

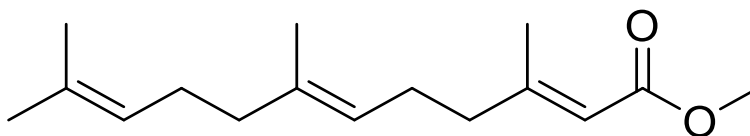
(*E,E*)-Methyl Farnesoate

Catalog number: S-0153

Molecular Formula: C₁₆H₂₆O₂

MW: 250.38

CAS: 10485-70-8



Alternate Name: Methyl (2*E*,6*E*)-3,7,11-trimethyldodeca-2,6,10-trienoate

Solubility: Soluble in most organic solvents, poor solubility in water

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

Background: Methyl farnesoate (MF) is a crustacean reproductive hormone that is structurally similar to insect juvenile hormone. It is responsible for enhancing reproductive maturation, maintaining juvenile morphology, and influencing male sex determination. Exposure of female Daphnids to increasing levels of MF increases the percentage of males in a brood in a dose-dependant manner. MF is endogenously produced in the mandibular organ and environmental factors such as salinity and temperature can influence hemolymph levels.

References: 1) Olmstead, A. W. and G. A. LeBlanc (2007). "The environmental-endocrine basis of gynandromorphism (intersex) in a crustacean." *Int J Biol Sci* 3(2): 77-84.

2) Eads, B. D., J. Andrews, et al. (2007). "Ecological genomics in Daphnia: stress responses and environmental sex determination." *Heredity* 100(2): 184.

3) Nagaraju, G. P. C. and D. W. Borst (2008). "Methyl farnesoate couples environmental changes to testicular development in the crab *Carcinus maenas*." *Journal of Experimental Biology* 211(17): 2773-2778.

4) P. Liu, H.-J. Peng and J. Zhu. (2015) Juvenile hormone-activated phospholipase C pathway enhances transcriptional activation by the methoprene-tolerant protein. In. *Proceedings of the National Academy of Sciences USA* 10.1073/pnas.1423204112

5) S. Schenk, et al. "Discovery of methylfarnesoate as the annelid brain hormone reveals an ancient role of sesquiterpenoids in reproduction" *eLife* 2016;5:e17126. DOI: 10.7554/eLife.17126

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.

