

Cyclo(Pro-Gly)

Chemical Properties

CAS No.:	19179-12-5
Formula:	C7H10N2O2
Molecular Weight:	N/A
Appearance:	N/A
Storage:	0-4°C for short term (days to weeks), or -20°C for long term (months).

Biological Description

Description	Cyclo(Pro-Gly) is an active metabolite of piracetam-N-phenylacetyl-L-prolylglycine (GWS-111), it shows a greater resistance to an enzymatic effect than natural neuropeptides. Cyclo-(Gly-Pro) shows cytotoxicity at the concentration of 10 umol/L, it inhibits the growth of <i>Bacillus subtilis</i> with the minimal inhibitory concentration (MIC) value of 0.8, 0.8 g/L.
In vitro	METHODS AND RESULTS: In the present study, an endophytic fungus isolate FTJZZJ09, which isolated from the fresh bulbs of <i>Fritillaria thunbergii</i> Miq., was identified as <i>Penicillium chrysogenum</i> based on its morphological characters and internal transcribed spacer (ITS) sequence. After being cultured in the modified Czapek-DoX medium (3 g/L maltose, 3 g/L peptone A, 0.1 g/L K ₂ HPO ₄ , 0.05 g/L KCl, 0.3 g/L NaNO ₃ , 0.05 g/L MgSO ₄ ·7H ₂ O, 0.001 g/L FeSO ₄ ·7H ₂ O, pH 6.5), it can secrete antibacterial metabolites under the condition of 28 °C in a rotary shaker at 160 r/min for 7 days. Three antibacterial compounds were isolated from the ethyl acetate extract of the fermentation broth by silica gel, they were elucidated as Cyclo(Pro-Gly), cyclo(Pro-Val) and 2-acetyl-4(3H)quinazolinone. CONCLUSIONS: All the three compounds could inhibit the growth of <i>Bacillus subtilis</i> with the minimal inhibitory concentration (MIC) value of 0.8, 0.8, and 0.4 g/L respectively, while they showed no apparent effects against the growth of Gram-negative bacteria.

Solubility Information

Solubility	< 1 mg/ml refers to the product slightly soluble or insoluble
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Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 °C for 6 months; - 20 °C for 1 month. Please use it as soon as possible.

Reference

1. The Endophytic Fungus Strain FTJZZJ09 Isolated from the Bulbs of *Fritillaria thunbergii* and Its Antibacterial Metabolites *Microbiology China*,2010, 37(10):1475-80.

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Inhibitors · Natural Compounds · Compound Libraries

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