

论著

蝉拟青霉多糖免疫调节和抗肿瘤活性的实验研究

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摘要 目的: 研究蝉拟青霉总多糖(PcPSt)及其组分PcPSAc的免疫调节和抗肿瘤活性。方法: 将实验动物分为5组: 正常对照组、肿瘤对照组、PcPSt组、环磷酰胺(Cy)组和PcPSt + Cy组, 除正常对照组外其余各组均复制荷瘤小鼠模型, 每日分别向5组小鼠腹腔注射生理盐水(NS)、NS、PcPSt、Cy和PcPSt+Cy, 10 d后, 观察各组白细胞、脾指数、瘤重和抑瘤率等指标的变化。以cell counting kit 8 (CCK-8)为指标, 以脂多糖(LPS)为阳性对照, 观察PcPSAc对体外培养的小鼠脾细胞增殖活性影响。以LPS为阳性对照, 观察不同浓度PcPSAc刺激体外培养小鼠腹腔巨噬细胞(PMΦ)产生一氧化氮(NO)的作用。结果: PcPSt能增加荷瘤小鼠白细胞数量, 缓解Cy所致荷瘤小鼠白细胞数的降低, 提高荷瘤小鼠的脾指数, 联用小剂量Cy时明显增强其抑制肿瘤作用。PcPSAc在600 mg/L和300 mg/L浓度时能提高体外培养小鼠脾细胞的增殖活性。PcPSAc在15-300 mg/L浓度范围内均能刺激体外培养小鼠PMΦ产生NO, 其中以300 mg/L PcPSAc作用最强。结论: 体内试验和体外试验表明蝉拟青霉多糖具有促进免疫功能和抗肿瘤的作用。

关键词 [拟青霉](#) [多糖类](#); [免疫力](#); [抗肿瘤活性](#)

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Experimental studies on immunomodulatory and antitumor activity of polysaccharide from Paecilomyces cicadidae

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Abstract

AIM: To study the immunomodulatory and antitumor activity of both total polysaccharide from Paecilomyces cicadidae (PcPSt) and its fraction PcPSAc.
METHODS: Five groups of mice which were composed of normal control, tumor control, group treated by PcPSt, treated by cyclophosphamide (Cy) and treated by both PcPSt and Cy were administrated by injecting to abdominis cavitas with normal saline (NS), NS, PcPSt, Cy, PcPSt+Cy correspondingly and respectively for 10 days after they had been injected B16 cell line except normal control. The white blood cells (WBC) were counted, spleen index and weight of tumor were statistically analysed. The cell counting kit 8 (CCK-8) was used to analyze proliferative activity of the cultured splenocytes. Nitric oxide (NO) kit was used to detect NO content of supernatant in each microplate. RESULTS: PcPSt increased WBC and relieved the decrease of WBC caused by Cy in tumor-bearing mice. PcPSt increased the spleen index of tumor-bearing mice and cooperated with Cy to promote antitumor activity. PcPSAc at concentrations of 600 mg/L and 300 mg/L enhanced the proliferative activity of cultured splenocytes. Appropriate doses (15-300 mg/L) of PcPSAc promoted the secretion of NO, the effect of 300 mg/L of PcPSAc was the strongest. CONCLUSION: Paecilomyces cicadidae polysaccharide can promote immunomodulatory and antitumor activity in vivo and in vitro experiments.

Key words [Paecilomyces](#) [Polysaccharides](#) [Immunity](#) [Antitumor activity](#)

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