

Anigorufone

Chemical Properties

CAS No.:	56252-32-5
Formula:	C ₁₉ H ₁₂ O ₂
Molecular Weight:	272.3
Appearance:	N/A
Storage:	0-4°C for short term (days to weeks), or -20°C for long term (months).

Biological Description

Description	Anigorufone is a phytoalexin, it shows striking antinematode activity. Anigorufone has shown inhibitory activity on the growth of the germinative tube of <i>Fusarium oxysporum</i> f. sp. <i>cubense</i> race 4.
Targets(IC ₅₀)	Antifection: None
In vitro	The global yield of bananas-one of the most important food crops-is severely hampered by parasites, such as nematodes, which cause yield losses up to 75%. METHODS AND RESULTS:Plant-nematode interactions of two banana cultivars differing in susceptibility to <i>Radopholus similis</i> were investigated by combining the conventional and spatially resolved analytical techniques (1)H NMR spectroscopy, matrix-free UV-laser desorption/ionization mass spectrometric imaging, and Raman microspectroscopy. This innovative combination of analytical techniques was applied to isolate, identify, and locate the banana-specific type of phytoalexins, phenylphenalenones, in the <i>R. similis</i> -caused lesions of the plants. CONCLUSIONS:The striking antinematode activity of the phenylphenalenone Anigorufone, its ingestion by the nematode, and its subsequent localization in lipid droplets within the nematode is reported. The importance of varying local concentrations of these specialized metabolites in infected plant tissues, their involvement in the plant's defense system, and derived strategies for improving banana resistance are highlighted.

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	3.672 mL	18.362 mL	36.724 mL
5 mM	0.734 mL	3.672 mL	7.345 mL
10 mM	0.367 mL	1.836 mL	3.672 mL
50 mM	0.073 mL	0.367 mL	0.734 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. Phenalenone-type phytoalexins mediate resistance of banana plants (*Musa* spp.) to the burrowing nematode *Radopholus similis*. *Proc Natl Acad Sci U S A*. 2014 Jan 7;111(1):105-10.
2. Fungus-elicited metabolites from plants as an enriched source for new leishmanicidal agents: antifungal phenyl-phenalenone phytoalexins from the banana plant (*Musa acuminata*) target mitochondria of *Leishmania donovani* promastigotes. *Antimicrob Agents Chemother*. 2004 May;48(5):1534-40.

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