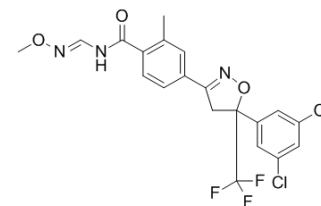


Fluxametamide

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	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (263.57 mM; Need ultrasonic)
 H₂O : < 0.1 mg/mL (insoluble)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	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.

In Vivo

- 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
- 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 IC₅₀ of 1.95 nM and 225 nM for *M. domestica* GABACls and GluCl_s.

IC₅₀ & Target

IC₅₀: 1.95 nM (*M. domestica* GABACls), 225 nM (*M. domestica* GluCl_s)^[1]

In Vitro

Fluxametamide is an antagonist of GABA- and glutamate-gated chloride channels, dose-dependently inhibits currents induced by GABA and glutamate in *M. domestica* GABACls and GluCl_s, with IC₅₀ values of 1.95 (1.18-3.21) nM and 225 (137-372) nM, respectively, and displays potent antagonistic activity against *T. urticae* GABACls with an IC₅₀ of

	0.219 (0.127-0.381) nM. Fluxametamide inhibits GABA responses in the wild-type <i>L. striatellus</i> GABA _A receptors with IC ₅₀ values of 1.40 (0.57-3.29) nM; in the A2'N mutant GABA _A receptors, the IC ₅₀ value is 3.51 (2.17-5.69) nM. Moreover, Fluxametamide scarcely inhibits GABA (EC ₅₀)-induced currents in rat GABA _A receptors at 10 μM and with no inhibition on glycine (EC ₅₀)-induced current in human α1 GlyC _l s at tested concentrations ^[1] .
In Vivo	Fluxametamide shows significant insecticidal activity with an LD ₅₀ (LD ₉₅) value of 12.9 ± 4.9 ng/fly (38.7 ± 6.3 ng/fly) [1].

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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