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论著

溶组织内阿米巴半胱氨酸蛋白酶的纯化及其活性的初步研究

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摘要

目的 探索溶组织内阿米巴通过基底膜进入固有膜的机制 ,了解其半胱氨酸蛋白酶 (cysteine proteinase,CP)与胞外基质的相互作用。 方法 阿米巴裂解液通过 laminin- Sepharose亲和层析和分离纯化 ,经分子量测定、测序及抑制剂实验 ,证明为 CP,以凝胶电泳测定其水解活性。 结果 纯化的 CP与 laminin有较强亲和力 ,其分子量为 2 7k Da,被 EC- 6 4所抑制 ,并具水解活性。 结论 溶组织内阿米巴半胱氨酸蛋白酶与胞外基质lam inin特异性结合 ,起水解作用 ,可能是入侵肠粘膜细胞基底膜的关键。

关键词 溶组织内阿米巴 半胱氨酸蛋白酶 水解活性

分类号

Preliminary Study on Isolation, Purification and Hydrolytic Activity of Cysteine Proteinases in Entamoeba histolytica

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Abstract

Objective To explore the invading mechanism of amebae in lamina porpria and observe the interaction between the cysteine proteinase (CP) of Entamoeba histolytica and laminin. Methods CP was identified by laminin-sepharose affinity chromatography, followed by isolation, purification and inhibitor experiment. The hydrolytic activity was measured by gelatin electrophoresis. Results Purified CP of E.histolytica showed a strong affinity with laminin. The molecular weight of CP is 27 kDa. It can be inhibited by EC-64 and exhibited a protein hydrolytic activity. Conclusion The specific affinity and hydrolytic activity of CP might play an important role in its invasion to the basement membrane of intestinal mucosa.

Key words Entamoeba histolytica cysteine proteinase hydrolytic activity

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