

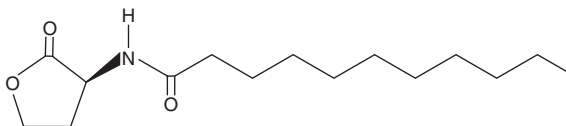
PRODUCT INFORMATION



N-undecanoyl-L-Homoserine lactone

Item No. 16827

CAS Registry No.: 216596-71-3
Formal Name: N-[(3S)-tetrahydro-2-oxo-3-furanyl]-undecanamide
Synonyms: N-undecanoyl-L-HSL, C11-HSL
MF: $C_{15}H_{27}NO_3$
FW: 269.4
Purity: $\geq 98\%$
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-undecanoyl-L-Homoserine lactone is supplied as a crystalline solid. A stock solution may be made by dissolving the N-undecanoyl-L-homoserine lactone in the solvent of choice, which should be purged with an inert gas. N-undecanoyl-L-Homoserine lactone is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of N-undecanoyl-L-homoserine lactone in these solvents is approximately 25 and 20 mg/ml, respectively. While N-undecanoyl-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-undecanoyl-L-Homoserine lactone is a bacterial quorum-sensing signaling molecule.¹ It induces GFP production in an *E. coli* reporter strain expressing the *V. fischeri* LuxR-P_{LuxI} quorum-sensing operon when used at concentrations ranging from 100 to 1,000 nM. N-undecanoyl-L-Homoserine lactone also inhibits the proliferation of isolated mouse splenocytes induced by concanavalin A (Item No. 14951; IC₅₀ = 90 μM).²

References

1. Syrpas, M., Ruysbergh, E., Stevens, C.V., *et al.* Synthesis and biological evaluation of novel N- α -haloacylated homoserine lactones as quorum sensing modulators. *Beilstein J. Org. Chem.* **10**, 2539-2549 (2014).
2. Chhabra, S.R., Harty, C., Hooi, D.S.W., *et al.* Synthetic analogues of the bacterial signal (quorum sensing) molecule N-(3-oxododecanoyl)-L-homoserine lactone as immune modulators. *J. Med. Chem.* **46**(1), 97-104 (2003).

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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