

PRODUCT INFORMATION



cis-9,10-Methyleneoctadecanoic Acid

Item No. 24824

CAS Registry No.: 4675-61-0
Formal Name: (1R,2S)-*rel*-2-octyl-cyclopropaneoctanoic acid
Synonym: Dihydrosterculic Acid, FA 19:1
MF: C₁₉H₃₆O₂
FW: 296.5
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

cis-9,10-Methyleneoctadecanoic acid is supplied as a solid. A stock solution may be made by dissolving the *cis*-9,10-methyleneoctadecanoic acid in the solvent of choice, which should be purged with an inert gas. *cis*-9,10-Methyleneoctadecanoic acid is soluble in organic solvents such as chloroform, methanol, ethanol, and hexane.

Description

cis-9,10-Methyleneoctadecanoic acid is a cyclopropane fatty acid that has been found in bacteria and the digestive gland of *P. globosa*.¹⁻³ It is a component of *S. aureus* cell membranes and levels decrease upon treatment with carvacrol.² *cis*-9,10-Methyleneoctadecanoic acid is secreted by *H. pylori* and enhances histamine- and dibutyl cAMP-stimulated acid secretion in isolated guinea pig parietal cells.⁴ It also activates protein kinase C (PKC) in a calcium-dependent manner.

References

1. Ramachandran, H., Shafie, N.A.H., Sudesh, K., *et al.* *Cupriavidus malaysiensis* sp. nov., a novel poly(3-hydroxybutyrate-co-4-hydroxybutyrate) accumulating bacterium isolated from the Malaysian environment. *Antonie Van Leeuwenhoek* **111(3)**, 361-372 (2018).
2. Wang, L.-H., Wang, M.-S., Zeng, X.-A., *et al.* Membrane destruction and DNA binding of *Staphylococcus aureus* cells induced by carvacrol and its combined effect with a pulsed electric field. *J. Agric. Food Chem.* **64(32)**, 6355-6363 (2016).
3. Misra, K.K., Shkrob, I., Rakshit, S., *et al.* Variability in fatty acids and fatty aldehydes in different organs of two prosobranch gastropod mollusks. *Biochem. System. Ecol.* **30(8)**, 749-761 (2002).
4. Beil, W., Birkholz, C., Wagner, S., *et al.* *Helicobacter pylori* fatty acid *cis* 9,10-methyleneoctadecanoic acid increases [Ca²⁺]_i, activates protein kinase C and stimulates acid secretion in parietal cells. *Prostaglandins Leukot. Essent. Fatty Acids* **59(2)**, 119-125 (1998).

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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