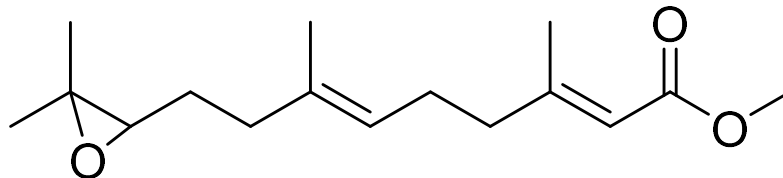


Juvenile Hormone III (racemic)

Catalog number: S-0155



Molecular Formula: C₁₆H₂₆O₃

MW: 266.38

CAS#: 24198-95-6

Alternate Name: *trans-trans*-10,11-epoxyfarnesenic Acid methyl ester, JHIII, JH-III

Solubility: Soluble in most organic solvents, poorly soluble in water

Storage and Handling: Store dry at -20 °C. Stock solutions should be stored frozen (-20 °C or below).

Background: Juvenile Hormone III (JH III) is a sesquiterpanoid found in insects which regulates important physiological processes such as reproduction and metamorphosis. JH III is biosynthesized via the mevalonate pathway and is metabolized by JH esterase and JH epoxide hydrolase terminating the activity of the hormone. JH III has also been found in certain plants such as *Cyperus iria* and *C. Aromaticus* potentially acting as a protectant against insect herbivory.

References: 1) C. Helvig, et al. "CYP15A1, the cytochrome P450 that catalyzes epoxidation of methyl farnesoate to juvenile hormone III in cockroach corpora allata" Proc. Nat. Sci. Acad. 2004, 101(12), 4024–4029, doi: 10.1073/pnas.0306980101.

2) J.A. Tillman, S.J. Seybold, R.A Jurenka, R.A., et al. "Insect pheromones - an overview of biosynthesis and endocrine regulation." Insect Biochemistry and Molecular Biology, 1999, 29(6), 481-514.

3) Y.C. Toong, D.A. Schooley, & F.C.Baker. "Isolation of Insect Juvenile Hormone III from a plant" Nature, 1988, 333, 170-171.

Hazardous Properties and Cautions: The toxicological and pharmacological properties of this compound are not fully known. For further information see the MSDS on request. This product is manufactured and shipped only in small quantities, intended for research and development in a laboratory utilizing prudent procedures for handling chemicals of unknown toxicity, under the supervision of persons technically qualified to evaluate potential risks and authorized to enforce appropriate health and safety measures. As with all research chemicals, precautions should be taken to avoid unnecessary exposures or risks.

Warranty and Disclaimer: Echelon warrants the product conforms to the specifications stated herein. In the event of nonconformity, Echelon will replace products or refund purchase price, at its sole option, and Echelon shall not be responsible for any other loss or damage, whether known or foreseeable to Echelon. No other warranties apply, express or implied, including but not limited to warranty of fitness for any purpose or implied warranty of merchantability. Purchaser is solely responsible for all consequences of its use of the product and Echelon assumes no responsibility therefore, including success of purchaser's research and development, or health or safety of any uses of the product.

Technical Data Sheet, Rev 2, 5/13/24– **For research use only.** Not intended for diagnostic or therapeutic use.

