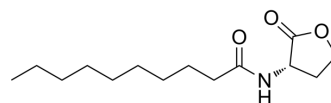


## N-Decanoyl-L-homoserine lactone

Cat. No.:	HY-136409
CAS No.:	177315-87-6
Molecular Formula:	C <sub>14</sub> H <sub>25</sub> NO <sub>3</sub>
Molecular Weight:	255.35
Target:	Bacterial; Reactive Oxygen Species
Pathway:	Anti-infection; Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



### SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (391.62 mM; Need ultrasonic)						
	Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg	
				1 mM	3.9162 mL	19.5810 mL	39.1619 mL
				5 mM	0.7832 mL	3.9162 mL	7.8324 mL
				10 mM	0.3916 mL	1.9581 mL	3.9162 mL
Please refer to the solubility information to select the appropriate solvent.							
In Vivo	1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (9.79 mM); Clear solution						
	2. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: 2.5 mg/mL (9.79 mM); Clear solution; Need ultrasonic						

### BIOLOGICAL ACTIVITY

Description	N-decanoyl-L-homoserine lactone (C10-HSL) is a N-acyl-homoserine lactone (AHL) N-decanoyl-L-homoserine lactone can inhibit primary root growth in Arabidopsis. N-decanoyl-L-homoserine lactone triggers a transient and immediate increase in the concentrations of cytosolic free Ca <sup>2+</sup> and reactive oxygen species (ROS), increases the activity of mitogen-activated protein kinase 6 (MPK6), and induces nitric oxide (NO) production in Arabidopsis roots <sup>[1]</sup> .
In Vitro	N-decanoyl-L-homoserine lactone (0-75 μM) causes a reduction in primary root growth and promotes lateral root formation in Arabidopsis <sup>[1]</sup> . N-decanoyl-L-homoserine lactone (0-30 μM) improves cytosolic Ca <sup>2+</sup> concentration in wild-type seedlings <sup>[1]</sup> . Bacterial signal C10-HSL stimulates spore germination of Galactomyces geotrichum by transboundary interaction <sup>[2]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

---

## REFERENCES

- [1]. Cao XY, et al. Cellular messengers involved in the inhibition of the Arabidopsis primary root growth by bacterial quorum-sensing signal N-decanoyl-L-homoserine lactone. *BMC Plant Biol.* 2022 Oct 14;22(1):488.
- [2]. Xin Lu, et al. Bacterial signal C10-HSL stimulates spore germination of *Galactomyces geotrichum* by transboundary interaction. *Chinese Chemical Letters.* 2022.
- 

**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA