

Methoprene

Chemical Properties

CAS No. : 40596-69-8

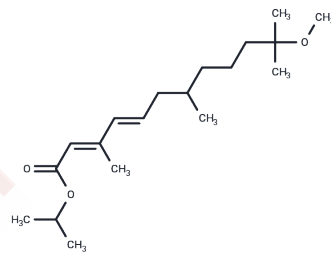
Formula: C₁₉H₃₄O₃

Molecular Weight: 310.47

Keep away from moisture

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

Actual storage temperature shall be subject to the COA.



Biological Description

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|---------------|--|
| 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) |
| In vivo Formulation | 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (6.44 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

| | 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.

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

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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