

Product Data Sheet

Product Name: Flupyrimin

Cat. No.: GC64394

Chemical Properties

Cas. No. 1689566-03-7

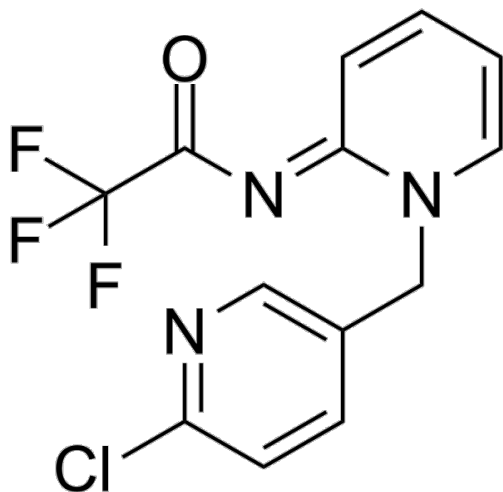
Formula $C_{13}H_9ClF_3N_3O$ M.Wt 315.68

Solubility DMSO : 250 mg/mL (791.94 mM; Need ultrasonic) 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

Flupyrimin (FLP) is a novel insecticide with a trifluoroacetyl pharmacophore and an antagonist of insect nicotinic acetylcholine receptors (nAChRs)^[1, 2]. nAChRs are ligand-gated ion channels that are primarily expressed in the central nervous system of insects and are direct targets of

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

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insecticides^[3]. Flupyrimin is a novel nicotinoid insecticide with unique biological properties, no cross-resistance, and is safe for pollinating insects^[4]. Flupyrimin can quench the intrinsic fluorescence of human serum albumin/bovine serum albumin (HSA/BSA)^[5]. Flupyrimin shows good efficacy against rice pests that are insensitive to neonicotinoids^[6].

References:

- [1] Umetsu N, Shirai Y. Development of novel pesticides in the 21st century[J]. Journal of Pesticide Science, 2020, 45(2): 54-74.
- [2] Terajima T, Suzuki T, Horikoshi R, et al. Deciphering the flupyrimin binding surface on the insect nicotinic acetylcholine receptor[J]. Journal of Agricultural and Food Chemistry, 2021, 69(33): 9551-9556.
- [3] Yuan X F, Zhong H, Xia Z Y, et al. Integrated transcriptome and 1H NMR-based metabolome to explore the potential mechanism of Spodoptera litura in response to flupyrimin[J]. Pesticide Biochemistry and Physiology, 2024, 205: 106146.
- [4] Lu X, Xu H, Zhang X, et al. Design, synthesis and bioactivity of novel low bee-toxicity compounds based on flupyrimin[J]. Molecules, 2022, 27(18): 6133.
- [5] Zhao Z, Shi T, Chu Y, et al. Comparison of the interactions of flupyrimin and nitenpyram with serum albumins via multiple analysis methods[J]. Chemosphere, 2022, 289: 133139.
- [6] Jeschke P. Status and outlook for acaricide and insecticide discovery[J]. Pest management science, 2021, 77(1): 64-76.

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