

论著

家蝇幼虫抗菌肽对弓形虫速殖子DNA的损伤作用

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摘要:

【摘要】 目的 从家蝇幼虫血淋巴中分离纯化出有抗弓形虫作用的抗菌肽, 观察其对弓形虫速殖子DNA的损伤作用。方法 通过损伤加感染的方法诱导家蝇幼虫大量表达抗菌肽, 然后经过研磨、离心和层析等过程, 分离纯化并筛选出抗弓形虫作用的抗菌肽, 采用流式细胞术(FCM)分析其对弓形虫速殖子DNA含量的影响。结果 通过DNA含量直方图可以看出, 实验组的速殖子数少于对照组, 且两组分布参数存在较明显差异。正常的弓形虫速殖子处于M1期的较M2期的少, 抗菌肽组则相反, 处于M1期的较M2期的多, 且M1峰值明显前移。结论 家蝇幼虫血淋巴中存在抗弓形虫作用的抗菌肽, 其可通过抑制弓形虫DNA的合成杀伤弓形虫。

关键词: 家蝇幼虫 抗菌肽 抗弓形虫 速殖子 DNA含量

The injury of the antimicrobial peptides with anti-Toxoplasma activity isolated from housefly (*Musca domestica*) larvae on the DNA of *Toxoplasma gondii*

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Abstract:

【Abstract】 Objective To observe the injury of the antimicrobial peptides with anti-Toxoplasma activity isolated from housefly larvae on the DNA of *T.gondii* tachyzoites. Methods The antimicrobial peptides of housefly larvae were induced largely by infection and injury, which were isolated and purified by trituration, centrifugalization and column chromatography. Then the antimicrobial peptides with anti-Toxoplasma activity were sieved by methyl thiazolyl tetrazolium colorimetric method and haemacytometry. The DNA contents of *T.gondii* tachyzoites were detected by flow cytometry (FCM). Results From the bar chart of DNA contents, it showed that the difference of distribution between the control group and the experimental group, and tachyzoites in the experimental group were fewer than that in the control group. The tachyzoites in M1 phase were fewer than that in M2 phase in the control group, but the condition was on the contrary in the antimicrobial peptide group. Furthermore, the peak in the M1 stage had an obvious antedisplacement. Conclusion The antimicrobial peptide isolated from housefly larvae could kill *T.gondii* by inhibiting the synthesis of DNA.

Keywords: Housefly larvae Antimicrobial peptide Anti-Toxoplasma Tachyzoite DNA content

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