

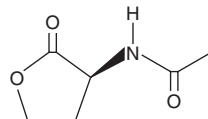
PRODUCT INFORMATION



Acetyl-L-Homoserine lactone

Item No. 23241

CAS Registry No.: 51524-71-1
Formal Name: N-[(3S)-tetrahydro-2-oxo-3-furanyl]-acetamide
Synonym: Acetyl-L-HSL, C2-HSL
MF: C₆H₉NO₃
FW: 143.1
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

Acetyl-L-homoserine lactone is supplied as a crystalline solid. A stock solution may be made by dissolving the acetyl-L-homoserine lactone in the solvent of choice. Acetyl-L-homoserine lactone is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. While acetyl-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

Acetyl-L-homoserine lactone belongs to the family of N-acylated homoserine lactones (HSLs) and has an acyl chain length of two carbons.¹ HSLs perform a role in quorum sensing; however, unlike other HSLs, acetyl-L-homoserine lactone does not elicit a response in bacteria. In an assay of carbapenem antibiotic biosynthesis, acetyl-L-homoserine lactone does not induce a response in *E. carotovora*.² In a fluorescence assay using *E. coli* containing a reporter plasmid of GFP expression in response to exogenous HSLs, acetyl-L-homoserine does not elicit GFP production.³

References

1. González, J.E. and Keshavan, N.D. Messing with bacterial quorum sensing. *Microbiol. Mol. Biol. Rev.* **70(4)**, 859-875 (2006).
2. 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).
3. Syrpas, M., Ruysbergh, E., Blommaert, L., *et al.* Haloperoxidase mediated quorum quenching by *Nitzschia cf pellucida*: Study of the metabolization of N-acyl homoserine lactones by a benthic diatom. *Mar. Drugs* **12(1)**, 352-367 (2014).

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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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