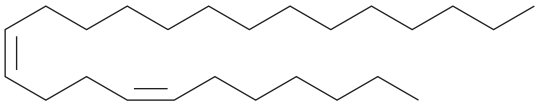
PRODUCT INFORMATION

7(Z),11(Z)-Pentacosadiene

Item No. 9000531

CAS Registry No.:	127599-39-7
Formal Name:	7Z,11Z-pentacosadiene
MF:	$C_{25}H_{48}$
FW:	348.7
Purity:	≥98%
Supplied as:	A 10 mg/ml solution in hexane
Storage:	-20°C
Stability:	≥1 year



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

7(Z),11(Z)-Pentacosadiene is supplied as a solution in hexane. To change the solvent, simply evaporate the hexane under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of 7(Z),11(Z)-pentacosadiene in these solvents is approximately 20 mg/ml.

Description

Unsaturated, long-chain hydrocarbons are found on the cuticles of insects and can act as pheromones. In mature *Drosophila melanogaster*, certain cuticular hydrocarbons are sexually dimorphic: males synthesize 23- and 25-C monoenes and females produce 27- and 29-C dienes. Each of these lipids plays specific roles in regulating male sexual behavior, with dienes stimulating courtship.[1] 7(Z),11(Z)-Pentacosadiene is a 25-C hydrocarbon that is found in low abundance on cuticles of mature *Drosophila* females.[2] Depletion of a female-specific elongase (eloF), which leads to an increase in 7(Z),11(Z)-pentacosadiene along with a parallel decrease in 7,11-nonacosadiene, significantly reduces copulation in *Drosophila*.[3] This raises the possibility that 7(Z),11(Z)-pentacosadiene may act as an anti-aphrodisiac.

References

1. Ferveur, J.-F. and Sureau, G. Simultaneous influences on male courtship of stimulatory and inhibitory pheromones produced by live sex-mosaic *Drosophila melanogaster*. *Proc. Biol. Sci.* **263(1373)**, 967-973 (1996).
2. Siwicki, K.K., Riccio, P., Ladewski, L., *et al*. The role of cuticular pheromones in courtship conditioning of *Drosophila* males. *Learn. Mem.* **12(6)**, 636-645 (2005).
3. Chertemps, T., Duportets, L., Labuer, C., *et al*. A female-biased expressed elongase involved in long-chain hydrocarbon biosynthesis and courtship behavior in *Drosophila melanogaster*. *Proc. Natl. Acad. Sci. USA* **104(11)**, 4273-4278 (2007).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent *via* email to your institution.

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