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盘基网柄菌发育中尿囊酸酶表达的定量定位研究

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Quantitation and localization of allanoicase during the development of *Dictysotelium discoideum*

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全文: PDF (1709 KB) HTML (1 KB) 输出: BibTeX | EndNote (RIS) 背景资料

摘要 用免疫荧光技术对KAx-3多细胞发育不同阶段的尿囊酸酶进行定位观察，用Western blot分析野生型细胞KAx-3 和突变型细胞AK127多细胞发育中尿囊酸酶的表达情况.结果显示：在细胞聚集阶段，尿囊酸酶在盘基网柄菌细胞膜附近存在较多；在细胞丘阶段,尿囊酸酶在细胞丘外层细胞中荧光强度较强；在蛞蝓体阶段，尿囊酸酶在前柄细胞中的表达量明显多于前孢子细胞；在子实体成熟的过程中，在前柄细胞区与前孢子细胞区交界处荧光强度最强，该区域内细胞将分化成前柄细胞B.据此推测尿囊酸酶的定位表达可能与盘基网柄菌细胞分化的类型相关.Western blot结果显示：在KAx-3 发育过程中尿囊酸酶的表达量呈现出逐渐上升的趋势，发育至18 h左右达到最大值；而AK127中尿囊酸酶的表达量始终在低水平徘徊.这表明gp150 的缺失影响了尿囊酸酶的表达.实验结果提示，尿囊酸酶的表达量与发育时间有关,并且这种表达量的变化与gp150存在着密切的关系.

关键词： 尿囊酸酶 定量分析 定位观察 gp150

Abstract： Location and expression of allanoicase were observed in the wild type KAx-3 and mutant type AK127 cells during development by immunofluorescent technique and Western blot, respectively. The results showed that abundant of allanoicase existed near the cytomembrane at the aggregation stage. At the mound stage, the fluorescence of allanoicase in the peripheral cells of mound was stronger than other place cells. When they developed into slug stage, more allanoicase existed in prestalk cells than that in prespore cells. The fluorescence of allanoicase expressed strongly at the junction of prespore area and prestalk area at the fruiting body stage,these cells would differentiate into prestalk B cells. These data indicated that there may be some relationships between the expression of allanoicase and cell-type differentiation during Dictysotelium discoideum development. The results of western blot showed that the expression of allanoicase increased gradually in the development of KAx-3 cells. The expression amount of allanoicase was maximum when the cells developed nearly 18 h. But the expression of allanoicase in AK127 cells which gene of gp150 protein was knocked out was always at a low level. It shows that the expression of allanoicase would be affected in the absence of gp150. The results indicate that the expression of allanoicase has some relationships with the developmental time of the cells, and is also associated with the expression of gp150 gene.

Key words： allanoicase quantitative analysis orientation observation gp150

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