

Product Data Sheet

Product Name: Chlorantraniliprole

Cat. No.: GC30656

Chemical Properties

Cas. No. 500008-45-7

SMILES O=C(C1=CC(Br)=NN1C2=NC=CC=C2Cl)NC3=C(C(NC)=O)C=C(Cl)C=C3C

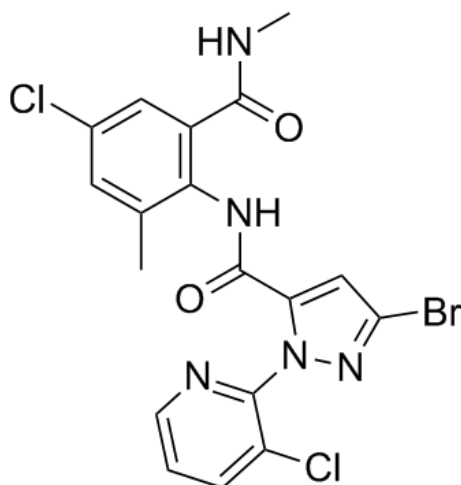
Formula $C_{18}H_{14}BrCl_2N_5O_2$ M.Wt 483.15

Solubility DMSO : ≥ 62.5 mg/mL (129.36 mM); Water : < 0.1 mg/mL (insoluble) Storage Store at -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

Chlorantraniliprole is an insecticide that potently and selectively activates insect ryanodine receptor, with EC₅₀s of 40 nM and 50 nM for *Drosophila melanogaster* and *H. virescens* ryanodine receptor, and ~300-fold more potent than that in the mouse myoblast cell line, C2C12 (EC₅₀, 14 μM).

Chlorantraniliprole is an insecticide that potently and selectively activates insect ryanodine receptor. Chlorantraniliprole actions by release of intracellular Ca^{2+} stores mediated by the ryanodine

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

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receptor. Chlorantraniliprole is ~300-fold less potent against ryanodine receptor (RyRs) in the mouse myoblast cell line, C2C12 (EC₅₀, 14 μ M), than in insect RyRs from *Drosophila melanogaster* and *H. virescens* (EC₅₀, 40 nM, 50 nM), and shows little selectivity at the rat cell line RyR2 (EC₅₀, >100 μ M)[1].

Chlorantraniliprole has low acute mammalian toxicity with an acute oral LD₅₀ of >5000 mg/kg in rats, and little to no toxicity in 90-day studies, at dosing as high as 1500 mg/kg/day[1].

[1]. George P.Lahm, et al. Rynaxypyr: A new insecticidal anthranilic diamide that acts as a potent and selective ryanodine receptor activator. *Bioorganic & Medicinal Chemistry Letters*. 2007 Nov 15;17(22):6274-6279.

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