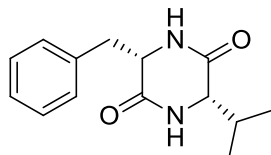


Cyclo(L-Phe-L-Val)

Code No.: **BIA-C1709**

Pack sizes: **5 mg, 25 mg**



Synonyms : (3S,6S)-3-(1-Methylethyl)-6-(phenylmethyl)-2,5-piperazinedione; Cyclo(Phe-Val); DKP 101516

Specifications

CAS #	: 35590-86-4
Molecular Formula	: C₁₄H₁₈N₂O₂
Molecular Weight	: 246.3
Source	: <i>Streptomyces</i> sp.
Appearance	: White solid
Purity	: >95% by HPLC
Long Term Storage	: -20°C
Solubility	: Soluble in ethanol, methanol, DMF or DMSO.

Application Notes

Cyclo(L-Phe-L-Val) is a diketopiperazine metabolite first isolated from a marine bacteria, *Pseudoalteromonas* sp. in 2011. Cyclo(L-Phe-L-Val) is also produced as a secondary metabolite of *Streptomyces rutgerensis* and *Bacillus subtilis*. Limited bioassay data suggests cyclo(L-Phe-L-Val) acts as a quorum sensing regulator but does not itself exhibit antimicrobial activity. Exogenously added cyclo(L-Phe-L-Val) may induce *Pseudoalteromonas* sp. to produce antibacterial products under low cell density conditions. It appears to act by stimulating the bacteria to induce metabolite production.

References

1. A case study on chemical defense based on quorum sensing: antibacterial activity of sponge-associated bacterium *Pseudoalteromonas* sp. NJ6-3-1 induced by quorum sensing mechanisms. Guo X. et al., *Ann. Microbiol.* 2011, 61, 247.
2. Two new cyclic tetrapeptides of *Streptomyces rutgersensis* T009 isolated from *Elaphodus davidianus* excrement. Li S-Q et al., *Helv. Chim. Acta* 2016, 99, 210.