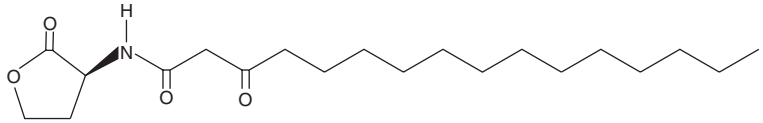
PRODUCT INFORMATION

N-3-oxo-hexadecanoyl-L-Homoserine lactone

Item No. 13062

CAS Registry No.: 925448-37-9
Formal Name: 3-oxo-N-[(3S)-tetrahydro-2-oxo-3-furanyl]-hexadecanamide
Synonyms: 3-oxo-C16-HSL, N-3-oxo-palmitoyl-L-Homoserine lactone
MF: $C_{20}H_{35}NO_4$
FW: 353.5
Purity: ≥97%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years
Special Conditions: Protect from light and moisture



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

Laboratory Procedures

N-3-oxo-hexadecanoyl-L-Homoserine lactone is supplied as a solid. A stock solution may be made by dissolving the N-3-oxo-hexadecanoyl-L-homoserine lactone in the solvent of choice, which should be purged with an inert gas. N-3-oxo-hexadecanoyl-L-Homoserine lactone is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of N-3-oxo-hexadecanoyl-L-homoserine lactone in these solvents is approximately 20 mg/ml. While N-3-oxo-hexadecanoyl-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-hexadecanoyl-L-Homoserine lactone is an unusual, substituted, long-chain N-acyl-homoserine lactone (AHL) produced by some bacteria, including strains of *Agrobacterium vitis* and *Pseudomonas*.[1,2] Like other AHLs, this C16-containing form is thought to be involved in quorum sensing. Substituted, long-chain AHLs, including N-3-oxo-tetradecanoyl-L-homoserine lactone (Item No. 13063), prime for systemic acquired resistance to pathogen attack in plants.[3]

References

1. Chang, C.-Y., Koh, C.-L., Sam, C.-K., *et al*. Unusual long-chain N-acyl homoserine lactone production by and presence of quorum quenching activity in bacterial isolates from diseased tilapia fish. *PLoS One* **7(8)**, e44034 (2012).
2. Savka, M.A., Le, P.T., and Burr, T.J. LasR receptor for detection of long-chain quorum-sensing signals: identification of N-acyl-homoserine lactones encoded by the avsI locus of *Agrobacterium vitis*. *Curr. Microbiol.* **62(1)**, 101-110 (2011).
3. Schenk, S.T. and Schikora, A. AHL-priming functions *via* oxylipin and salicylic acid. *Front. Plant Sci.* **14(5)**, 784 (2015).

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.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/02/2022

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM