

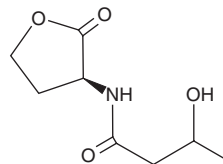
# PRODUCT INFORMATION



## N-3-hydroxybutyryl-L-Homoserine lactone

Item No. 27691

**CAS Registry No.:** 1325550-06-8  
**Formal Name:** 3-hydroxy-N-[(3S)-tetrahydro-2-oxo-3-furanyl]-butanamide  
**Synonyms:** 3-OH-C4-HSL, N-3-hydroxybutanoyl-L-Homoserine lactone, N-3-hydroxybutyryl-L-HSL, N-3-hydroxybutanoyl-L-HSL  
**MF:** C<sub>8</sub>H<sub>13</sub>NO<sub>4</sub>  
**FW:** 187.2  
**Purity:** ≥95%  
**Supplied as:** A 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-hydroxybutyryl-L-Homoserine lactone is supplied as a solid. A stock solution may be made by dissolving the N-3-hydroxybutyryl-L-homoserine lactone in the solvent of choice, which should be purged with an inert gas. N-3-hydroxybutyryl-L-Homoserine lactone is soluble in organic solvents such as DMSO and dimethyl formamide. While N-3-hydroxybutyryl-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-hydroxybutyryl-L-Homoserine lactone is an N-acyl-homoserine lactone produced by the bacterium *V. splendidus* and has been found in sequencing batch biofilm reactors used in wastewater treatment.<sup>1,2</sup> It is the racemic version of the *V. harveyi* autoinducer N-((R)-3-hydroxybutanoyl)-L-homoserine lactone.<sup>3</sup>

### References

1. Purohit, A.A., Johansen, J.A., Hansen, H., *et al.* Presence of acyl-homoserine lactones in 57 members of the *Vibrionaceae* family. *J. Appl. Microbiol.* **115**(3), 835-847 (2013).
2. Feng, Z., Sun, Y., Li, T., *et al.* Operational pattern affects nitritation, microbial community and quorum sensing in nitrifying wastewater treatment systems. *Sci. Total Environ.* **677**, 456-465 (2019).
3. Ke, X., Miller, L.C., and Bassler, B.L. Determinants governing ligand specificity of the *Vibrio harveyi* LuxN quorum-sensing receptor. *Mol. Microbiol.* **95**(1), 127-142 (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.

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