Pirimiphos-methyl

Cat. No.: HY-B1881

CAS No.: 29232-93-7

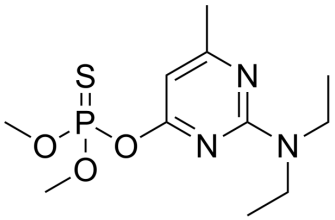
Molecular Formula: $C_{11}H_{20}N_3O_3PS$

Molecular Weight: 305.33

Target: Parasite; Cholinesterase (ChE)

Pathway: Anti-infection; Neuronal Signaling

Storage: 4°C, sealed storage, away from moisture and light
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (163.76 mM; Need ultrasonic)

Preparing Stock Solutions	Concentration / Solvent / Mass	1 mg	5 mg	10 mg
	1 mM	3.2751 mL	16.3757 mL	32.7515 mL
	5 mM	0.6550 mL	3.2751 mL	6.5503 mL
	10 mM	0.3275 mL	1.6376 mL	3.2751 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 (8.19 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 2.5 mg/mL (8.19 mM); Suspended solution; Need ultrasonic
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (8.19 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Pirimiphos-methyl is a rapid-acting organophosphorus insecticide and acaricide, causing inhibition of AChE in target organisms. Pirimiphos-methyl is often used for prevention and control of beetles, snout beetles, moths and Ephestia cautella during storage of agricultural grains[1][2][3].

IC_{50} & Target	Mite	AChE

CUSTOMER VALIDATION

- Chemosphere. 2023 Jul 17;139541.

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REFERENCES

[1]. Shizhuang Weng, et al. Detection of Pirimiphos-Methyl in Wheat Using Surface-Enhanced Raman Spectroscopy and Chemometric Methods. Molecules. 2019 Apr 30;24(9):1691.

[2]. Pål A Olsvik, et al. In Vitro Toxicity of Pirimiphos-Methyl in Atlantic Salmon Hepatocytes. Toxicol In Vitro. 2017 Mar;39:1-14.

[3]. Esther Borrás, et al. Atmospheric Degradation of the Organothiophosphate Insecticide - Pirimiphos-methyl. Sci Total Environ. 2017 Feb 1;579:1-9.

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