of 1.95 nM and 225 nM for <i>M. domestica</i> GABACls and GluClS.
IC₅₀ & Target	IC ₅₀ : 1.95 nM (<i>M. domestica</i> GABACls), 225 nM (<i>M. domestica</i> GluClS) ^[1]
In Vitro	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 ₅₀ 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 ₅₀ of 0.219 (0.127-0.381) nM. Fluxametamide inhibits GABA responses in the wild-type <i>L. striatellus</i> GABACls with IC ₅₀ values of 1.40 (0.57-3.29) nM; in the A2'N mutant GABACls, the IC ₅₀ value is 3.51 (2.17-5.69) nM. Moreover, Fluxametamide scarcely inhibits GABA (EC ₅₀)-

induced currents in rat GABA_ARs at 10 μ M and with no inhibition on glycine (EC₅₀)-induced current in human α 1 GlyCIs at tested concentrations^[1].

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

In Vivo

Fluxametamide shows significant insecticidal activity with an LD₅₀ (LD₉₅) value of 12.9 \pm 4.9 ng/fly (38.7 \pm 6.3 ng/fly)^[1].

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

CUSTOMER VALIDATION

- Agronomy. 2022, 12(7), 1656.
- Crop Prot. January 2023, 106101.

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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.

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

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