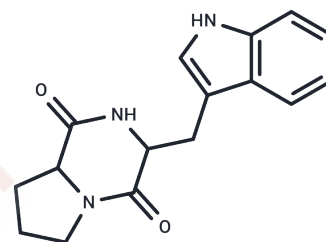


Cyclo(Pro-Trp)

Chemical Properties

CAS No. : 67889-75-2
 Formula: C₁₆H₁₇N₃O₂
 Molecular Weight: 283.33
 Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
 Actual storage temperature shall be subject to the COA.



Biological Description

Description	Cyclo(Pro-Trp) and cyclo(Phe-Pro) show broad spectrum antibacterial properties.
In vitro	Cyclic dipeptides are products of rational drug design, which may exhibit both antimicrobial and antitumor properties. The aim of this study was to investigate both the antimicrobial effects of the cyclic dipeptides cyclo(L-phenylalanyl-L-prolyl), cyclo(L-tyrosyl-L-prolyl), cyclo(L-tryptophanyl-L-prolyl) and cyclo(L-tryptophanyl-L-tryptophanyl) and the effects of these cyclic dipeptides on the gastrointestinal epithelium in vitro. Furthermore, a relevant solvent for the possible pharmaceutical application of the products was sought concurrently. METHODS AND RESULTS: The antimicrobial effect of the cyclic dipeptides was assayed using the Kirby-Bauer disc diffusion assay against Escherichia coli, Pseudomonas aeruginosa, Klebsiella pneumoniae, Staphylococcus aureus, Bacillus subtilis, Streptococcus pneumoniae, Candida albicans, Aspergillus niger and Penicillium notatum. The effect of the cyclic dipeptides on the gastrointestinal epithelium was assessed by changes in alkaline phosphatase expression of HT-29 cells. Cyclo(Pro-Trp) and cyclo(Phe-Pro) show broad spectrum antibacterial properties and cyclo(Trp-Pro) and cyclo(Trp-Trp) show broad spectrum antifungal properties. The maturation of the gastrointestinal cells was enhanced by cyclo(Phe-Pro), cyclo(Tyr-Pro), cyclo(Trp-Trp) and cyclo(Trp-Pro). CONCLUSIONS: The activity of these cyclic dipeptides thus indicates potential application of these compounds as pharmacological agents.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.5295 mL	17.6473 mL	35.2945 mL
5 mM	0.7059 mL	3.5295 mL	7.0589 mL
10 mM	0.3529 mL	1.7647 mL	3.5295 mL
50 mM	0.0706 mL	0.3529 mL	0.7059 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Antimicrobial activity of selected cyclic dipeptides. Pharmazie. 1999 Oct;54(10):772-5.

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