

Product Name: Butyryl-L-homoserine lactone

Product Number: B059

CAS Number: 67605-85-0

Molecular Formula: $C_8H_{13}NO_3$

Molecular Weight: 171.2

Description: Butyryl-L-homoserine lactone is a short acylhomoserine lactone isolated from *Pseudomonas aeruginosa* in 1995 and demonstrated to be a quorum sensing modulator in biofilms. Acylhomoserine lactones have been detected in hundreds of bacterial species and, while the homologues vary between species and strains, the homoserine lactones are the major chemical modulators of within and between cell communication and regulation. The most significant variable defining the function of the homoserine lactone is the length of the acyl chain, with shorter chains displaying opposing actions to the longer chains.

Butyryl-L-homoserine lactone is soluble in ethanol, methanol, DMF or DMSO.
Poor water solubility

References: Autoinducer-mediated regulation of rhamnolipid biosurfactant synthesis in *Pseudomonas aeruginosa*. Ochsner U.A. & Reiser J. Proc. Natl. Acad. Sci. U.S.A. 1995, 92, 6424.

Quorum sensing and *Chromobacterium violaceum*: exploitation of violacein production and inhibition for the detection of N-acylhomoserine lactones. McClean K.H. et al. Microbiology 1997, 143, 3703.

N-Acylhomoserine lactones are potent neutrophil chemoattractants that act via calcium mobilization and actin remodeling. Karlsson T. et al. J. Leukoc. Biol. 2012, 91, 15.

Small molecule inhibitors of bacterial quorum sensing and biofilm formation. Geske G.D. et al. J. Am. Chem. Soc. 2005, 127, 12762.