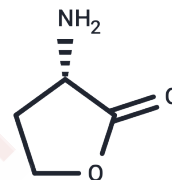


L-Homoserine lactone hydrochloride

Chemical Properties

CAS No. : 2185-03-7
 Formula: C₄H₈ClNO₂
 Molecular Weight: 137.57
 Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.



HCl

Biological Description

Description	L-Homoserine lactone hydrochloride constitutes the core structural unit of N-acetylhomoserine lactone (AHL), a bacterial quorum sensing signal molecule.
Targets(IC50)	Others
In vitro	L-Homoserine lactone hydrochloride is the metabolic product of AHLs processed by plant fatty acid amide hydrolase. The impact of AHLs on plant growth depends on whether they can be converted into this compound. The effect of AHLs on seedling growth exhibits concentration dependence: at low concentrations, it stimulates growth by promoting transpiration, whereas at high concentrations, it inhibits growth by inducing ethylene production [2].

Solubility Information

Solubility	PBS (pH 7.2): 10 mg/mL (72.69 mM), Sonication is recommended. DMSO: 80 mg/mL (581.52 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 1 mg/mL (7.27 mM), Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	7.269 mL	36.3451 mL	72.6903 mL
5 mM	1.4538 mL	7.269 mL	14.5381 mL
10 mM	0.7269 mL	3.6345 mL	7.269 mL
50 mM	0.1454 mL	0.7269 mL	1.4538 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

Chhabra SR, et al. Synthetic analogues of the bacterial signal (quorum sensing) molecule N-(3-oxododecanoyl)-L-homoserine lactone as immune modulators. *J Med Chem.* 2003 Jan 2;46(1):97-104.

Palmer AG, et al. Plant responses to bacterial N-acyl L-homoserine lactones are dependent on enzymatic degradation to L-homoserine. *ACS Chem Biol.* 2014 Aug 15;9(8):1834-45.

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