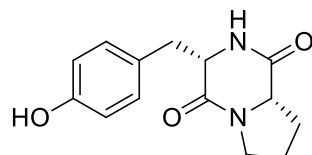


cyclo(L-Pro-L-Tyr)

Code No.: **BIA-C1359**

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



Synonyms : Maculosin

Specifications

CAS #	: 4549-02-4
Molecular Formula	: C ₁₄ H ₁₆ N ₂ O ₃
Molecular Weight	: 260.3
Source	: Synthetic
Appearance	: White solid
Purity	: >95% by HPLC
Long Term Storage	: -20°C
Solubility	: Soluble in ethanol, methanol, DMF or DMSO. Limited water solubility.

Application Notes

Cyclo(L-Pro-L-Tyr) (maculosin) is a diketopiperazine formed by the fusion of tyrosine and proline, reported as a secondary metabolite of fungi and bacteria. In *Pseudomonas aeruginosa*, cyclo(L-Pro-L-Tyr) is capable of activating N-acylhomoserine lactones (AHLs). Cyclo(L-Pro-L-Tyr) is also capable of activating or antagonizing other LuxR-based quorum-sensing systems. While the mode of action of cyclo(L-Pro-L-Tyr) is not known, its activity suggests the existence of cross talk among bacterial signalling systems. Cyclo(L-Pro-L-Tyr) was identified as a host-specific toxin produced by *Alternaria alternata* on spotted knapweed.

References

1. Citromycetins and bilains A-C: new aromatic polyketides and diketopiperazines from Australian marine-derived and terrestrial *Penicillium* spp. Capon R.J. et al., *J. Nat. Prod.* 2007, 70, 1746.
2. 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.
3. Maculosin, a host-specific phytotoxin for spotted knapweed from *Alternaria alternata*. Stierle A.C. *Proc. Natl. Acad. Sci. USA* 1988, 85, 8008.