

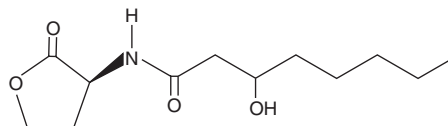
# PRODUCT INFORMATION



## N-3-hydroxyoctanoyl-L-Homoserine lactone

Item No. 9001150

**CAS Registry No.:** 192883-14-0  
**Formal Name:** 3-hydroxy-N-[(3S)-tetrahydro-2-oxo-3-furanyl]-octanamide  
**Synonym:** OH-C8-HSL  
**MF:** C<sub>12</sub>H<sub>21</sub>NO<sub>4</sub>  
**FW:** 243.3  
**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-3-hydroxyoctanoyl-L-Homoserine lactone is supplied as a crystalline solid. A stock solution may be made by dissolving the N-3-hydroxyoctanoyl-L-homoserine lactone in the solvent of choice, which should be purged with an inert gas. N-3-hydroxyoctanoyl-L-Homoserine lactone is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of N-3-hydroxyoctanoyl-L-homoserine lactone in these solvents is approximately 30 mg/ml. While N-3-hydroxyoctanoyl-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

Quorum sensing is a regulatory system used by bacteria for controlling gene expression in response to increasing cell density. Different quorum sensing molecules are produced at different times in bacterial population growth and have distinct cellular effects mediated through changes in gene expression.<sup>1,2</sup> N-3-hydroxyoctanoyl-L-Homoserine lactone is a small diffusible signaling molecule secreted by various bacteria.<sup>3,4</sup> This lactone can have activating or suppressing effects on gene expression and biofilm formation, respectively.<sup>5,6</sup> N-3-hydroxyoctanoyl-L-Homoserine lactone is produced via lactonolysis from 3-oxooctanoyl-homoserine lactone, altering quorum sensing or contributing to quorum quenching.<sup>7</sup>

### References

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3. Flodgaard, L.R., Dalggaard, P., Andersen, J.B., et al. *Appl. Environ. Microbiol.* **71(4)**, 2113-2120 (2005).
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5. Duerkop, B.A., Herman, J.P., Ulrich, R.L., et al. *J. Bacteriol.* **190(14)**, 5137-5141 (2008).
6. Gamage, A.M., Shui, G., Wenk, M.R., et al. *Microbiology (Reading)* **157(Pt 4)**, 1176-1186 (2011).
7. Chan, K.G., Atkinson, S., Mathee, K., et al. *BMC Microbiol.* **11(51)**, 1-13 (2011).

#### 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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