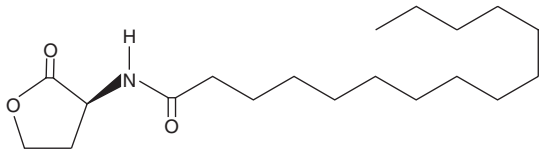
PRODUCT INFORMATION

N-pentadecanoyl-L-Homoserine lactone

Item No. 13094

CAS Registry No.:	182359-66-6
Formal Name:	N-[(3S)-tetrahydro-2-oxo-3-furanyl]-pentadecanamide
Synonym:	C15-HSL
MF:	$C_{19}H_{35}NO_3$
FW:	325.5
Purity:	≥98%
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

N-pentadecanoyl-L-homoserine lactone is supplied as a crystalline solid. A stock solution may be made by dissolving the N-pentadecanoyl-L-homoserine lactone in the solvent of choice, which should be purged with an inert gas. N-pentadecanoyl-L-homoserine lactone is soluble in the organic solvent dimethyl formamide at a concentration of approximately 0.25 mg/ml. While N-pentadecanoyl-L-homoserine lactone is also soluble in ethanol and other primary alcohols, their use is not recommended as they have been shown to open the lactone ring.

Description

N-pentadecanoyl-L-Homoserine lactone is an N-acyl homoserine lactone produced by *Y. pseudotuberculosis* and a bacterial quorum-sensing signaling molecule.[1] It activates the LasR quorum sensing receptor of bacteria in a reporter assay.[2] N-pentadecanoyl-L-Homoserine lactone induces GFP production in a *P. putida* F117 reporter strain expressing the pKR-C12 quorum-sensing operon when used at a concentration of 0.094 nM.[3]

References

1. Ortori, C.A., Atkinson, S., Chhabra, S.R., *et al.* Comprehensive profiling of N-acylhomoserine lactones produced by *Yersinia pseudotuberculosis* using liquid chromatography coupled to hybrid quadrupole-linear ion trap mass spectrometry. *Anal. Bioanal. Chem.* **387(2),** 497-511 (2007).
2. Passador, L., Tucker, K.D., Guertin, K.R., *et al.* Functional analysis of the Pseudomonas aeruginosa autoinducer PAI. *J. Bacteriol.* **178(20)**, 5995-6000 (1996).
3. Girard, L., Blanchet, É., Intertaglia, L., *et al.* Characterization of *N*-acyl homoserine lactones in *Vibrio tasmaniensis* LGP32 by a biosensor-based UHPLC-HRMS/MS method. *Sensors (Basel)* **17(4)**, 906 (2017).

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