

论文

含L-4-氧代赖氨酸寡肽的合成及其抗白念珠菌活性

陆一瓴;黄嘉鑫;张鸿龙

\*一九八六届硕士生中国科学院上海细胞研究所;中国科学院上海药物研究所

摘要:

本文运用“违法传送”概念,根据白念珠菌对寡肽的传送特点,设计并合成了十个含L-4-氧代赖氨酸(以下称I-677)的寡肽,以提高I-677的抗白念珠菌活性。体外抗白念珠菌试验表明:I-677-肽(I-677-X<sub>1</sub>,I-677-X<sub>1</sub>-X<sub>2</sub>和I-677-X<sub>1</sub>-X<sub>2</sub>-Gly,其中X<sub>1</sub>,X<sub>2</sub>=Met,Leu,Ile,Ala,β-Ala,Gly)较I-677单体摩尔活性提高了2.1~28倍,其摩尔最低抑菌浓度为8.7×10<sup>-8</sup>~9.3×10<sup>-9</sup>mol/ml,传送肽和赖氨酸分别逆转I-677-肽抗菌活性的实验结果证实了I-677的“违法传送”途径。

关键词: L-4-氧代赖氨酸 违法传送 抗真菌寡肽 白念珠菌

SYNTHESIS AND ANTI -CANDIDA ALBICANS ACTIVITY OF L-4-OXALYSINE-CONTAINING OLIGOPEPTIDES

YL Lu; JX Huang and HL Zhang

Abstract:

In order to improve the inhibitory activity of L-4-oxalysine (designated as I -677) against clinical important pathogen Candida albicans, ten oligopeptides containing I -677, I -677- X<sub>1</sub>, I -677- X<sub>1</sub>- X<sub>2</sub>, I -677- X<sub>1</sub>- X<sub>2</sub>-Gly (X<sub>1</sub>, X<sub>2</sub>=Met, Leu, Ile, Ala, β-Ala and Gly)were designed and synthesized according to the concept of "Illicit Transport" and peptide transport specificities of C. albicans. Anti-Candida albicans in vitro Showed that these I -677-peptides had higher activities determined as molar minimum inhibitory concentrations (molar MIC)than that of free I -677 by 2.1 to 28-fold. The values of molar MIC varied from 8.7× 10<sup>(-8)</sup> to 9.3×10<sup>(-9)</sup>mol/ml. The results of antagonism tests in which Gly-Gly or Lysine can reverse the antimicrobial activities of I -677-Leu supported the way of "Illicit Transport" of I -677 within which peptide permease of microorganisms mediated the entry of I -677-peptide into the cells, followed by the enzymatic release of free I -677 inside the cells.The mixed anhydride and active ester condensation procedures in homogeneous solution were carried out for the peptide synthesis and the MIC were determined by the disk diffusion assay.

Keywords: Illicit transport Antifungal oligopeptide Candida albicans L-4-oxalysine(I-677)

收稿日期 1987-06-16 修回日期 网络版发布日期

DOI:

基金项目:

通讯作者:

作者简介:

参考文献:

本刊中的类似文章

文章评论 (请注意:本站实行文责自负, 请不要发表与学术无关的内容!评论内容不代表本站观点.)

扩展功能

本文信息

- Supporting info
- PDF(409KB)
- [HTML全文]
- 参考文献

服务与反馈

- 把本文推荐给朋友
- 加入我的书架
- 加入引用管理器
- 引用本文
- Email Alert
- 文章反馈
- 浏览反馈信息

本文关键词相关文章

- L-4-氧代赖氨酸
- 违法传送
- 抗真菌寡肽
- 白念珠菌

本文作者相关文章

- 陆一瓴
- 黄嘉鑫
- 张鸿龙

PubMed

- Article by
- Article by
- Article by

反 馈 人	<input type="text"/>	邮箱地址	<input type="text"/>
-------------	----------------------	------	----------------------

反馈标题

验证码

6500