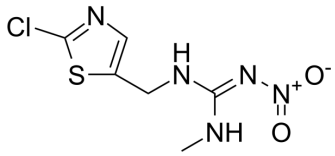
Clothianidin

Cat. No.:	HY-133167
CAS No.:	210880-92-5
Molecular Formula:	$C_6H_8ClN_5O_2S$
Molecular Weight:	249.68
Target:	Others
Pathway:	Others

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 : 100 mg/mL (400.51 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	4.0051 mL	20.0256 mL	40.0513 mL
	5 mM	0.8010 mL	4.0051 mL	8.0103 mL
	10 mM	0.4005 mL	2.0026 mL	4.0051 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: ≥ 2.5 mg/mL (10.01 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (10.01 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (10.01 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Clothianidin is a neonicotinoid insecticide. Clothianidin shows excellent long-term control effect in small doses against various insect pests such as Coleoptera, Thysanoptera, Lepidoptera, Diptera, Homoptera, Heteroptera, Orthoptera and Isoptera families. Clothianidin has various application methods and high safety for crops[1].

In Vitro

Clothianidin (30 nM) exhibits high activity on isolated neurons[2].
Clothianidin (1 μg/L; 36 h) shows sublethal effect on monarch butterfly larvae in milkweed[3].
Clothianidin (0.25 mg/seed and 0.50 mg/seed) has a low concentration in soil and water in farmland cultivated with corn

and soybean[4].

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

REFERENCES

[1]. Uneme H. Chemistry of clothianidin and related compounds. J Agric Food Chem. 2011 Apr 13;59(7):2932-7.

[2]. Nauen R, et al. Thiamethoxam is a neonicotinoid precursor converted to clothianidin in insects and plants[J]. Pesticide biochemistry and physiology, 2003, 76(2): 55-69.

[3]. Pecenka JR, et al. Non-target effects of clothianidin on monarch butterflies. Naturwissenschaften. 2015 Apr;102(3-4):19.

[4]. de Perre C, et al. Fate and effects of clothianidin in fields using conservation practices. Environ Toxicol Chem. 2015 Feb;34(2):258-65.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA