

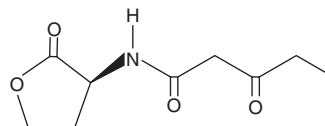
PRODUCT INFORMATION



N-3-oxo-pentanoyl-L-Homoserine lactone

Item No. 13201

CAS Registry No.: 148433-21-0
Formal Name: 3-oxo-N-[(3S)-tetrahydro-2-oxo-3-furanyl]-pentanamide
Synonym: 3-oxo-C5-HSL
MF: C₉H₁₃NO₄
FW: 199.2
Purity: ≥95%
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-3-oxo-pentanoyl-L-Homoserine lactone is supplied as a crystalline solid. A stock solution may be made by dissolving the N-3-oxo-pentanoyl-L-homoserine lactone in the solvent of choice, which should be purged with an inert gas. N-3-oxo-pentanoyl-L-Homoserine lactone is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of N-3-oxo-pentanoyl-L-homoserine lactone in these solvents is approximately 20 mg/ml. While N-3-oxo-pentanoyl-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-3-oxo-pentanoyl-L-Homoserine lactone is a chain-shortened derivative of the bacterial quorum sensing signaling molecule N-3-oxo-octanoyl-L-homoserine lactone (Item No. 10011206).¹ It inhibits binding of the autoinducer N-3-oxo-hexanoyl homoserine lactone to *E. coli* containing the transcription factor LuxR when used at a concentration of 230 nM.² It acts as an autoinducer to activate the *V. fischeri* luminescence system in *E. coli* when used at concentrations ranging from 20 to 200 nM.

References

1. Chhabra, S.R., Stead, P., Bainton, N.J., *et al.* Autoregulation of carbapenem biosynthesis in *Erwinia carotovora* by analogues of N-(3-oxohexanoyl)-L-homoserine lactone. *J. Antibiot. (Tokyo)* **46(3)**, 441-454 (1993).
2. Schaefer, A.L., Hanzelka, B.L., Eberhard, A., *et al.* Quorum sensing in *Vibrio fischeri*: Probing autoinducer-LuxR interactions with autoinducer analogs. *J. Bacteriol.* **178(10)**, 2897-2901 (1996).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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