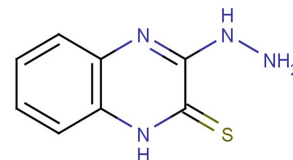


HPi1

Chemical Properties

CAS No.:	13080-21-2
Formula:	C ₈ H ₈ N ₄ S
Molecular Weight:	192.24
Appearance:	N/A
Storage:	0-4°C for short term (days to weeks), or -20°C for long term (months).



Biological Description

Description	HPi1 is a selective and orally active antimicrobial against <i>Helicobacter pylori</i> (IC ₅₀ : 0.24 µM and a MIC of 0.08-0.16 µg/mL). HPi1 is inactive against other bacteria, including the gut commensals, <i>Lactobacillus reuteri</i> , <i>Lactobacillus casei</i> , and <i>Bifidobacterium longum</i> .
Targets(IC ₅₀)	<i>Helicobacter pylori</i> : (MIC)0.08-0.16 µg/ml
In vitro	HPi1 is effective against the clarithromycin-resistant strains ARHp172 (MIC of 0.004–0.016 µg/mL) and ARHp246 (MIC of 0.008–0.032 µg/mL). HPi1 has some activity against the <i>Bacteroides</i> species, but at concentrations at least 18-fold higher than the <i>H. pylori</i> MIC. HPi1 has good physicochemical and pharmacological properties, including determining the aqueous solubility (19 µg/mL), human plasma protein binding (93% bound), stability with human liver microsomes (T _{1/2} of 1.3 hours), and the ability to passively permeate membranes. The MIC against <i>H. pylori</i> isolates ranged from 0.002-0.032 µg/mL (0.01-0.17 µM) in the agar dilution assay. More potent activity is detected for <i>Campylobacter jejuni</i> with a MIC of 0.3 µg/mL.
In vivo	Treated with HPi1 (6.25-50 mg/kg; Oral gavage; once a day; for 3 days; female C57BL/6 mice), reduces colony counts below the limit of detection at doses of 25 or 50 mg/kg/day.

Solubility Information

Solubility	< 1 mg/ml refers to the product slightly soluble or insoluble
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	5.202 mL	26.009 mL	52.018 mL
5 mM	1.04 mL	5.202 mL	10.404 mL
10 mM	0.52 mL	2.601 mL	5.202 mL
50 mM	0.104 mL	0.52 mL	1.04 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 °C for 6 months; - 20 °C for 1 month. Please use it as soon as possible.

Reference

1. Gavrish E, et al. In vitro and in vivo activities of HPi1, a selective antimicrobial against *Helicobacter pylori*. *Antimicrob Agents Chemother*. 2014 Jun;58(6):3255-60.

Inhibitors · Natural Compounds · Compound Libraries

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