Thiacloprid

Cat. No.: HY-B1953

CAS No.: 111988-49-9

Molecular Formula: $C_{10}H_9ClN_4S$

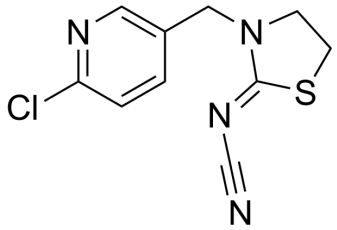
Molecular Weight: 252.72

Target: Parasite; DNA Stain

Pathway: Anti-infection; Cell Cycle/DNA Damage

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (197.85 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.9569 mL	19.7847 mL	39.5695 mL
5 mM	0.7914 mL	3.9569 mL	7.9139 mL
10 mM	0.3957 mL	1.9785 mL	3.9569 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (9.89 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Thiacloprid, a chloronicotinyl insecticide, is targeted chiefly to control aphid pest species in orchards and vegetables[1]. Thiacloprid destabilizes DNA. Thiacloprid changes the structure and stability of DNA through binding into the minor groove by hydrophobic or hydrogen interactions[2].

REFERENCES

[1]. Schuld, M., et al. Effects of Thiacloprid, a New Chloronicotinyl Insecticide, On the Egg Parasitoid Trichogramma cacaoeciae. Ecotoxicology 9, 197–205 (2000).

[2]. Verebová V, Želonková K, Holečková B, Staničová J. The effect of neonicotinoid insecticide thiacloprid on the structure and stability of DNA. Physiol Res. 2019;68(Suppl 4):S459-S466.

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

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