

Methoprene

Chemical Properties

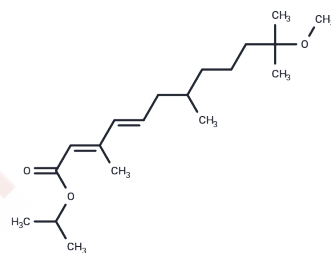
CAS No. : 40596-69-8

Formula: C₁₉H₃₄O₃

Molecular Weight: 310.47

Appearance: no data available

Storage: Pure form: -20°C for 3 years | In solvent: -80°C for 1 year



Biological Description

Description	Methoprene (ZR-515) is a juvenile hormone (JH) mimic and a biological pesticide. Methoprene acts as an insect growth regulator interfering with the lifecycles of insects and preventing insects from reaching maturity or reproducing.
Targets(IC50)	Others
In vivo	The time of first brood deposition is affected by methoprene, with a clear concentration-dependent response and a NOEC of 32 nM. Methoprene reduces fecundity according to a 2-segmented line, with thresholds of 24 and < or =0.18 nM. Methoprene reduces the

Solubility Information

Solubility	DMSO: 50 mg/mL (161.05 mM), Sonication is recommended. Ethanol: 95 mg/mL (305.99 mM), Sonication is recommended. Acetone: 50 mg/mL (161.05 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.2209 mL	16.1046 mL	32.2092 mL
5 mM	0.6442 mL	3.2209 mL	6.4418 mL
10 mM	0.3221 mL	1.6105 mL	3.2209 mL
50 mM	0.0644 mL	0.3221 mL	0.6442 mL

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.

Reference

- Monteiro JP, et al. Toxicity of methoprene as assessed by the use of a model microorganism. *Toxicol In Vitro*. 2005; 19(7):951-956.
- Olmstead AW, LeBlanc GL. Low exposure concentration effects of methoprene on endocrine-regulated processes in the crustacean *Daphnia magna*. *Toxicol Sci*. 2001;62(2):268-273.

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