

Product Name: cyclo(L-Pro-L-Val)

Product Number: C223

CAS Number: 2854-40-2

Molecular Formula: C₁₀H₁₆N₂O₂

Molecular Weight: 196.3

Description: Cyclo(L-Pro-L-Val) is a diketopiperazine formed by the fusion of valine and proline, reported as a secondary metabolite of fungi and bacteria. In *Pseudomonas aeruginosa*, cyclo(L-Pro-L-Val) is capable of activating N-acylhomoserine lactones (AHLs). Cyclo(L-Pro-L-Val) is also capable of activating or antagonizing other LuxR-based quorum-sensing systems.

Cyclo(L-Pro-L-Val) is soluble in ethanol, methanol, DMF or DMSO. Limited water solubility

Mechanism of Action: While the mode of action of the cyclo(L-Pro-L-Val) is not known, its activity suggests the existence of cross talk among bacterial signalling systems.

References: Citromycetins and bilains A-C: new aromatic polyketides and diketopiperazines from Australian marinederived and terrestrial *Penicillium* spp. Capon R.J. et al. *J. Nat. Prod.* 2007, 70, 1746.

Quorum-sensing cross talk: isolation and chemical characterization of cyclic dipeptides from *Pseudomonas aeruginosa* and other Gram-negative bacteria. Holden M.T.G. et al. *Mol. Microbiol.* 1999, 33, 1254.