2-Phenylethyl isothiocyanate

Cat. No.: HY-23155

CAS No.: 2257-09-2

Molecular Formula: C_9H_9NS

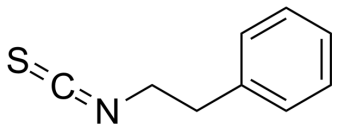
Molecular Weight: 163.24

Target: Fungal

Pathway: Anti-infection

Storage:

Pure form	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (612.59 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	6.1259 mL	30.6297 mL	61.2595 mL
	5 mM	1.2252 mL	6.1259 mL	12.2519 mL
	10 mM	0.6126 mL	3.0630 mL	6.1259 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (15.31 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (15.31 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

2-Phenylethyl isothiocyanate is a potent antifungal agent. 2-Phenylethyl isothiocyanate significantly inhibited spore germination and mycelial growth of Alternaria alternata, with a MIC (minimum inhibitory concentration) of 1.22 mM. The antifungal effect of 2-Phenylethyl isothiocyanate against Alternaria alternata might be via reduction in toxin content and breakdown of cell membrane integrity[1][2].

REFERENCES

[1]. B. J. Smith, et al. In vitro inhibition of soil microorganisms by 2-phenylethyl isothiocyanate. Plant Pathology. 4 October 2002;51(5):585-593.

[2]. Zhang M, et al. 2-Phenylethyl Isothiocyanate Exerts Antifungal Activity against Alternaria alternata by Affecting Membrane Integrity and Mycotoxin Production. Toxins (Basel). 2020 Feb 15;12(2):124.

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