Data Sheet (Cat.No.T7332)

TargetMol
YOUR TARGET MOLECULES

(E)-2-Decenoic acid

Chemical Properties

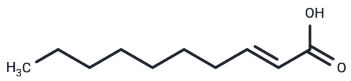
CAS No. : 334-49-6

Formula: C10H18O2

Molecular Weight: 170.25

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year



Biological Description

Description	(E)-2-Decenoic acid (trans-2-Decenoic acid) is an unsaturated fatty acid found in royal jelly produced from the hypopharyngeal and mandibular gland secretions of honeybees.
Targets(IC50)	Others
In vitro	Trans-2-decenoic acid does not inhibit AI-2-specific signaling, but rather the luciferase reaction used for its detection. A potential biological role of trans-2-decenoic acid was then discovered. It is able to suppress the transition from yeast to hyphal morphology in the opportunistic human pathogen Candida albicans at concentrations that do not affect growth. The expression of HWP1, a hyphal-specific signature gene of C. albicans, is abolished by trans-2-decenoic acid. trans-2-Decenoic acid is structurally similar to the diffusible signal factor (DSF) family of interkingdom-signaling molecules and is the first member of this family from a Gram-positive organism (Streptococcus DSF, SDSF). SDSF activity was also found in S. mitis, S. oralis, and S. sanguinis, but not in other oral bacteria. SDSF could be relevant in shaping multispecies Candida bacteria biofilms in the human body[1].

Solubility Information

Solubility	DMSO: 100 mg/mL (587.37 mM), (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	5.8737 mL	29.3686 mL	58.7372 mL
5 mM	1.1747 mL	5.8737 mL	11.7474 mL
10 mM	0.5874 mL	2.9369 mL	5.8737 mL
50 mM	0.1175 mL	0.5874 mL	1.1747 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

Ramiro Vílchez, André Lemme, Ballhausen B , et al. Streptococcus mutans Inhibits Candida albicans Hyphal Formation by the Fatty Acid Signaling Molecule trans-2-Decenoic Acid (SDSF)[J]. Chembiochem, 2010, 11(11):1552-