PRODUCT INFORMATION

N-3-oxo-tetradecanoyl-L-Homoserine lactone
Item No. 13063

CAS Registry No.: 177158-19-9
Formal Name: 3-oxo-N-[3(S)-tetrahydro-2-oxo-3-furanyl]-tetradecanamide
Synonyms: 3-oxo-C14-HSL, N-3-oxo-myristoyl-L-Homoserine lactone
MF: C_{18}H_{31}NO_4
FW: 325.4
Purity: ≥98%
UV/Vis.: λ_{max}: 204, 248 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly

Laboratory Procedures

N-3-oxo-tetradecanoyl-L-Homoserine lactone (3-oxo-C14-HSL) is supplied as a crystalline solid. A stock solution may be made by dissolving the 3-oxo-C14-HSL in the solvent of choice. 3-oxo-C14-HSL is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of 3-oxo-C14-HSL in ethanol is approximately 10 mg/ml, and approximately 20 mg/ml in DMSO and DMF.

Description

3-oxo-C14-HSL is a small diffusible signaling molecule involved in quorum sensing, thereby controlling gene expression and affecting cellular metabolism in bacteria.\(^1\)\(^-\)\(^3\) It appears later than shorter acyl chain AHLs in developing biofilms\(^4\) and, like other long chain 3-oxo-AHLs, stimulates the production of putisolvin,\(^5\) which in turn, inhibits biofilm formation.

References