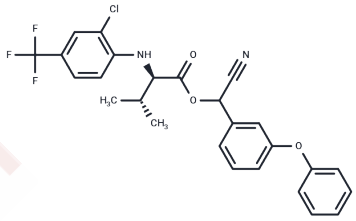
Data Sheet (Cat.No.T35419)

TargetMol

τ-Fluvalinate

Chemical Properties



CAS No. : 102851-06-9

Formula: C26H22ClF3N2O3

Molecular Weight: 502.91

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	τ-Fluvalinate is a pyrethroid acaricide.1It induces tail currents in Western honeybee (A. mellifera) voltage-gated sodium channels (AmNav1) expressed inXenopusoocytes (EC50= 60 nM). It also induces tail currents in honeybee parasitic Varroa mite (V. destructor) Nav1 channels (VdNav1) expressed inXenopusoocytes (EC50= 160 nM) with a faster tail current decay than that of AmNav1 channels. Topical application of τ-fluvalinate (2 μl) in combination with coumaphos , atrazine , 2,4-DMPF, chlorpyrifos , and chlorothalonil does not affect honeybee queen mass, egg-laying patterns, or the mass of daughter worker bees at emergence.2Formulations containing τ-fluvalinate have been used to control Varroa mites in beehives.
Targets(IC50)	Others

Solubility Information

Solubility	DMSO: 10 mg/mL (19.88 mM),Sonication is recommended. Ethanol: 10 mg/mL (19.88 mM),Sonication is recommended. DMF: 10 mg/mL (19.88 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.9884 mL	9.9421 mL	19.8843 mL
5 mM	0.3977 mL	1.9884 mL	3.9769 mL
10 mM	0.1988 mL	0.9942 mL	1.9884 mL
50 mM	0.0398 mL	0.1988 mL	0.3977 mL

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

Gosselin-Badaroudine, P., and Chahine, M.Biophysical characterization of the Varroa destructor NaV1 sodium channel and its affinity for τ-fluvalinate insecticideFASEB J.31(7)3066-3071(2017)
McAfee, A.Honey bee queen health is unaffected by contact exposure to pesticides commonly found in beeswaxSci. Rep.11(1)15151(2021)