

Reuterin

Chemical Properties

CAS No. : 2134-29-4

Formula: C₃H₆O₂

Molecular Weight: 74.08

Store at low temperature

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	Reuterin is a broad-spectrum antimicrobial agent produced by specific strains of <i>Lactobacillus reuteri</i> during anaerobic glycerol metabolism. Reuterin exhibits potent activity against Gram-positive and Gram-negative bacteria, yeasts, molds, protozoa, and human or poultry-associated <i>Campylobacter</i> isolates, serving as a critical tool in microbiology, food safety, and antimicrobial research.
Targets(IC50)	Antibacterial
In vitro	Reuterin is water-soluble, functions effectively across a broad pH range, and exhibits resistance to proteolytic and lipolytic enzymes, making it a promising candidate for exploration as a food preservative or adjunct therapeutic agent. As a potent antimicrobial substance, Reuterin demonstrates high activity against various <i>Utheisa kong Campylobacter</i> and <i>Escherichia coli</i> isolates [1]. Furthermore, Reuterin is produced by certain strains of <i>Lactobacillus reuteri</i> during anaerobic glycerol fermentation and possesses broad-spectrum antimicrobial properties, effectively inhibiting intestinal pathogens and gut bacteria [2].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	13.4989 mL	67.4946 mL	134.9892 mL
5 mM	2.6998 mL	13.4989 mL	26.9978 mL
10 mM	1.3499 mL	6.7495 mL	13.4989 mL
50 mM	0.270 mL	1.3499 mL	2.6998 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

Schaefer L, et al. The antimicrobial compound reuterin (3-hydroxypropionaldehyde) induces oxidative stress via interaction with thiol groups. *Microbiology (Reading)*. 2010;156(Pt 6):1589-1599.

Asare PT, et al. Reuterin Demonstrates Potent Antimicrobial Activity Against a Broad Panel of Human and Poultry Meat *Campylobacter* spp. Isolates. *Microorganisms*. 2020;8(1):78. Published 2020 Jan 6.

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