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**Product Data Sheet**

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Product Name: N-undecanoyl-L-Homoserine lactone

Cat. No.: GC44473

**Chemical Properties**

Cas. No. 216596-71-3

SMILES CCCCCCCCCCC(=O)N[C@H]1CCOC1=OFormula  $C_{15}H_{27}NO_3$ 

M.Wt 269.4

Solubility DMF: 20 mg/ml, DMSO: 25 mg/ml, Ethanol: 1.5 mg/ml Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure **Background**

Quorum sensing is a regulatory system used by bacteria for controlling gene expression in response to increasing cell density. This regulatory process manifests itself with a variety of phenotypes including biofilm formation and virulence factor production. Coordinated gene expression is achieved by the production, release, and detection of small diffusible signal molecules called autoinducers. The N-acylated homoserine lactones (AHLs) comprise one such class of autoinducers, each of which generally consists of a fatty acid coupled with homoserine lactone (HSL). Regulation of bacterial quorum sensing signaling systems to inhibit pathogenesis represents a new approach to antimicrobial therapy in the treatment of infectious diseases. AHLs vary in acyl group length (C4-C18), in the substitution of C3 (hydrogen, hydroxyl, or oxo group), and in the presence or absence of one or more carbon-carbon double bonds in the fatty acid chain. These differences confer signal specificity through the affinity of transcriptional regulators of the LuxR family. C11-HSL possesses a rare odd-numbered acyl carbon chain and may be a minor quorum-sensing signaling molecule in *P. aeruginosa* strains.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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