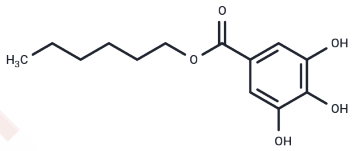
Data Sheet (Cat.No.T11558)

TargetMol

Hexyl gallate

Chemical Properties



CAS No. : 1087-26-9

Formula: C13H18O5

Molecular Weight: 254.28

Appearance: no data available

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

Biological Description

Description	Hexyl gallate (Gallic acid hexyl ester), an alkyl ester derivative of gallic acid, exhibits potent antimalarial activity against Plasmodium falciparum (IC50: 0.11 mM).
Targets(IC50)	Antibacterial
In vitro	Hexyl gallates (Hexyl 3,4,5-trihydroxybenzoate) selectively inhibit RhlR-dependent production of rhamnolipid and pyocyanin, impacting only Rhl-regulated pathways while preserving elastase production and biofilm formation controlled by the Las system. These compounds show pigment inhibition at concentrations of 10-30 μM and exhibit notable antibacterial properties. Hexyl gallates also suppress N-butanoyl homoserine lactone (BHL) production at 100 and 300 μM, without affecting N-(3-oxododecanoyl)-l-homoserine lactone (OdDHL) and 2-heptyl-3-hydroxy-4(1H) quinolone (PQS) synthesis. As a promising antimicrobial alternative to copper compounds, Hexyl gallates effectively inhibit Xanthomonas citri growth at 30-50 μg/ml by targeting the bacterium's membrane, demonstrating a dose-responsive behavior.

Solubility Information

Solubility	DMSO: 50 mg/mL (196.63 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.9327 mL	19.6634 mL	39.3267 mL
5 mM	0.7865 mL	3.9327 mL	7.8653 mL
10 mM	0.3933 mL	1.9663 mL	3.9327 mL
50 mM	0.0787 mL	0.3933 mL	0.7865 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

Kim B, et al. Differential effects of alkyl gallates on quorum sensing in Pseudomonas aeruginosa. Sci Rep. 2019;9 (1):7741. Published 2019 May 23.
Ade Arsianti, et al. Synthesis and in vitro antimalarial activity of alkyl esters of gallate as a growth inhibitor of plasmodium falciparum. Oriental Journal of Chemistry, 34(2), 655-662.
Cavalca LB, et al. Hexyl gallate for the control of citrus canker caused by Xanthomonas citri subsp citri [published online ahead of print, 2020 Aug 6]. Microbiologyopen. 2020;e1104.

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