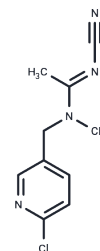


## Acetamiprid

## Chemical Properties

CAS No. :	135410-20-7
Formula:	C <sub>10</sub> H <sub>11</sub> ClN <sub>4</sub>
Molecular Weight:	222.67
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	Acetamiprid is a nicotinic acetylcholine receptor (nAChR) agonist. Acetamiprid is a neonicotinoid insecticide used worldwide. It is shown to be associated with neuromuscular and reproductive disorders.
Targets(IC50)	AChR
In vivo	Acetamiprid decreases body weight and mildly affects spermatogenesis [1]. It disrupts testosterone biosynthesis by reducing the conversion rate of cholesterol to testosterone and preventing cholesterol from entering Leydig cell mitochondria, causing reproductive damage in rats [2]. Additionally, it decreases the expression of testosterone-metabolism genes, nAChR subunit genes, and proliferation-associated genes in mice [1].

## Solubility Information

Solubility	DMSO: 122.5 mg/mL (550.14 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 3.3 mg/mL (14.82 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

### Preparing Stock Solutions

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	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	4.491 mL	22.4548 mL	44.9095 mL
5 mM	0.8982 mL	4.491 mL	8.9819 mL
10 mM	0.4491 mL	2.2455 mL	4.491 mL
50 mM	0.0898 mL	0.4491 mL	0.8982 mL

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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

Terayama H, et al. Effect of acetamiprid on the immature murine testes. *Int J Environ Health Res.* 2018 Dec;28(6): 683-696.

Kong D, et al. Acetamiprid inhibits testosterone synthesis by affecting the mitochondrial function and cytoplasmic adenosine triphosphate production in rat Leydig cells. *Biol Reprod.* 2017 Jan 1;96(1):254-265.

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