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论文

产广谱高效多烯类抗真菌抗生素的纺锤链霉菌SD 07(*Streptomyces netropsis*)的分离及鉴定

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摘要:

从山东省济南市南部山区土壤中分离得到1株具有广谱抗真菌活性的链霉菌SD 07菌株。根据形态特征、生理生化反应和16S rDNA序列分析结果, 链霉菌SD 07为定为纺锤链霉菌(*Streptomyces netropsis*)。分离纯化了SD 07产生的抗真菌活性成分并获得其结晶CA SD07。抗真菌活性检测结果发现: CA SD07对酵母菌、担子菌、接合菌等多种真菌具有广谱抗菌作用。对CA SD07进行性质研究发现, 抗真菌活性成分CA SD07抗菌谱广且抗菌活性高(约等于两性的两性霉素B), 是戊烯和七烯混合的多烯大环内酯类抗真菌抗生素。

关键词: 纺锤链霉菌; 抗真菌抗生素; 多烯大环内酯抗生素

Isolation and classification of a *Streptomyces netropsis* strains SD 07 which produces polyene macrolide antibiotics with broad spectrum and high anti fungal activity

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Abstract:

Streptomyces sp. SD 07 was isolated from the soil of the mountain area in the south of Jinan, Shandong province. This strain exhibited broad spectrum and high antifungal activity. Based on the results of preliminary morphological, cultural, physiological and biochemical studies on this strain, and its 16S rDNA sequences, strain SD 07 was classified as *Streptomyces netropsis*. The antifungal compounds CA SD07 were extracted from the mycelia and then crystallized, named as CA SD07. CA SD07 could inhibit many fungi such as Ascomycetes, Basidiomycetes, Zygomycetes and so on. The data from ultraviolet visible absorption and high performance liquid chromatography / diode array detection (HPLC / DAD) indicated that CA SD07 was a mixture of pentaene macrolide and heptaene macrolide antibiotics, and the major compounds were pentaene macrolide antibiotics. CA SD07 has wider antifungal spectrum and higher antifungal activity(about two times Amphoteric B).

Keywords: *Streptomyces netropsis*; antifungal antibiotics; pentaene macrolide antibiotics

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