

## N-(3-Oxodecanoyl)-L-homoserine lactone

## Chemical Properties

CAS No. : 147795-40-2

Formula: C<sub>14</sub>H<sub>23</sub>NO<sub>4</sub>

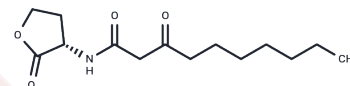
Molecular Weight: 269.34

Storage:

Keep away from moisture, Store at low temperature,  
Keep away from direct sunlight

Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



## Biological Description

Description	N-(3-Oxodecanoyl)-L-homoserine lactone (3-Oxo-C10-HSL) serves as a crucial bacterial signaling molecule, acting as an autoinducer in quorum sensing. It regulates bacterial gene expression, virulence factor production, biofilm formation, and synchronized group behavior in a concentration-dependent manner. This makes it a key molecular tool for studying bacterial communication mechanisms, pathogen virulence regulation, and screening anti-infection targets.
Targets(IC50)	Antibacterial

## Solubility Information

Solubility	DMSO: 80 mg/mL (297.02 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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## Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.7128 mL	18.5639 mL	37.1278 mL
5 mM	0.7426 mL	3.7128 mL	7.4256 mL
10 mM	0.3713 mL	1.8564 mL	3.7128 mL
50 mM	0.0743 mL	0.3713 mL	0.7426 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Buchholtz C, et al. Profiling of acylated homoserine lactones of *Vibrio anguillarum* in vitro and in vivo: Influence of growth conditions and serotype. *Syst Appl Microbiol*. 2006 Sep;29(6):433-45.

Milton DL, et al. Quorum sensing in *Vibrio anguillarum*: characterization of the *vanI/vanR* locus and identification of the autoinducer N-(3-oxodecanoyl)-L-homoserine lactone. *J Bacteriol*. 1997 May;179(9):3004-12.

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