中国药理学与毒理学杂志 2011 25 (1): 83-87 ISSN: 1000-3002 CN: 11-1115/R

论著

氯化镧水杨酸和8-羟基喹啉配合物$La(C_7H_5O_3)_2\cdot(C_9H_6NO)$对粟酒裂殖酵母细胞生长和胞质分裂的影响

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收稿日期 2010-3-22 **修回日期** **网络版发布日期** 2011-1-25 **接受日期** 2010-8-16

摘要 **目的** 探讨氯化镧水杨酸8 羟基喹啉配合物〔$La(Sal)_2(Qu)$〕对粟酒裂殖酵母（*S.pombe*）的生长及细胞分裂的影响。**方法** $La(Sal)_2(Qu)$ 2，4，6 8和10 mg·L^{-1}处理细胞。应用恒温振荡培养和固体培养MTT法观察$La(Sal)_2(Qu)$对*S.pombe*生长的影响；胞质分裂抑制实验观察$La(Sal)_2(Qu)$对*S.pombe*细胞形态和胞质分裂的影响；流式细胞术检测对细胞DNA含量的影响。**结果** $La(Sal)_2(Qu)$ 6，8和10 mg·L^{-1}在恒温振荡培养*S.pombe* 8 h，可抑制*S.pombe*细胞的生长，生长率从正常对照组的（104.9±8.4）%分别降低至（36.1±2.2）%，（35.2±2.6）%和（37.6±2.8）%（$P<0.01$）。$La(Sal)_2(Qu)$ 4 mg·L^{-1}可抑制细胞分裂，不仅具有1个隔膜的细胞数目明显增多（28.97%），而且可见具有2个或3个隔膜的细胞；$La(Sal)_2(Qu)$ 2，4和6 mg·L^{-1}使细胞DNA含量从1 N增加到2 N。**结论** $La(Sal)_2(Qu)$可影响*S.pombe*细胞的生长和胞质分裂。

关键词 氯化镧水杨酸和8-羟基喹啉配合物 裂殖酵母菌属 细胞分裂

分类号 R978.5

Effect of larthanum and salicylic acid and 8-hydroxyquinoline complexes 〔$La(C_7H_5O_3)_2\cdot(C_9H_6NO)$〕 on growth and cytokinesis of *Schizosaccharomyces Pombe*

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Abstract

OBJECTIVES To explore inhibition effect of larthanum and salicylic acid and 8-hydroxyquinoline complexes〔$La(C_7H_5O_3)_2(C_9H_6NO)$ $La(Sal)_2(Qu)$〕 on growth and cytokinesis in *Schizosaccharomyces pombe* (*S.pombe*). **METHODS** *S.pombe* treated with $La(Sal)_2(Qu)$ 2, 4, 6, 8 and 10 mg·L^{-1} under constant temperature shaking culture and solid culture. The proliferation was detected by MTT assay. Inhibition of cytokinesis of $La(Sal)_2(Qu)$ on *S.pombe* was observed by cytokinesis inhibition test. DNA content was measured by flow cytometry. **RESULTS** Compared to normal control group, $La(Sal)_2(Qu)$ 6, 8, 10 mg·L^{-1} inhibited *S.pombe* growth on constant temperature shaking culture, and decreased cell viability from (104.9±8.4)% to (36.1±2.2)%, (35.2±2.6)%, (37.6±2.8)%, respectively. $La(Sal)_2(Qu)$ 4 mg·L^{-1} inhibits cell division, not only cells with 1 septum had a significant increase(28.97%), but also cells with 2 or 3 septums were seen. $La(Sal)_2(Qu)$ 2, 4, 6 mg·L^{-1} increased DNA content from 1 N to 2 N. **CONCLUSION** $La(Sal)_2(Qu)$ inhibited the cytokinesis and cell growth of *S.pombe*.

Key words larthanum and salicylic acid and 8-hydroxyquinoline complexes lanthanum ternary schizosaccharomyces cell division

DOI: 10.3867/j.issn.1000-3002.2011.01.016

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