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: $C_{19}H_{36}O_2$
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 dibutyryl 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 $[Ca^{2+}]i$, activates protein kinase C and stimulates acid secretion in parietal cells. *Prostaglandins Leukot. Essent. Fatty Acids* **59(2)**, 119-125 (1998).

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