

Vibralactone B

Chemical Properties

CAS No.:	1093230-95-5
Formula:	C ₁₂ H ₁₆ O ₄
Molecular Weight:	224.26
Appearance:	N/A
Storage:	0-4°C for short term (days to weeks), or -20°C for long term (months).

Biological Description

Description	Vibralactone B shows antibacterial activity, it can inhibit significantly the growth of <i>E. coli</i> and <i>Pseudomonas aeruginosa</i> , with MBC values of 50 and 100 µg/mL, respectively.
Targets(IC ₅₀)	Antifection: None
In vitro	<p>METHODS AND RESULTS:Extracts obtained from liquid mycelial fermentations of the Chilean fungus <i>Stereum hirsutum</i> (Sh134-11) showed antifungal activity against <i>Botrytis cinerea</i>. Two types of extracts were obtained: EtOAc-extract (liquid phase) and MeOH-extract (mycelial phase). Plate diffusion assay showed that EtOAc-extracts were more active than MeOH-extracts. A large-scale fermentation of Sh134-11 and chromatographic methods allowed to isolated four compounds: MS-3, Vibralactone, Vibralactone B and Sterenin D. Only Sterenin D showed antifungal activity against <i>B. cinerea</i> in the tests performed. Effects on the mycelial growth of <i>B. cinerea</i> showed that Sterenin D showed inhibition at 1000-2000 µg/mL reaching 67% and 76% respectively. Sterenin D was more effective to control the sporogenesis, inhibiting in 96% the sporulation at 500 µg/mL. Assays showed that Sterenin D exhibited a minimal fungicidal concentration (MFC) of 50 µg/mL and minimal inhibitory concentration (MIC) at 20 µg/mL. CONCLUSIONS: Our study indicated that submerged fermentations of Chilean <i>S. hirsutum</i> (Sh134-11) produced extracts with antifungal activity and Sterenin D is responsible for this activity, which could be used as possible biofungicides alternative to synthetic fungicides.</p>

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	4.459 mL	22.296 mL	44.591 mL
5 mM	0.892 mL	4.459 mL	8.918 mL
10 mM	0.446 mL	2.230 mL	4.459 mL
50 mM	0.089 mL	0.446 mL	0.892 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. Antifungal activities of secondary metabolites isolated from liquid fermentations of *Stereum hirsutum* (Sh134-11) against *Botrytis cinerea* (grey mould agent). Food Chem Toxicol. 2017 May 18. pii: S0278-6915(17)30264-8.
2. Bioactive compounds isolated from submerged fermentations of the Chilean fungus *Stereum rameale*. Z Naturforsch C. 2015;70(3-4):97-102.

Inhibitors · Natural Compounds · Compound Libraries

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