

Product Data Sheet

Product Name: τ -Fluvalinate

Cat. No.: GC49296

Chemical Properties

Cas. No. 102851-06-9

SMILES FC(F)(F)C1=CC(Cl)=C(N[C@H](C(C)C)C(OC(C2=CC=CC(OC3=CC=CC=C3)=C2)C#N)=O)C=C1

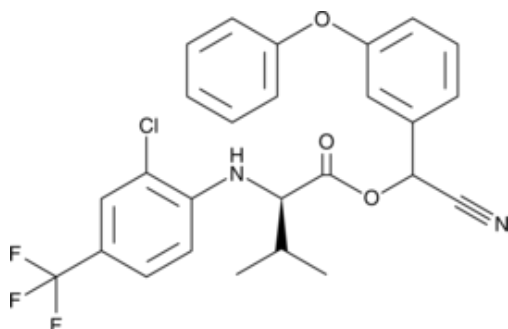
Formula C₂₆H₂₂ClF₃N₂O₃ M.Wt 502.9

Solubility DMF: 10 mg/ml, DMSO: 10 mg/ml, Ethanol: 10 mg/ml Storage -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

τ -Fluvalinate is a pyrethroid acaricide.¹ It induces tail currents in Western honeybee (*A. mellifera*) voltage-gated sodium channels (AmNa_v1) expressed in *Xenopus* oocytes (EC₅₀ = 60 nM). It also induces tail currents in honeybee parasitic Varroa mite (*V. destructor*) Na_v1 channels (VdNa_v1) expressed in *Xenopus* oocytes (EC₅₀ = 160 nM) with a faster tail current decay than that of AmNa_v1 channels. Topical application of τ -fluvalinate (2 μ l) 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.² Formulations containing τ -fluvalinate have been

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used to control Varroa mites in beehives.

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

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