Data Sheet (Cat.No.T38277)

TargetMol

8-methyl Nonanoic Acid

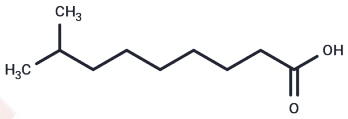
Chemical Properties

CAS No. : 5963-14-4

Formula: C10H20O2

Molecular Weight: 172.2646

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.



Biological Description

Description	Capsaicin, the chemical that imparts the spicy-hot quality of chili peppers, is produced by the fruits of plants belonging to the Capsicum family. 8-methyl Nonanoic acid is an immediate precursor of capsaicin as well as a by-product of capsaicin degradation.[1] Addition of 5 mM of 8-methyl nonanoic acid significantly increases the yield of capsaicin in both immobilized and freely suspended cells of C. frutescens. [2] Capsaicin has reported antimicrobial properties, however isocapric acid can act as a growth substrate in certain bacterial strains.[3]
Targets(IC50)	Others

Solubility Information

Solubility	Ethanol: 10 mg/mL (58.05 mM),Sonication is recommended. DMSO: 10 mg/mL (58.05 mM),Sonication is recommended. DMF: 10 mg/mL (58.05 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	5.8052 mL	29.0259 mL	58.0518 mL
5 mM	1.161 mL	5.8052 mL	11.6104 mL
10 mM	0.5805 mL	2.9026 mL	5.8052 mL
50 mM	0.1161 mL	0.5805 mL	1.161 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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Kaga, H., Miura, M., and Orito, K. A facile procedure for synthesis of capsaicin. The Journal of Organic Chemistry 54, 3477-3478 (1989).

Lindsey, K., and Yeoman, M.M. The synthetic potential of immobilised cells of Capsicum frutescens mill cv. annuum. Planta 162, 495-501 (1984).

Flagan, S.F., and Leadbetter, J.R. Utilization of capsaicin and vanillylamine as growth substrates by Capsicum (hot pepper)-associated bacteria. Environmental Microbiology 8(3), 560-565 (2006).

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