

**Product Name:** Octanoyl-L-homoserine lactone

**Product Number:** O035

**CAS Number:** 147852-84-4

**Molecular Formula:**  $C_{12}H_{21}NO_3$

**Molecular Weight:** 227.3

**Description:** Octanoyl-L-homoserine lactone is an active quorum sensing modulator first recognised in *Yersinia pseudotuberculosis*. Octanoyl-L-homoserine lactone and other 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.

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

**References:** 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.

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